# CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Authorizing the City Manager to Execute a Contract for Professional Services with CH2M for Design and Environmental Services for the SR-523 (N/NE 145 <sup>th</sup> Street) – Aurora Avenue to Interstate-5 Project in an Amount not to Exceed \$1,711,172		
DEPARTMENT:	Public Works		
PRESENTED BY:	Tricia Juhnke		
ACTION:	Ordinance Resolution <u>X</u> Motion Discussion Public Hearing		

# **PROBLEM/ISSUE STATEMENT:**

The City of Shoreline is implementing improvements identified in the <u>145<sup>th</sup> Street</u> <u>Multimodal Corridor Study</u> to improve access and safety for all travel modes using the corridor and to improve access to Sound Transit's 145<sup>th</sup> Street Light Station. The SR-523 – Aurora Avenue to Interstate-5 Project will reduce congestion, improve traffic operations, and improve pedestrian and bike access on this segment of the corridor.

In order to advance the project, staff is proposing to contract with a consultant team to provide engineering and environmental services. Staff has completed consultant selection and contract negotiations with CH2M for this work. Tonight, Council is being asked to authorize the City Manager to execute the contract with CH2M.

# **RESOURCE/FINANCIAL IMPACT:**

CH2M will provide engineering, design and environmental services for the project as defined in Attachment A to this staff report. The fee for services will be \$1,711,172. The City has received \$4,235,000 of Surface Transportation Program grant funding for environmental review and final design, a portion which will be used for this preliminary work. Matching City funds are available from the Roads Capital Fund. The project cost and budget summary is as follows:

EXPENDITURES			
City Staff		250,000	
Direct Expenses	\$	80,000	
Consultant Contracts			
30-Percent Design and Environmental (CH2M)	\$1	,711,172	
Final Design (available budget)	\$2	2,200,000	
Miscellaneous	\$	200,000	
WSDOT	\$	120,000	
Contingency	\$	333,828	
Total Expenditures	\$4	,895,000	

# REVENUE

Total Revenue	\$ 4,895,000
Federal Grant	\$ 4.235.000
Roads Capital Fund	\$ 660.000

# RECOMMENDATION

Staff recommends that Council authorize the City Manager to execute a contract with CH2M for design and environmental services related to the SR-523 (N/NE 145<sup>th</sup> Street) – Aurora Avenue N to Interstate-5 Interchange Project in an amount not to exceed \$1,711,172.

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

# BACKGROUND

In 2016, the City completed the 145<sup>th</sup> Street Multimodal Corridor Study which identified needed improvements along SR-523 (145<sup>th</sup> Street) from Aurora Avenue N to Interstate-5 in addition to improvements on three other segments of the corridor. The improvements are needed to improve traffic operations, safety, pedestrian and bicycle mobility and to improve access to the proposed 145<sup>th</sup> Street light rail station. The Multimodal Corridor Study broke the project into five phases or segments. This contract covers the segment from I-5 to SR-99. The interchange is being designed through a separate project; the segment from SR-522 to I-5 is included in the Sound Transit 3 scope; and the final segment from Aurora to 3<sup>rd</sup> Avenue is not currently funded for design.

It is important to remember that the 145<sup>th</sup> Corridor is not within the City of Shoreline jurisdiction. The design and construction of the project requires and is dependent on the coordination with other jurisdictional partners including the City of Seattle, Washington Department of Transportation and King County Road Services. All of the signals along this segment are owned and operated by the City of Seattle so their participation and cooperation is essential to the success of the project.

The design will progress in two steps. First, the City is contracting with a consultant on preliminary design (30-Percent Design) and the environmental documentation such as SEPA and NEPA (this contract). These early documents will further refine the project elements and allow greater accuracy in estimating the final design scope and costs. With the information from the 30-Percent design, the City will either enter into a separate negotiated contract with CH2M or a new selection process and another firm for the final design.

The project currently is funded by the Roads Capital fund and a federal transportation grant as shown in the Financial Impact section of the report. The City of Seattle at this time has not agreed to fund a portion of this project. Staff intends to continue to seek additional grants, utilize a portion of the Connecting Washington funds (funds from the State of Washington transportation budget allocated to the City of Shoreline) and work with other funding partners to secure funding for the eventual construction of the project while minimizing the additional contribution from the City's revenues.

# **ALTERNATIVES ANALYSIS**

The City requested proposals from qualified firms interested in designing this project. One qualified firm, CH2M responded. CH2M completed the Multimodal Corridor study and based on their performance on the Multimodal Corridor Study, a review of written qualifications, interviews, and a review of references CH2M was determined to be qualified for the project.

# **RESOURCE/FINANCIAL IMPACT**

This project is funded for design in the 2017-2022 Capital Improvement Plan. Within this scope, CH2M will provide 30-Percent engineering design and environmental services. The City has received \$4,235,000 of Surface Transportation Program grant

funding for environmental review and final design, a portion of which is used for this preliminary work. Matching funds for the grant are available from the Roads Capital Fund. The fee for services will be \$1,711,172. The project cost and budget summary is as follows:

#### EXPENDITURES

Total Expenditures	\$ 4,895,000
Contingency	\$ 333,828
WSDOT	\$ 120,000
Miscellaneous	\$ 200,000
Final Design (available budget)	\$ 2,200,000
30-Percent Design and Environmental (CH2M)	\$ 1,711,172
Consultant Contracts	
Direct Expenses	\$ 80,000
City Staff	\$ 250,000

REVENUE	
Roads Capital Fund	\$ 660,000
Federal Grant	\$ 4,235,000
Total Revenue	\$ 4,895,000

# RECOMMENDATION

Staff recommends that Council authorize the City Manager to execute a contract with CH2M for design and environmental services related to the SR-523 (N/NE 145<sup>th</sup> Street) – Aurora Avenue N to Interstate-5 Interchange Project in an amount not to exceed \$1,711,172.

# **ATTACHMENTS**

Attachment A: CH2M, SR-523 – Aurora Avenue to Interstate-5 Interchange Project Scope of Work

# Attachment A

# City of Shoreline 145<sup>th</sup> Street Multimodal Corridor Project Aurora Avenue to I-5 Base Mapping, Preliminary Engineering, and Environmental Review

# 4/1/2017

Exhibit B-1 Scope of Work Project No. xxxx Federal Aid No. xxxxxxx

During the term of this AGREEMENT, CH2M HILL, Inc. (CONSULTANT) team will perform professional services in connection with the 145th Street Multimodal Corridor Project as described below. The CONSULTANT team consists of CH2M HILL, Inc., LMN Architects, EnviroIssues, Parametrix, Alta Planning + Design, HBB Landscape Architecture, and RES Group Northwest.

# **PROJECT DESCRIPTION**

This Scope of Work is for the CITY of Shoreline 145th Street Multimodal Corridor Project with project extents from the Aurora Avenue intersection to the I-5 Interchange (approximately 1 mile). This scope includes survey and base mapping, preliminary engineering, preliminary geotechnical investigations, environmental documentation, public involvement, and agency coordination. Completion of this project will require the amendment of this scope with additional tasks for right of way services and final design. These two tasks were not included in the original scope of work so they may be more accurately defined as the design progresses.

Proposed improvements are assumed based on the 145<sup>th</sup> Street Multimodal Corridor Study's Preferred Design Concept, as adopted by City Council on April 11, 2016, and are aimed at improving safety and mobility for all modes of travel. The Preferred Design Concept includes signalized intersection improvements at Aurora Avenue, Ashworth Avenue, Meridian Avenue, and 1<sup>st</sup> Avenue NE involving new left turn lanes, new traffic signals, signal timing modifications, new sidewalk, curb ramps, landscaping, bus zones, and urban design treatments. Overhead utilities will be relocated underground and storm drainage improvements will be made. In addition, an off-corridor bike network will be developed for the corridor.

This scope of work assumes that the project will have duration of no more than 18 months commencing in May, 2017, and being completed by September 2018.

# **General Assumptions**

 Subsurface Investigations - In soils, foundation, groundwater, and other subsurface investigations, the actual characteristics may vary significantly between successive test points and sample intervals and at locations other than where observations, exploration, and investigations have been made. Because of the inherent uncertainties in subsurface evaluations, changed or unanticipated underground conditions may occur that could affect total project cost and/or execution. These conditions and cost/execution effects are not the responsibility of CONSULTANT.

- 2. Opinions of Cost, Financial Considerations, and Schedules In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the project, CONSULTANT has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by operating personnel or third parties; and other economic and operational factors that may materially affect the ultimate project cost or schedule. Therefore, CONSULTANT makes no warranty that CITY's actual project costs, financial aspects, economic feasibility, or schedules will not vary from CONSULTANT's opinions, analyses, projections, or estimates.
- 3. CITY will provide to CONSULTANT all data in CITY's possession relating to CONSULTANT's services on the project. CONSULTANT will reasonably rely upon the accuracy, timeliness, and completeness of the information provided by CITY.

# **1.0 PROJECT MANAGEMENT**

The CONSULTANT will provide overall project administration and management for the duration of this contract.

- 1.1 Project Management Plan. Preparation of a project management plan to include a project work breakdown structure (WBS), identification of the project team and organization structure, scope of services, invoicing procedures, communication plan, quality management plan, risk analysis plan, project Health and Safety Plan, Change Management Plan, and Contract Close-out Plan.
- 1.2 Project Schedule. An overall project schedule completion date will be established by the CITY. A detailed schedule for the CONSULTANT work elements shall be prepared by the CONSULTANT and will be jointly developed with the CITY. The baseline schedule shall be delivered to the CITY within 45 days from the date of the Notice to Proceed. The schedule shall be revised up to 6 times during the course of the project, at the request of the CITY.
- 1.3 Direction and Review. Implementation of the workplan, and direction of the staff and review of their work over the course of the project shall be provided. This is for the overall project rather than a specific work element and shall provide guidance to the entire team. The CONSULTANT shall direct and control the staff by supervising their work, holding regular internal coordination meetings, and by other methods.
- 1.4 Document Management. The CONSULTANT shall provide for the management of the drawings and documents received and generated over the course of the project. This information shall be filed to facilitate ready and selective retrieval. A status of requested information also shall be maintained by the CONSULTANT.
- 1.5 Monthly Progress Reports and Invoicing. This work element shall include the monthly invoice and progress reports. Invoices and backup shall be prepared in accordance with the format agreed to with the CITY project manager. The progress reports shall describe the work accomplished during the billing period including the status of individual work elements, meetings attended, and action or information needed from the CITY. Progress reports shall also indicate work to be accomplished during the next month. The progress reports shall be submitted to the CITY with the monthly invoice.
- 1.6 Budget Monitoring and Projections. Periodic monitoring of the CONSULTANT'S budget shall occur over the course of the project and projections provided to the CITY upon request. Current project

financial status as well as independent projections (i.e. non-project related Consultant staff) to complete work shall be developed as needed. This work element is intended to help monitor costs and budgets and to propose corrective actions. These actions could include formal requests for budget or scope modifications.

- 1.7 Issue and Change Management. The Change Management Plan shall address the five elements of change management: Identification of change; Analysis of the change and determination of its impacts; Development of a response strategy; Communication of the strategy and gaining agreement on the change; and Revision of the workplan, scope, schedule and budget
- 1.8 Subconsultant Management. SUBCONSULTANT management shall provide an overview of progress, review invoices and provide overall coordination of SUBCONSULTANTs conducting various project elements.

### Task 1 Deliverables:

- Project Management Plan
- Project schedule and up to six (6) schedule updates
- Monthly invoices and progress reports
- Monthly budget status reporting
- Project change log and updates

# 2.0 PROJECT DELIVERY AND PROJECT COORDINATION

This work element is continuous throughout the duration of the project. It includes the work necessary to coordinate the work with the CITY, related projects, and partner agencies.

2.1 Team Chartering. The CONSULTANT shall conduct a chartering session and prepare a charter for the project that provides a written description of several important points that serve as input into the workplan. This includes the project purpose, mission, vision, measures of success, roles, responsibilities, and operating guidelines. These are needed to ensure effective communication and decision making during the subsequent project planning and execution activities. These elements will be developed during a team chartering session. The CITY, the CONSULTANT Team, and representatives from Partner Agencies will be involved in the chartering session.

This element results in a team charter (documentation of assignments and commitments made during the meeting) that increases the probability that the team will successfully achieve high-quality performance. It will also empower team members, maximizing their effectiveness and influence, and monitor team performance so that the members can diagnose problems and take corrective actions.

An endorsement session shall be held in conjunction with the chartering session. Endorsement of the workplan is the final planning step, and results in projects where the team, management, clients and essential third parties all focus on the same project objectives. They support the team efforts to accomplish those objectives as described in the workplan, and commit to offer whatever assistance is needed to successfully complete the project. An endorsement session shall also include the CONSULTANT Team and the CITY (including document reviewers).

2.2 Project Management Team Meetings. The CONSULTANT will plan, facilitate, and host monthly project management team (PMT) meetings. These meetings will occur rotating between the CITY's office and the CONSULTANT'S office and are assumed to be 2 hours in length. Up to two CONSULTANT team staff members will attend each meeting, depending on the agenda. The CONSULTANT will prepare meeting agendas, meeting summaries, and action items.

- 2.3 Risk Management. The Risk Register is a tool that identifies potential risks to the project and management strategies for those risks. A Risk Register will be maintained and updated by the CONSULTANT up to five times to monitor project progress over the course of the development of this Project Element.
- 2.4 Interchange Project Coordination Meetings. The CONSULTANT will facilitate monthly project coordination meetings with the Interchange Project team. These meetings will occur at the CITY's office and are assumed to be 2 hours in length. Up to two CONSULTANT team staff members will attend each meeting, depending on the agenda. The CONSULTANT will prepare meeting agendas, meeting summaries, and action items.
- 2.5 Consultant Project Team Meetings. The CONSULTANT will plan and lead bi-weekly team meetings to coordinate work between the team members. This effort is for the overall project rather than a specific task and is intended to provide the coordination that the team will need to understand project priorities, deadlines, and resolve issues that arise. CITY staff involvement is encouraged. For budgeting purposes, bi-monthly meetings, two hours in length are assumed over the duration of the project (24 meetings).
- 2.6 Delivery Plan Support.
- 2.7 City of Seattle Coordination. The CONSULTANT will support the CITY in coordination with the City of Seattle including SDOT, SCL, and SPU. The CONSULTANT will prepare for, attend, and participate in up to nine (9) meetings with Seattle staff. The CONSULTANT will prepare meeting notes.
- 2.8 WSDOT Coordination. The CONSULTANT will support the CITY in coordination with WSDOT. The CONSULTANT will prepare for, attend, and participate in up to six (6) meetings with WSDOT staff. The CONSULTANT will prepare meeting notes.
- 2.9 Sound Transit Coordination. The CONSULTANT will support the CITY in coordination with Sound Transit. The CONSULTANT will prepare for, attend, and participate in up to three (3) meetings with Sound Transit. The CONSULTANT will prepare meeting notes.
- 2.10 Inter-jurisdictional Partner Coordination. The CONSULTANT will provide strategic guidance, meeting support and attendance for up to twelve (12) meetings among the partner agencies, working in collaboration with the CITY. The first of twelve meetings will be organized as the chartering session. The CONSULTANT will provide facilitation support and meeting support for the chartering meeting with agency partners. Meeting support will include planning and agenda preparation, coordinating schedules among CITY and agency partners, sharing meeting materials and resources and providing review time for partners, and tracking progress and completion of individual and group action items.

#### Assumptions:

• CITY will pay directly for venue reservations and facilitation materials (if needed).

#### Task 2 Deliverables:

- Chartering Meeting Presentation
- Project Charter
- PMT meeting agendas and meeting notes
- Risk Register, up to five updates
- Interchange Coordination Meeting agendas and meeting notes
- Agency meeting agendas and meeting notes (up to 18 meetings)

145<sup>TH</sup> CORRIDOR EXHIBIT B1

# 3.0 Funding Support

The CONSULTANT will assist the CITY in its continued pursuit of full funding for the Project. This will consist of the preparation of funding applications and promotion of the project.

- 3.1 Identification of Opportunities. Identify potential funding opportunities that could provide partial or full funding of corridor pre-construction activities, right-of-way, and construction of improvements. Anticipate schedule for application submittals for each source. Establish unique requirements for each source to help prepare for application. List intent of each source and special attributes and criteria that are important to those funding programs.
- 3.2 Funding Program Coordination. Maintain contact with funding programs and coordinating agencies to anticipate opportunities and to keep them informed on this project.
- 3.3 Project Promotion. Maintain interest and promote the project with local and federal funding partners through regular contact. Seek to maintain consensus among partnering agencies by addressing their issues, and considering their project needs.
- 3.4 Application Preparation. Work with City staff to prepare up to two (2) separate grant applications for submittal to funding agencies. The information needed for inclusion into the applications is assumed to be readily available from prior work or other work within this scope.
- 3.5 Cash Flow Analysis. The CONSULTANT will develop up to three cash-flow scenarios for the project development. This will be used as a tool to help inform decisions regarding project funding opportunities and alternative capital delivery methods such as the use of loans.

# Task 3 Deliverables:

- Project brochure development and updates
- Grant application support, up to two (2)
- Cash flow analysis

# 4.0 Data Collection and Existing Conditions Documentation

# 4.1 Surveying and Mapping – 145<sup>th</sup> Corridor

Provide surveying and mapping to support the community and agency coordination, environmental documentation, right-of-way evaluation, and preliminary design work elements.

Horizontal Datum - Survey work shall be in the Washington State Plane NAD 83/2011 and shall be in U.S. Survey Foot units. The horizontal control to establish ties to the datum shall be shown on the plans and/or in the surveyor's notes. Vertical Datum - The Vertical datum for survey work shall be the North American Vertical Datum of 1988 (NAVD 1988). The benchmarks used to establish ties to the datum shall be shown on the plans and/or in the surveyor's notes.

4.1.1 Primary Survey Control. The Consultant will establish survey control points using GPS, or conventional ground traverse techniques in support of ground survey data collection and aerial photogrammetry control. The Consultant shall establish primary Survey Control for the project using existing SPU monumentation (assumes SPU has placed, observed and balanced network).

The Consultant shall develop an overall control scenario using ties to said SPU monument locations, which will be used to calculate the appropriate Survey Datum(s) listed above.

- 4.1.2 Supplemental Survey Control. The task includes the work to establish Secondary Control points used for topographical surveys tied to the Primary Survey Control network. For budgeting purposes, it is assumed that +/- 30 Survey Control Points will be set and field located in this task.
- 4.1.3 Field Survey. The Consultant will conduct field surveying along N 145th Street (see attached Exhibit A Area 1). The limits will generally be 145th Street beginning 50 ft west of Linden Avenue N and continuing to 100 ft east of 1st Avenue NE.

The survey will obtain data within the right of way 50 ft beyond the curb/pavement returns of any intersecting side streets not specifically identified as follows: on Ashworth Avenue N, Meridian Avenue N, and 1st Avenue NE the survey will obtain data within the right of way three hundred (300) feet beyond the curb/pavement returns, and on Aurora Avenue N the survey will obtain data within the right of way three hundred (300) feet south and six hundred (600) feet north of the curb/pavement returns. This will include topographic surface features, such as paved areas, surface utilities, fences, ditches, and trees larger than 6-inches diameter at breast height.

- 4.1.4 Roadways: The Consultant will survey the public roadway surfaces to create a digital terrain model (DTM), with an accuracy needed to produce one (1) foot contour interval map. The survey will extend from right of way limit to right of way limit (except where obstructed by occupation barriers). The field data will be processed, and added to the project basemap. This work will be limited to existing public roadways.
- 4.1.5 Utility Locates: The CONSULTANT will coordinate with a private utility locating service subcontractor to define the limits, schedule, and budget for underground utility locates. The CONSULTANT will survey the location of visible and accessible surface indications of underground utilities, detail the interior of accessible storm drainage and sanitary sewer structures (pipe inverts, directions, and sizes) from the surface, and underground utility locates (paint marks) as provided by a private utility locate service. The field data will be processed, and added to the project basemap. This work will be limited to those portions within existing public roadways.
- 4.1.6 Digital Orthophotography: The Consultant will provide high resolution geo referenced aerial photographs of the project corridor as obtained by consultant UAVs, to be used in conjunction with the survey basemap.
- 4.1.7 Measure Downs. The CONSULTANT will perform inspection and measure-downs of existing storm drain catch basins and manholes within the project limits. The purpose of the inspection is to document the type of structure (brick, precast) and the condition to confirm suitability for continued use.
- 4.1.8 Utility Mapping. Prepare underground utility mapping. The CONSULTANT will compile this mapping from available as-builts and record drawings obtained from the respective utility companies and from "painted" utility location marks on the ground. Service line locations will not be mapped. Supplemental utility surveying of inverts of the underground sanitary sewer system and other utilities will be conducted (for information not found in utility district/company records). Survey for the storm drain system will be limited primarily to locations where connections will be made from the new roadway storm drain system to the existing downstream or upstream systems. The surveyed information will be incorporated into the utility mapping.

4.1.9 Quality Control. Implement Quality Control as outlined in Task 2.6.

Assumptions:

- Survey will be developed using with symbol, and linetype standards conforming to WSDOT standards
- Any Rights of Entry and/or Title Reports required will be obtained by the City. No survey work will take place on private parcels without a Right of Entry permission being granted.
- Consultant survey crews will have unrestricted access to make measurements
- A record of survey will not be performed as part of this scope
- Specific parcel boundary determination or private parcel surveys are not included as a phase of this work

# 4.2 Surveying and Mapping – 145<sup>th</sup> / I-5 Interchange

Provide surveying and mapping to support the community and agency coordination, environmental documentation, right-of-way evaluation, and preliminary design work elements.

Horizontal Datum - Survey work shall be in the Washington State Plane NAD 83/2011 and shall be in U.S. Survey Foot units. The horizontal control to establish ties to the datum shall be shown on the plans and/or in the surveyor's notes. Vertical Datum - The Vertical datum for survey work shall be the North American Vertical Datum of 1988 (NAVD 1988). The benchmarks used to establish ties to the datum shall be shown on the plans and/or in the surveyor's notes.

- 4.2.1 Primary Survey Control. The Consultant will establish survey control points using GPS, or conventional ground traverse techniques in support of ground survey data collection and aerial photogrammetry control. The Consultant shall establish primary Survey Control for the project using existing SPU monumentation (assumes SPU has placed, observed and balanced network). The Consultant shall develop an overall control scenario using ties to said SPU monument locations, which will be used to calculate the appropriate Survey Datum(s) listed above.
- 4.2.2 Supplemental Survey Control. The task includes the work to establish Secondary Control points used for topographical surveys tied to the Primary Survey Control network. For budgeting purposes, it is assumed that +/- 10 Survey Control Points will be set and field located in this task.
- 4.2.3 Field Survey. The Consultant will conduct field surveying along N 145th Street (see attached Exhibit A, Area 2). The limits will generally be 145th Street beginning 100 ft east of 1st Avenue NE and continuing to 100 ft east of 5<sup>th</sup> Avenue NE.

The survey will obtain data within the right of way 50 ft beyond the curb/pavement returns of any intersecting side streets not specifically identified as follows: on Southbound I-5 Ramps the survey will obtain data within the right of way three hundred (300) feet beyond the curb/pavement returns, and on 5th Avenue N the survey will obtain data within the right of way six hundred (600) feet south of the curb/pavement returns. This will include topographic surface features, such as paved areas, surface utilities, fences, ditches, and trees larger than 6-inches diameter at breast height. Basemapping north on 5<sup>th</sup> Avenue will be provided by Sound Transit.

4.2.4 Roadways: The Consultant will survey the public roadway surfaces to create a digital terrain model (DTM), with an accuracy needed to produce one (1) foot contour interval map. The survey will extend from right of way limit to right of way limit (except where obstructed by occupation barriers). The field data will be processed, and added to the project basemap. This work will be limited to existing public roadways.

- 4.2.5 *Overpass Scan:* The Consultant will complete a digital scan of the 145<sup>th</sup> Street overpass and will obtain a 3D point cloud of the bridge structure. A surface and linework will be created from the point cloud and incorporated into the interchange basemap.
- 4.2.6 Utility Locates: The Consultant will survey the location of visible and accessible surface indications of underground utilities, detail the interior of accessible storm drainage and sanitary sewer structures (pipe inverts, directions, and sizes) from the surface, and underground utility locates (paint marks) as provided by a private utility locate service. The field data will be processed, and added to the project basemap. This work will be limited to those portions within existing public roadways.
- 4.2.7 Digital Orthophotography: The Consultant will provide high resolution geo referenced aerial photographs of the project corridor as obtained by consultant UAVs, to be used in conjunction with the survey basemap.
- 4.2.8 Measure Downs. The CONSULTANT will perform inspection and measure-downs of existing storm drain catch basins and manholes within the project limits. The purpose of the inspection is to document the type of structure (brick, precast) and the condition to confirm suitability for continued use.
- 4.2.9 Utility Mapping. Prepare underground utility mapping. The CONSULTANT will compile this mapping from available as-builts and record drawings obtained from the respective utility companies and from "painted" utility location marks on the ground. Service line locations will not be mapped. Supplemental utility surveying of inverts of the underground sanitary sewer system and other utilities will be conducted (for information not found in utility district/company records). Survey for the storm drain system will be limited primarily to locations where connections will be made from the new roadway storm drain system to the existing downstream or upstream systems. The surveyed information will be incorporated into the utility mapping.
- 4.2.10 Quality Control. Implement Quality Control as outlined in Task 2.6.

Assumptions:

- Survey will be developed using with symbol, and linetype standards conforming to WSDOT standards
- Any Rights of Entry and/or Title Reports required will be obtained by the City. No survey work will take place on private parcels without a Right of Entry permission being granted.
- Consultant survey crews will have unrestricted access to make measurements
- A record of survey will not be performed as part of this scope
- Specific parcel boundary determination or private parcel surveys are not included as a phase of this work
- Survey data in Area 3 of the attached exhibit will be provided by Sound Transit and incorporated into the Interchange basemap. No field work will be performed by the consultant in Area 3 of the attached Exhibit.
- Datum will be NAD 83/2011 horizontal, and NAVD 1988 vertical unless otherwise required by the City of Shoreline.
- Specific parcel boundary determination or private parcel surveys are not included as a phase of this work

# 4.3 Geotechnical Investigation

This scope of work covers geotechnical engineering services needed to support development of contract documents for the construction of potential stormwater facilities, traffic signal foundations, retaining walls, and pavement associated with the 145<sup>th</sup> Street Corridor project.

The geotechnical work includes geotechnical field reconnaissance and subsurface explorations and development of geotechnical design parameters for retaining walls less than 10 feet high, signal and luminaire poles, drainage facilities, and paving.

4.3.1 Subsurface Exploration and Data Report. The CONSULTANT will perform site reconnaissance, limited subsurface exploration, and laboratory testing to produce information for preliminary geotechnical design of the project elements.

Obtain and review existing subsurface information, coordinate and plan access and restoration for test holes, and identify features that affect other geotechnical design work elements.

The subsurface exploration will consist of the following:

- Visual reconnaissance of surface soils and topographic features
- Up to 5 borings with continuous standard penetration test sampling to a depth of up to 20 feet Visual inspection and documentation of the existing pavement condition as part of the pavement rehabilitation assessment
- Up to 5 pavement and subbase cores

The CONSULTANT will prepare a Geotechnical Data Report containing a map of the sample locations and laboratory test results. Observations of the existing pavement condition will also be included. The data report will also contain applicable logs and laboratory test results from previous geotechnical or hydro-geological explorations in the project vicinity, as well as published descriptions of site geology. It is intended that the Geotechnical Data Report, containing the un-interpreted subsurface data from subsurface explorations, will become part of the construction contract documents.

#### Assumptions:

General geotechnical issues and assumptions for the project are discussed below.

- This scope of work does not include an environmental assessment or exploration to define contamination; the site is assumed to be free of soil and groundwater contamination
- The extent of the subsurface exploration program to be implemented will be reviewed and discussed with the CITY to obtain CITY endorsement that the appropriate level of subsurface exploration is performed to reasonably manage project risks.
- The site is underlain by primarily granular soils and calculations of consolidation settlement and liquefaction susceptibility are not required. Granular soils are also assumed to be nonaggressive from a corrosion standpoint.
- Borings will be drilled with hollow stem auger and groundwater depths will be noted at the time of drilling only. Groundwater monitoring wells will not be installed.
- Explorations will be within City right of way.
- Evaluation of infiltration will be based on grain size analysis only.

- Traffic control will be required for all borings and cores.
- The CONSULTANT will obtain all permits for work with the right of way, the City will pay for the permit fees directly.
- The soils are uncontaminated.
- Soil samples will not be retained past the final completion of the Geotechnical Data Report.
- The CONSULTANT will record soil sample locations with a handheld GPS.
- Cultural resource monitoring is not required.
- The Draft Geotechnical Data Report will be finalized during final design to include supplemental explorations and suggestions incorporated from review comments on the draft version.
- 4.3.2 Preliminary Geotechnical Design Recommendations. The CONSULTANT will interpret the geotechnical data to provide preliminary geotechnical design parameters for design of gravity retaining walls less than 10 feet high, signal pole foundations, luminaire foundations, stormwater vaults, and infiltration facilities. Data gaps and the need for additional explorations or analyses will be identified.

# 4.4 Drainage and Utilities Inventory

The CONSULTANT will compile and review the following as-builts/Record drawings and records from the CITY, SDOT, SPU, and other agencies: WSDOT signals, CITY's storm drainage system, SPU utilities, private storm drainage systems. The CONSULTANT will prepare a letter to each agency requesting record information which will be received, reviewed and filed by the CONSULTANT. The CITY will provide available record information on CITY-owned facilities. The CONSULTANT will also obtain information from the affected utilities and private parties.

#### 4.5 Reports and Studies

Reports/Studies: CITY Comprehensive Plan, Drainage Basin Study, traffic data, geotechnical reports and boring logs for signal poles. The CITY will provide their comprehensive plan, drainage basin study, traffic data, geotech reports and other CITY owned documents.

#### 4.6 Walk-through

Walk-Through: The CONSULTANT will walk and photograph the site, log and index photos. Photos will include selected property frontages (not to exceed 50 locations) impacted by the project. The off-corridor bike network alignment will be included in the area of the project walk-through.

# 4.7 Confirm Design Criteria and Design Principles

The CONSULTANT will prepare an internal Memorandum that identifies how and which design standards will be applied including CITY, SDOT, WSDOT, AASHTO, King County, Metro and the CATF Corridor Study recommendations. Standards included will relate to roadway geometrics and access, stormwater and drainage as well as transit amenities.

Building off of the CATF Guiding Principles from the Corridor Study, the CONSULTANT work with the CITY and stakeholder groups Design Principles that will guide the design development moving forward. These

principles will establish a framework of mutually agreed upon priorities of the corridor that the design team and stakeholders can use to evaluate the concepts and options as the design progresses.

# 4.8 Peer Street Precedent Study.

The CONSULTANT will provide a sample 3 to 5 comparable streets that share existing and/or future qualities such as: surrounding land use, multimodal channelization, landscape, traffic volumes. These will be documented in a PowerPoint presentation.

# 4.9 Summary Documentation

Before Condition Documentation. Establish and document the "before" conditions that will be used to perform "before and after" analysis in order to gauge the effects of improvement. Document existing conditions of roadway geometry, intersections, signal systems, utilities, landscaping, property access, pedestrian and transit facilities. Much of this data will be summarized from the Corridor Study Report. Coordinate with WSDOT to collect available data related to existing traffic and safety conditions. Coordinate with WSDOT to survey pedestrian activity in the corridor under existing conditions. WSDOT will perform the survey. The Before Conditions data will be summarized in a two to three page memorandum and distributed to the CITY, SDOT, WSDOT, and King County Metro.

# Task 4 Deliverables:

- Survey topographic mapping data provided in Civil 3D 2016 format
- DTM data including TIN, break lines and 1 foot contours also provided in Civil 3D 2016 format
- Survey right of way boundary data provided in Civil 3D 2016 format
- Ortho photos in tiff and jpg format.
- Right of way centerline
- Draft Geotechnical Data Report (PDF version)
- Technical memorandum summarizing the recommended geotechnical design parameters and recommendations for additional explorations or analyses if needed
- Design criteria, design guidance, and design priciples
- Peer Street Precedent Study
- Existing conditions documentation

# 5.0 Concept Development Refinement

- 5.1 Refinement of Roadway Footprint. The preferred design concept will be further refined based on updated design criteria and existing conditions developed in Task 4, and based on comments and input obtained from agency coordination outlined in Task 2. This "refined" preliminary design concept will then be carried into preliminary design (30%) as the preferred alternative.
- 5.2 Structures Refinement. The CONSULTANT will identify preliminary location and size of retaining walls for the project.
- 5.3 Off Corridor Bicycle Network. The CONSULTANT will refine a concept for the neighborhood greenway connecting the Interurban Trail to I-5 via N 143<sup>rd</sup> Street and N 155<sup>th</sup> Street as identified during the 145<sup>th</sup> Corridor Study. The CONSULTANT will develop up to three (3) concepts for each of the following intersections: N 143<sup>rd</sup> St & Aurora, N 143<sup>rd</sup> St & Stone/Roosevelt Way, N 143<sup>rd</sup> St & 1<sup>st</sup> Ave NE, NE 145<sup>th</sup> St & 1<sup>st</sup> Ave NE, and NE 145<sup>th</sup> St & 4<sup>th</sup> Ave NE/I-5 on ramps. 155<sup>th</sup> & Aurora, 155<sup>th</sup> & Meridian. The CONSULTANT will also propose standard treatments to be used along the neighborhood greenway and may include speed humps, curb extensions, diverters, RRFBs,

pavement markings, wayfinding and other signing. The preferred concepts and associated comments will be basis for developing a preferred alternative in Task 6

- 5.4 Opinion of Cost Estimate The CONSULTANT will estimate preliminary quantities and prepare opinion of cost estimate for the preliminary design concept.
- 5.5 Concept Review Workshop. The CONSULTANT will facilitate a workshop with the CITY to review the Refined Preferred Design Concept. The outcomes of the workshop will be value engineering recommendations to carry forward into the 30% design, identification of project risk elements and risk management measures, and confirmation of the project footprint with an increased understanding of potential property impacts and effects of the project. It is assumed that the workshop will include five (5) CONSUTLANT staff and will be a duration of 4 hours.

# Task 5 Deliverables:

- Project footprint, 1" = 100' roll plot
- Preliminary cross sections, 50-ft interval
- Neighborhood greenway intersection concept sketches (1" = 20' plans)
- Neighborhood greenway corridor concept diagram (1" = 100' plan)
- 10% Level Opinion of cost estimate update

# 6.0 Preliminary Design

Task 6, Preliminary Design, will advance the design to establish the concepts for roadway improvements, basic channelization, utility and drainage systems. This task will progress the major design elements to 30% level, and perform specific activities to support this design level. See Attachment 1 for a Sheet List by discipline. The Preliminary Design effort will include modifying the design concept based on WSDOT and stakeholder input; these modifications will be assumed to be minor adjustments within the project limits described. Documentation of the Preliminary Design task will include the preparation of technical memorandum that assess project impacts. Quantity takeoffs will be performed for each discipline under this task. Design coordination meetings to support the 30% design efforts are included in Task 2 Project Delivery and Project Coordination.

#### 6.1 Roadway Design

- 6.1.1 Traffic Analysis. The CONSULTANT will update the traffic operations analysis from the 145<sup>th</sup> Street Corridor Study so that lane configuration, and turn bays are properly sized. Traffic analysis will be included with the WSDOT Channelization submittal documentation. Coordination with WSDOT will be performed under Task 2.
  - Update of City of Shoreline's Travel Demand Model to reflect the detail needed to produce reliable future traffic forecasts. Integrate relevant components of the most recent version of the PSRC regional travel demand model with City of Shoreline's demand model.
  - Expand the City of Shoreline's Synchro model arterial network to reflect the City of Shoreline's adopted Station Area plan and to support City's concurrency program.
  - Analysis of existing traffic conditions. Summarize roadway characteristics such as speed, number of lanes, and traffic control. Update safety assessment to include the most recent 5 years of crash data on N 145<sup>th</sup> St. between and including Aurora Avenue and 5<sup>th</sup> Avenue NE. Existing (2017) traffic volume data (including truck classifications) and signal timing/phasing data will be provided to the CONSULTANT by the CITY for all intersections (signalized and unsignalized). Vehicle volumes will be provided for the weekday a.m. and p.m. peak periods,

as well as the average daily weekday if available. Prepare 2017 a.m. and p.m. peak-hour intersection level-of-service calculations for the following locations on N 145<sup>th</sup> Street: Aurora Avenue, Ashworth Avenue, Meridian Avenue, First Ave NE, I-5 SB Ramps, and 5<sup>th</sup> Avenue NE.

- Analysis of future traffic conditions (year 2035). Prepare level-of-service calculations for the same intersections and peak periods as described under the analysis of existing traffic conditions above for the design alternative and a no-action alternative.
- Prepare traffic signal warrants for the installation of new traffic signal at Ashworth Avenue.
- 6.1.2 Property Access. Evaluate property access alternatives that consider driveway consolidations, driveway relocations, shared access, circulation, parking impacts, and median openings. Collect additional information/access concerns from public meetings included in Work Element 8.
- 6.1.3 Preliminary WSDOT Channelization Plans. The CONSULTANT will prepare and submit preliminary WSDOT Channelization Plans for CITY review and then WSDOT review. The Channelization Plans will be prepared per WSDOT Northwest Region Chan Plan Checklist. It is anticipated that the Chan Plans will be at 1"=40" for 11x17 plots. Coordination with WSDOT will be performed under Task 5.1.6. Revisions to the Channelization Plans and development of the Project Analysis will be performed under Task 7.5.
- 6.1.4 Pavement Design. The CONSULTANT will prepare pavement designs for roadways that will be reconstructed. Three pavement sections will be designed for the project limits, including the following:
  - Flexible pavement design for 145<sup>th</sup> Street
  - Flexible pavement design for Aurora Avenue
  - Flexible pavement design for side street approaches

The subgrade strength parameters (resilient modulus) will be provided under Task 8 Geotechnical. Traffic volumes, including percentage and classification of trucks, will be used from the information generated from the forecasted traffic volumes provided by the CITY.

The pavement sections will be shown on the typical cross-sections as described under Task 6.1.4 Roadway Plans.

#### Deliverable(s):

- Pavement design memorandum to be included in the 30% Design Report
- 6.1.5 Develop Roadway Plans. Once the topography and right-of-way survey has been performed and right-of-way centerlines and parcel lines are established in Task 2, the CONSULTANT will refine the horizontal and vertical alignments to establish the basic project footprint (pavement edges, curb lines, and sidewalk limits) for other disciplines to begin advancing design to the 30% level.

The CONSULTANT will develop 30% Roadway design that include the following elements:

#### Typical Roadway Sections (30%)

The CONSULTANT will prepare preliminary Typical Roadway Section Plans not to scale (NTS) for Auburn Way South and cross streets. The sections will denote roadway and sidewalk widths and materials.

#### Preliminary Paving and Grading Plans (30%)

The CONSULTANT will prepare Preliminary Paving and Grading Design plans at 1"=40' scale (half size) for horizontal. The plans will show dimensions for roadway outlines and sidewalks. The Plans will also show curb returns, tapers, intersection layouts, proposed driveway access and other pertinent surface features, which are typically shown at the preliminary phase. A preliminary layout of property limits will be developed and shown in the form of cut/fill lines and property reconstruction limits. Right of way lines will be shown and right of way needs will be identified on the 30% Design Paving and Grading Plans.

### Preliminary Roadway Profiles (30%)

The CONSULTANT will prepare Preliminary Roadway Profile Sheets at 1''=40' scale (half size) for horizontal. The plans will show existing ground line, proposed grade line, and vertical alignment information.

### Curb Ramp Plans (30%)

The CONSULTANT will prepare Preliminary Roadway Profile Sheets at 1''=40' scale (half size) for horizontal. The plans will show existing ground line, proposed grade line, and vertical alignment information.

### Task 6.1 Deliverables:

- Traffic analysis Synchro outputs and model files
- Preliminary WSDOT Channelization Plans, PDF version
- Pavement design report
- Roadway plans

# 6.2 Stormwater Design

- 6.2.1 Offsite Analysis and Drainage Memo. The CONSULTANT will collect and review available data concerning drainage issues. Sources of data are data from the CITY's stormwater management staff, GIS and Stormwater Comprehensive Plan. The CITY will provide drainage system information in GIS format and available record drawing information of existing storm sewers, culverts, stormwater management facilities, or related planning information in the vicinity of the site. It is anticipated that up to two (2) field visits with two (2) CONSULTANT staff will occur as part of this sub-task. The Offsite Analysis will be included in the Type, Size, and Location Memo (TSL). The CONSULTANT will prepare a brief Type, Size and Location (TSL) memo that summarize changes in impervious surfaces revisions and describes the proposed stormwater features in the preliminary design, for City review. It will include a brief narrative and draft plans/sketches showing estimated footprint and location of proposed treatment and flow control facilities; major conveyance systems. City review comments on the Stormwater TSL and plans/sketches will be incorporated into the 30% drawings in task 6.2.2,
- 6.2.2 Drainage Plans. The CONSULTANT will develop 30% Drainage and Utilities Project Design Plot at 1"=20' scale. The Plot will show preliminary locations for drainage structures and conveyance systems. The stormwater modeling will be done by the CITY's on-call stormwater modeling consultant. The CITY will provide the modeling results to the CONSULTANT.

#### Task 6.2 Deliverables:

- Stormwater TSL Memo up to 10 pages in length
- Offsite Analysis up to 6 pages in length
- 30% Drainage and Utilities Roll Plot at 1"=20' scale

145<sup>TH</sup> CORRIDOR EXHIBIT B1

# 6.3 Utilities Design

6.3.1 Utility Design. Relocation of CITY water and sewer utilities and appurtenances will be depicted by the CONSULTANT on the Drainage and Utility Project Design Plot.

Non-City Utilities Include:

- Seattle City Light Distribution Power
- Seattle City Light Transmission Power
- Puget Sound Energy Natural Gas
- SPU Water and Sanitary Sewer
- Comcast Cable TV/ Fiber Optics
- Century Link Telephone
- 6.3.2 Underground Utility Plan. The CONSULTANT shall coordinate with Seattle City Light, CenturyLink, and Comcast to develop a preliminary plan to relocate select overhead utilities underground. Each utility company will provide the CONSULTANT a preliminary schematic design of their proposed underground facilities showing conduit sizes and runs, major structure/manhole locations, street lights and termination points. The CONSULTANT will identify utility conflicts and coordinate with the franchise utilities for required utility relocations, including coordination of plans for undergrounding all overhead low voltage utilities and new street illumination. The CONSULTANT will coordinate with King County for the undergrounding of their overhead signal interconnect. The CONSULTANT will coordinate with SPU Wastewater, Puget Sound Energy, and all other underground utility operators for the relocation of underground utilities. The CONSULTANT will incorporate this information into the design so that it is compatible with other utility and roadway facilities and produce a plan showing preliminary locations of vaults, utility trench routes and termination points. Potential conflicts with existing utilities will be identified and will be the basis to confirm critical locations for utility potholes. Three (3) meetings will be held with interested utilities as part of Task 2.7.

#### Task 6.3 Deliverables:

• 30% Drainage and Utilities Roll Plot at 1"=20' scale

#### 6.4 Preliminary Traffic Signal and Illumination

6.4.1 Preliminary Illumination Design. The CONSULTANT will prepare preliminary illumination design plans as part of the 30% design package.

Illumination design will be based on the width of the roadway and potential for placing luminaires on the outside along the corridor segment. The CONSULTANT will work with the CITY and SDOT to determine the general layout and configuration type of light fixture(s) for the roadway lighting to be used on this project and model photometrics that match the chosen fixture.

The CONSULTANT will provide preliminary lighting designs that show spacing of luminaires for each option meeting lighting requirements. Preliminary design will show the lane configuration, type of luminaire configuration, spacing between luminaires, and the light level results. Preliminary Paving and Grading Project Design Plot will indicate luminaires' locations. 6.4.2 Preliminary Traffic Signal Design. The CONSULTANT will prepare preliminary traffic signal design plans as part of the 30% design package.

The CONSULTANT will work with the CITY to determine the general layout and configuration for the traffic signal poles and appurtenances.

The CONSULTANT will provide a preliminary traffic signal design that shows proposed locations for signal poles, controller and power service cabinet. Preliminary Paving and Grading Project Design Plot will indicate luminaires' locations.

### Task 6.4 Deliverables:

- Light level result plans
- Traffic Signal layout plan

# 6.5 Structures Design

This task consists of preliminary structures design for retaining wall and stormwater vault concepts to be carried forward into final design and construction in subsequent phases of the project.

- 6.5.1 Data Collection and Review. Assemble and review the data needed to perform the structures work elements including:
  - Review of available site survey and geotechnical data.
  - Review of existing reports, maps, utilities, and as-built plans.
  - Review proposed roadway, profiles, and related geometrics.
- 6.5.2 Preliminary Structures Design. The CONSULTANT will evaluate up to two (2) alternatives for the retaining walls. Approximate geometric requirements will be defined, such as elevations, length, width, and height. Preliminary construction staging/sequencing concepts and existing site constraints will be identified. Advantages and disadvantages of each concept and potential constraints from a structural and constructability perspective will be identified. Comparative-level opinion of costs will be developed for the major cost elements of each alternative.

Preliminary layouts will be prepared for the purpose of establishing retaining wall type, size, and location to be used for establishing a basis for final design. Preliminary opinions of cost will be developed. Preliminary foundation design concepts for the structural elements (vaults) of the project will be prepared in coordination with the CONSULTANT's project geotechnical engineer.

This task includes two (2) meetings throughout the course of the project with agency staff and to coordinate the technical elements of the work.

#### Assumptions:

- Up to 10 fill walls assumed on north side of 145<sup>th</sup>
- Fill walls will be block walls, rock walls, MSE walls, concrete cantilever, or solider pile depending on wall height and distance of wall from sidewalk
- One cut wall is assumed, east of 1<sup>st</sup> Ave NE, and soldier pile or soil nail wall is assumed

#### Task 6.5 Deliverables:

- Structures Preliminary Design Technical Memorandum to be included in the 30% Design Report
- 30% Retaining Wall Plans to be included in the 30% Drawing Set

# 6.6 Preliminary Landscape and Urban Design

6.6.1 Landscape/Urban Design Concept. The CONSULTANT will prepare one (1) landscape/urban design concept. This concept will include a draft illustrative plan, typical sections and sketch vignettes to highlight character be rendered on the 1"= 40' scale (half-size) conceptual roadway plan. Prepare landscape and urban design portion of the preliminary design memorandum.

Elements to be included as a part of the urban design concept will look at cohesive contextual solutions that address the character of the immediate surroundings yet offer a continuity through the corridor:

- Streetscape Urban Design Elements for special paving, site furnishings, bicycle facilities, pedestrian lighting, plant material, median treatment etc. (up to six (6) typical 20 scale annotated section-vignette sketches).
- Policies and Procedures for Landscaping Memorandum. The CONSULTANT shall coordinate with the City of Seattle on landscaping policies with respect to underground utilities and shall prepare a technical memorandum that identifies the project's policies and design guidelines for locating trees and plant types. Assume the memorandum will not exceed five (5) pages. The coordination will involve two (2) meeting with the City of Seattle identified under Task 2.
- Street Tree and Landscape Plan (40-scale plan with recommended plan materials image matrix)
- Typical Intersection treatment concept Identify pedestrian safety features and crossings for three (3) different typical intersections, including cross walks. (3 typical 20-scale plan enlargement)
- Gateway options (20-scale plan enlargements of Interurban, Aurora, 1St Ave, I-5) up to 8 sketch perspective renderings)
- Conceptual Property Interface Treatment (up to 2 typical 20-scale plans within street rightof-way, including low walls and other site specific conditions.)
- 6.6.2 Refinement of Design Alternative. The preliminary alternative will be further refined based on comments and input obtained during the community and agency involvement outlined in Work Element 6. This "refined" preliminary design alternative will then be carried into final design as the preferred alternative.

Elements to be included as a part of the refinement design:

- Updates and refinements to the above graphics
- Lighting Family. Coordinated concept diagrams for roadway, pedestrian, and possible feature lighting.
- Transit Interface. Up to 2 conceptual sketches illustrating transit facilities integrated with the overall corridor design.
- Irrigation approach (text description of irrigation concept with product cutsheets)(HBB)
- Presentation Graphics the CONSULTANT will revise urban design presentation graphics up to three (3) times based on comments received from the CITY.

- Property frontage interface and modifications. For the purposes of adjacent property and business owner outreach the CONSULTANT will provide up to 12 plan or section diagram sketches to illustrate conceptual frontage modifications. Properties selected should include typical and significant interface concepts as well as partial or full acquisition opportunities, may include:
  - Opportunities with Full Acquisition. Parcels that will be vacated as a result of improvements or parcels where the existing use remains will be identified. An appropriate urban redevelopment option will be recommended. For vacated parcels, parks, transit areas, public art, monuments, or reconfiguring the parcel with the existing use will be recommended. Up to 4 typical plan sketch examples of urban redevelopment options (for site impacts, typical examples of building façade modifications will be sketched to identify potential options to property and business owners.). Up to 4 typical plan examples of urban design opportunities will be hand-illustrated (2 full-site redevelopment, 2 for not developable – parks, etc).
  - Opportunities with Partial Acquisition. Develop criteria for redevelopment options.
    Examine site layout conditions. Potential improvements will be identified, which may include building façade modification, potential landscape modification recommendations, or building relocation. Up to 2 plans or elevations will be produced.
  - Land use and development standard allowances. A summary of possible code/policy allowances to enable some aspects of design to be achieved through redevelopment will be provided. Code/policy examined shall include: access and parking requirements, setbacks, building form and mass, building location, on-site landscaping requirements, signage, poles, fencing, stormwater, and drainage. Development standards will also be examined. Potential amendments to land use code and development standards will be identified. Up to 4 conceptual (not property-specific) plans, sections, or elevations will be drawn to illustrate conformance issues.

#### Task 6.6 Deliverables:

- Urban Design Elements vignette sketches
- Policies and Procedures for Landscaping Memo
- 30% Landscaping Plans to be included in the 30% Drawing Set
- Intersection Treatments figures
- Gateway Option sketches
- Property Interface Treatments typical plans
- Transit Interface sketches

# 6.7 Off Corridor Bike Network

The CONSULTANT will develop one (1) preliminary design for the neighborhood greenway that is based on feedback from Task 5. Design drawings set to include alignment plans, intersection enlargements and details. The alignment plans will extend the length of the corridor from the Interurban Trail to I-5, and include speed humps, curb extensions, diverters, RRFBs, pavement markings, wayfinding and other signing. Intersection enlargement plans at the following intersections:

- N 143rd St & Aurora
- N 143rd St & Stone/Roosevelt Way
- N 143rd St & 1st Ave NE
- N 155<sup>th</sup> St & Aurora Ave N

- N 155<sup>th</sup> ST & Meridian Ave NE
- NE 145th St & 1st Ave NE
- NE 145<sup>th</sup> St & 4<sup>th</sup> Ave NE/I-5 on ramps

Signal design for the Off Corridor Bike Network will be covered under Task 6.4.

#### Task 6.7 Deliverables:

- Alignment Plans, 1" = 40' scale
- Intersection Enlargement Plans, 1" = 20'
- Opinion of Cost Estimate for the Off Corridor Bike Network
- 6.8 Quantities and Opinions of Cost. The CONSULTANT will estimate preliminary quantities and prepare opinions of cost for the preliminary design alternative.
- 6.9 Report Production. The CONSULTANT will assemble the Draft Design Memorandum and submit ten (10) copies to the CITY.
- 6.10 Design Review Workshop. The CITY will conduct a design review workshop with the CONSULTANT to present and discuss the CITY's review comments. The intent is to assemble key CITY staff with the CONSULTANTs designers to confirm that design, construction and operational issues have been identified and coordinated sufficiently to proceed with the Final Design Memorandum.
- 6.11 Value Engineering. The CITY will conduct a Value Engineering (VE) Study of the project after the Design Memorandum is complete and the preferred alignment is identified. A presentation detailing the design criteria and constraints of the project will be given by the CONSULTANT to assist the CITY in this study. The CONSULTANT will prepare a written response to the Value Engineering Study recommendations and include applicable recommendations into the final design.
- 6.12 Final Design Memorandum. Compile all comments including the CITY's and WSDOT (Channelization, signals/traffic & structural) and VE study and incorporate these comments into the design memorandum.

# 7.0 Environmental

The environmental documentation assumes federal funding, and therefore both the National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA) apply.

# 7.1 NEPA Determination of Class of Action

WSDOT and CITY will need to confirm the appropriate NEPA document prior to commencing full environmental analyses. This task includes the development of documentation to solicit WSDOT agreement on the type of NEPA analysis. A matrix will be developed to provide information on the potential project impacts and the mitigation that would be implemented. Because the project's adverse effects are assumed to be avoided or minimized to less than significant the required NEPA documentation is likely to result in a NEPA a Documented Categorical Exclusion (DCE).

#### Assumptions:

- Task will require development of environmental justice documentation as result of the potential residential displacements. Work under Task 7.2.4 will be incorporated into the matrix.
- If WSDOT prefers an EA, information on the scope is included below under Task 7.6.

145<sup>TH</sup> CORRIDOR EXHIBIT B1

# **Deliverables:**

• Matrix supporting the NEPA Class of Action

# 7.2 NEPA Supporting Documentation

To support the development of the environmental documentation technical reports will be prepared to address the affected environment, potential construction and operation impacts, and potential mitigation measures. All supporting documentation will be prepared consistent with the WSDOT Environmental Manual.

The following technical reports are assumed given the potential for impacts with each of the environmental resources.

- 7.2.1 **Transportation.** The CONSULTANT will conduct a traffic analysis for the project and document it in a Transportation Technical Report. The report will include results of the analysis performed in Task 6.1.1.
- 7.2.2 Cultural Resources. The Technical Report will include an affected environment analysis reflecting an initial area of potential effect (APE). The APE is primarily limited to where ground disturbance would occur, including roadway modifications, stations, and new overhead catenary poles. For archaeological resources, the APE will be limited to those areas of direct ground disturbance from the project and assumed to be a maximum depth of 12 feet. For archaeological resources, this effort assumes review of the DAHP database and previous survey reports and preparation of a prehistoric and ethnographic context. No archaeological field work is anticipated due to the previously disturbed nature of the urban environment, most of which is paved.

For built environment resources, the effort assumes an intensive survey of properties in the APE with construction dates of 45 years from the anticipated date of initial construction (2020, requiring the identification and assessment of properties built in 1975 or before) that have not had a previous determination of NRHP or local landmark eligibility. This effort shall also include the preparation of SHPO database Historic Property Inventory (HPI) forms and mapping of all surveyed properties within the APE. The number of HPI forms will be based upon the concurred APE boundary. The Technical Report shall also include a table listing all properties inventoried, their addresses, the date of inventory, and the proposed eligibility determination or a prior determination of eligibility, if applicable, accompanied by a mapping of all properties surveyed within the APE.

The Technical Report to be prepared in compliance with Section 106 of the National Historic Preservation Act, documenting methodology, data sources, literature search results, historic context, determinations of eligibility, and finding of effect. HPI forms would be included as an appendix.

#### Assumptions:

- Attend up to eight (8) meetings for two (2) historic staff.
- One (1) field visit with up to two (2) historic staff will be required for built environment survey.
- Assumes up to 150 HPI forms will be required.
- No field work will be required for archaeology.
- There will be no adverse effect of historic properties.

- Consultation is limited to drafting of correspondence and advice to client. No consultation meetings will be held and no other materials will be produced.
- Assumes a finding of No Adverse Effects to historic properties and archaeological resources.
- Timeline for Section 106 process concurrent with NEPA process.

### Task 7.2.2 Deliverables:

- Methodology Memorandum procedures and timeline to meet Section 106 requirements
- Draft letter/memo identifying APE for WSDOT/FHWA and DAHP approval
- Draft Cultural Resources Technical Report for CITY review (electronic and 5 hard copies)
- Draft Cultural Resources Technical Report for WSDOT/FHWA review (electronic and 5 hard copies)
- Draft Cultural Resources Technical Report for DAHP review (electronic and 5 hard copies)
- Final Cultural Resources Technical Report (electronic and 15 hard copies)
- DAHP/SHPO correspondence
- 7.2.3 **Noise.** The CONSULTANT shall document the methodology and assumptions used to guide a Noise Analysis and prepare a Noise Technical Report. The report will identify areas with the potential of being impacted by noise and identify appropriate noise mitigation measures that will minimize impact in a cost-effective manner. To the extent possible, specific locations and design parameters for the mitigation measures will be included in the preliminary design of the project.

CONSULTANT will perform a quantitative noise analysis within the study area. The analysis will include existing baseline conditions and predicted changes in noise levels resulting from proposed project. In accordance with FHWA requirements, noise abatement measures will be considered where traffic noise impacts are predicted. CONSULTANT will provide location, length, height, profile, estimated cost and number of benefiting noise sensitive properties for each proposed barrier.

The analysis will contain a discussion of impacted areas that do not meet the criteria for abatement and specifically note reasons for not including mitigation. Construction activities that may cause annoyance at nearby noise sensitive land uses will be qualitatively assessed.

#### Assumptions:

- This scope of work assumes that noise monitoring and modeling will be conducted for no more than five (5) locations.
- Detailed noise barrier design, if required, is limited to up to 2 barriers approximately 2,000 feet in length.
- Build and no-build traffic data will be provided by engineering team to conduct the noise analysis.
- Any engineering and traffic related data developed that are required to start this task will be provided.

#### Task 7.2.3 Deliverables:

- Draft Noise Technical Report for CITY review
- Draft Noise Technical Report for WSDOT/FHWA review
- Final Noise Technical Report

7.2.4 Environmental Justice. CONSULTANT shall prepare an Environmental Justice Analysis Technical Report in compliance with Presidential Executive Order 12898, Federal Actions to Address Environmental justice in Minority Populations and Low-Income Populations; US Department of Transportation (DOT) Order on Environmental Justice (DOT Order 5610.2a); and Federal Highway Administration (FHWA) Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (FHWA Order 6640.23). The study area is assumed to encompass the areas within 0.5 mile of the alternative. The environmental justice analysis will provide detailed demographic characteristics of populations (including minority, low-income, and limited English proficiency) within the study area, review the scope of project effects using the technical reports and technical memoranda prepared for the project, and taking into account the demographics of the impacted areas, the results of public involvement efforts, and taking into consideration off-setting benefits that may also result from the project alternatives. The results of all environmental impact analyses prepared for the No Build Alternative and build alternative will be reviewed during operations and construction. Considering proposed mitigation and the benefits provided by the project, the section will end with a draft summary conclusion regarding the likelihood to cause potential disproportionately high and adverse effects on minority and/or low-income populations, compared to the general population, after taking into account project mitigation measures and off-setting benefits.

#### Assumptions:

• The latest American Community Survey data will collected for demographics and augmented with elementary school data.

### Task 7.2.4 Deliverables:

- Draft Environmental Justice Technical Report for CITY review
- Draft Environmental Justice Technical Report for WSDOT/FHWA
- Final Environmental Justice Technical Report
- 7.2.5 **Hazardous Materials**. The CONSULTANT will prepare a Hazardous Materials technical memorandum to address potential environmental impacts, focusing on sites representing the highest level of complexity or concern that could impact the project's development. The hazardous materials study area will extend 1/8 mile around the project. Regulatory database information on existing sites with known or potential contamination will be collected within the study area from the Washington State Department of Ecology Facilities database and include a historical map review based upon publically accessible data. The technical memorandum will describe the general land use history and the physical environmental characteristics, potential mitigation measures and cumulative impacts will be identified.

#### Assumptions:

- Soil, surface water, or groundwater sampling and chemical analyses are not included in this scope of work.
- Phase I is not included in this scope of work.

#### Task 7.2.5 Deliverables:

- Draft Hazardous Materials Technical Memorandum for CITY review
- Draft Hazardous Materials Technical Memorandum for WSDOT review
- Final Hazardous Materials Technical Memorandum

# 7.3 GIS and Graphics for Environmental Documentation

CONSULTANT shall conduct GIS data collection and analysis efforts in support of the environmental analyses.

# Assumptions:

- Maps and graphics shall be made using ArcGIS 10 and/or Adobe Creative Suite, as appropriate.
- Original graphics may be used by CITY for outreach activities, Board presentations, or other purposes.
- Up to 20 maps and graphics will be prepared to be used in the DCE and supporting technical reports.

# Task 7.4 Deliverables:

• Maps and graphics in support of the environmental documentation and technical reports

# 7.4 NEPA Documented Categorical Exclusion

CONSULTANT, in coordination with the CITY, will use the latest DOT Form 140-100EF, Local Agency Environmental Classification Summary (ECS), to prepare a Draft NEPA Environmental Classification Summary (ECS). CONSULTANT will use information developed as part of the technical supporting documentation and available existing information as the basis for preparing the Draft ECS.

Information used to revise and complete the ECS will be based on, and supported by and the technical memorandums prepared in Task 7.2. CONSULTANT will confirm that the ECS contains current information to indicate the NEPA approaches for environmental review and documentation.

CONSULTANT will submit a first draft of the Final ECS for review and comment by the CITY and other entities as determined by the CITY. Following this review, CONSULTANT will incorporate revisions responsive to the reviewers' comments and submit the Final ECS to the CITY. Supporting documentation will be submitted as separate submittals to WSDOT as needed.

# Deliverables:

- Draft ECS for CITY Review
- Draft ECS for WSDOT Review
- Final ECS

# 7.5 SEPA Documentation

The CITY's State Environmental Procedures Act (SEPA) regulations under Shoreline Municipal Code 20.30.640 allows the use of NEPA documents to support a SEPA threshold decision:

# Assumptions:

- CITY will adopt the NEPA DCE in lieu of a SEPA checklist to support a Determination of Nonsignificance.
- CITY will prepare and distribute the SEPA adoption notice for the project.
- No new deliverables. Deliverables the same as NEPA documentation.

# 7.6 Environmental Assessment Documentation

If it is determined that a NEPA Environmental Assessment (EA) is required the CONSULTANT will prepare the required documentation in compliance with NEPA for the Build and the No-Action alternative. It is assumed that the EA will result in a Finding of No Significant Impact (FONSI). For the following environmental resources, the CONSULTANT will prepare technical memorandums. As needed, the memorandums will provide information on the affected environment, potential impacts during construction and operation, and potential mitigation measures. These technical memoranda will be used to prepare the various sections of the EA.

#### Assumptions:

- Technical reports and memoranda prepared above under Task 7.2 (Transportation, Cultural Resources, Noise, Environmental Justice, and Hazardous Materials analysis) will be used for the EA documentation and no changes to these technical report will be required.
- Assumed that the EA will result in a Finding of No Significant Impact (FONSI). If a NEPA Environmental Impact Statement is required a separate scope and budget will be prepared.
- Public and agency scoping meeting(s) for the EA are addressed under Task 8.0.

### Task 7.6 Deliverables:

The deliverable for each sub task below would be individual technical memorandums which will be collected as part of the NEPA documentation. Information from these technical memorandums will be incorporated in the EA.

- Draft for CITY review
- Draft for WSDOT/FHWA review
- 7.6.1 **Social/Economic**. The analysis will examine the potential for the project's potential environmental impacts (applying the results of other topics areas such as noise, visual, transportation, and displacements) to individually or cumulatively affect community cohesion, impacts on community facilities, and effects on safety. The memorandum will summarize demographic information (up to 0.5 mile from alternative) and include information on community facilities. Based upon outreach efforts the analysis will include neighborhood concerns and potential impact issues. This analysis will take into account the mitigation measures proposed by the other environmental resources. It will examine defined neighborhoods, community facilities and social interactions within the study area and cross reference other environmental resources.

The technical memorandum will also analysis existing or planned parks and recreation areas within 0.25 miles of the alternative. Information will be provided on the type, owner, and amenities. Information on public services, including law enforcement, fire and emergency services, solid waste, schools, and hospitals in the study area, will be incorporated in the technical memorandum. These will be mapped and a qualitative assessment of impacts to their facilities, service, and response routes will be conducted as part of the analysis. Information will also be provided on utility providers and identify any major utility crossings or shared alignments where major utility access or maintenance activities could be disrupted. Typical impacts to utilities would be described in a more qualitative fashion.

The economic analysis will review the general characteristics of the local and regional economy, including economic activity indicators, including sales tax revenues, wages, and property values within the local study area, major private and public employers, size of businesses in the areas affected, employment, local government revenues, and regional, county or local economic development plans and districts. The analysis will include a qualitative review of the effects of the project during construction and operation on economic activities, and potential localized economic effects of changes to parking, access or other transportation services. The analysis will also capture the potential for construction-related economic activity.

### Assumptions:

- CITY or outreach will conduct any needed coordination with neighborhood associations, community facilities, and/or business associations.
- Information on location and type of utilities will be provided by engineering team.
- CITY will conduct any needed coordination with public service providers.
- Economic development is not primary goal identified in the purpose and need, and therefore a detailed economic analysis is not required.
- Economic analysis will focus on the local (City of Shoreline and Seattle) economy only and will not address the regional economy.
- 7.6.2 **Displacement and Relocation Technical Memorandum**. CONSULTANT shall prepare a technical memorandum identifying any properties affected by type (residential, commercial, and public), and total displacements by type. Impacts from construction, if known, will also be evaluated. The memorandum will identify the properties affected in tabular and mapped format. The analysis will also include a qualitative assessment of whether relocation opportunities would be available within the project area or the region for potentially displaced commercial, residential or other uses. While this would not identify specific displaced uses or specific sites for relocation, it would note types of properties that could be more difficult to relocate or where local study area replacement opportunities would be limited.

#### Assumptions:

- Although the memorandum will address mitigation of displacement impacts, it will not evaluate compensation amounts, determine fair market values, or otherwise provide analysis to determine actual dollar amounts that would be offered for displaced properties. This type of evaluation will occur later in the project when design for the alignment and associated facilities is further defined and finalized.
- 7.6.3 Land Use. CONSULTANT shall prepare a technical memorandum to address existing and planned land uses for jurisdictions within 0.25 mile of the alternative. Information on existing land use patterns, zoning, and adopted comprehensive plan and in-process plan or subarea plans within the study area will be discussed. Land use will be described in the following broad categories: single-family residential, multifamily residential, office, retail, mixed use, industrial, parks, transportation/state uses, other public uses, and vacant. GIS maps will be used to display existing land uses and/or zoning. The impact analysis is anticipated to include a review of acquisitions and displacement information for impacts to land use patterns, and a review of the consistency of the project with key adopted reginal and local plans and development regulations.
- 7.6.4 **Section 4(f)/6).** (f If required, a separate Section 4(f)/Section 6(f) technical memorandum will be provided describing Section 4(f) and Section 6(f) regulations, identifying park/recreational and cultural resources subject to Section 4(f) or Section 6(f) requirements, describing individual Section 4(f) resource attributes and features, assessing the potential for project alternatives to use or convert Section 4(f) resources, and describing the outreach and coordination to date with parties with jurisdiction over the resource. The technical memorandum will conclude with an assessment of potential Section 4(f) uses, and, as respectively applicable, the following: a discussion of *de minimis* determination findings; a review of avoidance alternatives identified todate; an assessment as to whether a feasible and prudent avoidance alternative is available; a least harm factors analysis (if more than one alternative results in a use of a Section

4(f) resource and there is no feasible and prudent avoidance alternative available). The appendix will also include a definition of parks or recreational resources that may involve noise sensitive uses. This task will also support the development of materials and draft correspondence to assist CITY, WSDOT and FHWA in consulting with agencies having jurisdiction over potentially affected resources, and the development of draft *de minimis* impact determination documents as attachments or appendices to the Section 4(f) evaluation (if *de minimis* applies).

### Assumptions:

- CITY will conduct any needed coordination with owners of parks and recreational facilities.
- No Land and Water Conservation Funds (LWCF) have been used within the corridor.
- Impacts on Section 4(f) resources will remain *de minimis* and there are no effects on Section 6(f) resources.
- 7.6.5 **Visual**. CONSULTANT shall prepare a Visual technical memorandum based upon the FHWA visual impact assessment methodology and refinements to it that have been developed by WSDOT for projects in Washington. Views and/or view corridors, if described in local comprehensive plans, will be identified and along with areas containing sensitive viewers (such as residential areas and parks) will be considered for Key Observation Points (KOPs). The selection of KOPs to be used in the assessment will be done in conjunction with the CITY, and potentially with input from WSDOT. Photographs from the selected KOPs will be used to depict existing visual conditions and visual quality. Photo-simulations for up to two (2) of the KOPs will be developed to depict how the alternative would change landscape character, existing views, and potentially change visual quality.

# Assumptions:

- Up to five (5) photos in locations in agreement with the CITY.
- If required, up to two (2) visual simulations will be developed for the analysis.
- 7.6.6 **Air Quality.** An air quality analysis will be performed to evaluate operational and construction impacts from the proposed project. The project is within an area of attainment and therefore no air quality conformity is required. The air quality analysis will compare and present the air quality impacts of the project and address potential mitigations measures for impacts, if needed. The main tasks for air quality include:
  - **Construction Impacts Analysis.** An evaluation of impacts during construction will be evaluated qualitatively and any mitigation measures for potentially significant impacts would be identified.
  - **Greenhouse Gases (GHG) and Climate change**. A GHG emissions and potential impacts from project operation within the region will be addressed based on a limited analysis using generic emission factors to show a reduction in GHG based on a reduction in VMT. Construction GHG will be developed through the SEPA Greenhouse Gas Emissions Worksheet or equivalent construction equipment use and costs conversion to GHG estimate.

# Assumptions:

 Qualitative analysis of criteria pollutants emissions during project construction is not required.

- CO hot spot modeling is not required (per December 16, 2016, USEPA, Region 10 letter to PSRC, "Seattle- Tacoma CO area did not extend the maintenance period beyond 20 years from redesignation, transportation conformity requirements for CO.")
- Since project is not in a PM nonattainment area, a PM conformity analysis is not necessary.
- Change in GHG is a generic number and does not necessarily indicate the true project change on quantified GHG emissions.
- 7.6.7 **Geology and Soils.** CONSULTANT shall prepare a technical memorandum that describes geologic and soil conditions in the project study area and any anticipated effects on slope and soil stability that would occur from the build alternative. The analysis includes a review of construction impacts for the alternative, including but not necessarily limited to erosion, slope instability, construction vibrations, settlement, excavations, and dewatering. Applicable mitigation measures or best management practices (BMPs) will be specified.

### Assumptions:

- Analysis based on existing and known information. No geotechnical field work associated with the task.
- 7.6.8 **Surface Water/Groundwater/Floodplains**. The CONSULTANT will prepare a Surface Water/Groundwater Technical Memorandum that will characterize and describe existing drainage and water quality conditions in the project corridor; identify (to a qualitative level only) the probable adverse impacts of the design alternative on drainage systems and surface water resources; and recommend mitigation measures that could be implemented. It is assumed that no flow or water quality data will be collected and no flow calculations will be done for surface water quantity except as needed to estimate annual pollutant loading to receiving waters. If flow data are available for some water bodies, those data will be used. No calculations will be done to determine the sizes of surface water collection, conveyance, and/or treatment facilities.

Existing streams and lakes will be identified that would be directly impacted by the project or that would receive stormwater runoff from the design alternative. If required, rivers, streams, and lakes with important aquatic resources will be determined from available literature and information obtained from resource agencies.

The potential for the project to increase erosion, sedimentation, stormwater runoff, and other construction-related pollutants will be determined. Potential stormwater quantity and quality treatment measures that may be used for the design alternative will be identified. Potential locations for proposed stormwater treatment facilities will be identified.

Long-term annual pollutant loads to receiving surface waters will be estimated using the methods described in the most recent WSDOT Highway Water Quality Manual. Those methods rely on predictions of average daily traffic, determinations of roadway length, change in impervious surfaces, and relationships established by long-term roadway runoff studies in Washington.

# Assumptions:

- Given the lack of surface water in the project area there are no designated floodplains
- 7.6.9 **Fish, Wildlife, and Vegetation and Wetlands.** CONSULTANT shall prepare a draft "no effect" letter. Given the heavily urbanized environmental and lack of habitat in the corridor, the project is expected to have no effect but this needs to be confirmed. The analysis will identify and document potential construction, operational, and cumulative impacts along and near the

project alternative. The field review/study area will encompass the areas within 200 feet of either side of the project alternative, but the description of affected environment will acknowledge ecosystem features such as streams or natural corridors that are partly within or cross through the field review area. This includes potential impacts to wetlands, threatened and endangered species, vegetation, wildlife habitat, wildlife, and aquatic species and habitat. Proposed mitigation measures or best management practices (BMPs) will be specified, if required.

### Assumptions:

- Assumes that there are no threatened and endangered species that would be affected by the project and only a No Effect Letter will be required. If a Biological Assessment is needed a scope and budget amendment will be required.
- No wetland delineations will be required, and if any wetlands are identified as part of the field survey an amendment to the scope and budget will be required.
- If ecosystems are not present in the project area and would not be affected by the proposed project information will be provided in the EA to note the resource is not evaluated.
- 7.6.10 **Indirect and Cumulative.** The CONSULTANT will work with the CITY to assemble a list of the reasonable and foreseeable future projects (RFFPs) that may cumulatively impact the environmental resources under analysis for the project. The analysts will review previous environmental documentation to assess the incremental impacts associated with these projects by resource topic. The analysts for each of the resources, will described the past and present state of the resources, then discuss whether other RFFPs could incrementally effect the resource under analysis and finally, assess whether the project, after mitigation, may also result in residual effects on the resource. These three steps will determine if the project may result in cumulatively affecting the resource.

#### Assumptions:

• CITY will assist in providing information on RFFPs in the study area.

# 7.7 Environmental Assessment

The technical reports and technical memoranda will be summarized and consolidated into the Environmental Assessment (EA). In addition to these technical environmental elements, the EA will include the following sections:

- Purpose and Need for the Project.
- Description of the Alternatives, including a discussion of the evaluation and screening of other alternatives and how the preferred alternative was selected.
- Comments and Coordination.

# Assumptions:

- WSDOT will prepare the Notice of Availability announcing that the EA is available for review.
- CONSULTANT will meet with CITY, WSDOT, and FHWA to review comments on the draft EA.
- CONSULTANT will be responsible for printing the document

#### Task 7.7 Deliverables:

- Draft Environmental Assessment including appendices for CITY review (electronic and 5 hard copies)
- Draft Environmental Assessment including appendices for WSDOT/FHWA review (electronic and 5 hard copies)
- Draft Environmental Assessment including appendices for legal review (electronic and 5 hard copies)
- Final (signature-ready) EA for approval and signature
- Final printer proof and electronic/web version for public release
  - 25 hard copies of EA and 15 copies of technical reports for distribution
  - 50 CDs for distribution

# 7.8 FONSI and EA revisions, including responses to comments on the EA

CONSULTANT shall prepare a draft FONSI that states the determination of significance for any environmental effects found in the project area. CONSULTANT shall respond to two sets of comments and shall prepare two revised FONSI documents.

The FONSI should include the following:

- Description of the Proposed Project
- Summary of Agency Coordination and Public Opportunity to Comment
- Summary of Comments on the EA
- Reference to Appendix where Mitigation Measures are addressed
- Determinations and Findings discussed for all applicable regulations (e.g., NEPA, Section 106, 4(f), ESA and Environmental Justice)

The previously issued EA is not reissued but rather the following are included in a FONSI package for FHWA approval. In addition to the required content format above, the following attachments would also be prepared:

- EA and Errata and Revision Sheet (as necessary to reflect changes since the EA was issued)
- Responses to Written and Oral Comments (with comments generally numbered in each letter and responded to according to number)
- Summary or Transcript of Public Hearing (if held)
- List of Project Mitigation Commitments

This task includes preparation of two (2) drafts and one final EA document (and referenced documents such as technical reports and appendices) and summary documents, as follows:

- 1st FONSI document for CITY review
- 2nd document responds to CITY comments and is prepared for WSDOT/FHWA review
- 3rd document responds to WSDOT/FHWA comments

# Assumptions:

- The CONSULTANT will provide each draft submittal in electronic and hard copy form. Electronic files should be provided in both MS Word and Adobe PDF format.
- All review comments CITY, WSDOT, FHWA and agencies are assumed to be provided in tabular format, consolidated by agency, and provided prior to the issuance of the next round revision version.
- The CONSULTANT will arrange for printing and delivery to CITY, and provide CITY with a final electronic version of the FONSI, and EA with any revision/errata sheets. This will be suitable for

inclusion on CITY's website. The CONSULTANT will provide CITY with the following copies of the final FONSI and EA materials:

- Hard copies: 15 including 15 copies of each Technical Report; CDs: 30
- Each resource analysis will cover temporary construction impacts as well as ongoing/permanent impacts, including from operations. All will also include indirect and cumulative impacts, consistent with Council on Environmental Quality and USDOT guidance. The organization of these discussions within the products would be based on detailed outlines to be approved by CITY, WSDOT, and FHWA as part of the development of methodologies.

#### Task 7.8 Deliverables

- Two (2) draft FONSI documents
- One (1) final FONSI document
- Two (2) draft errata sheets and EA revisions
- One (1) final errata sheet and revised EA

# 7.9 GIS and Graphics for Environmental Documentation

CONSULTANT shall conduct GIS data collection and analysis efforts in support of the environmental analyses. Maps and graphics developed under Task 7.4 will be used to complete the EA and Task 7.9 provides additional graphics needed to support the EA

### Assumptions:

• Up to 35 maps and graphics will be prepared to be used in the EA and supporting technical memoranda.

### Task 7.4 Deliverables:

• Maps and graphics in support of the environmental documentation and technical reports

# 7.10 SEPA Documentation

The CITY's State Environmental Procedures Act (SEPA) regulations under Shoreline Municipal Code 20.30.640 allows the use of NEPA documents to support a SEPA threshold decision:

#### Assumptions:

- CITY will adopt the NEPA EA in lieu of a SEPA checklist to support a Determination of Nonsignificance.
- CITY will prepare and distribute the SEPA adoption notice for the project.
- No new deliverables. Deliverables the same as NEPA documentation.

# 8.0 Community Engagement and Outreach

The CONSULTANT will assist the CITY in public stakeholder communication of the project to the 145<sup>th</sup> Corridor area community and interested stakeholders.

- 8.1 Agency and Public Involvement Plan. The CONSULTANT will develop an Agency and Public Involvement Plan, including coordinated agency and citizen task force meeting schedules, identification of key stakeholders, determining project area demographics and any translation needs, and key message development.
- 8.2 Citizen Advisory Task Force Coordination. The CONSULTANT will provide meeting support for a Citizen Advisory Task Force to support the project. Activities include:

The CITY will lead and the CONSULTANT will support the City in attending Task Force meetings of up to 12 members. The CITY will identify, recruit Task Force members. Up to eight (8) meetings are assumed.

8.3 Public Meetings and Activities. The CONSULTANT will work with the CITY to provide targeted public engagement opportunities with public meetings. Activities include:

Develop and implement up to two (2) public meetings. One open house will be held during the scoping phase of the EA. The second open house is intended to be an EA Hearing to accommodate public review and comments of the DRAFT EA as well as a design update in coordination with a design update on the I-5 interchange project.

#### Assumptions:

- WSDOT will prepare the Notice of Availability announcing that the EA is available for review and announcing the EA Hearing.
- The CONSULTANT will collect and compile the comments and incorporate them where possible into the FINAL Environmental Assessment.
- 8.4 Public Outreach Materials. The CONSULTANT will work with the CITY to develop project materials with graphics to communicate project purpose and schedule and relay key technical information as well as opportunities for public involvement. Activities include:
  - Develop content and graphical layout for one (1) project fact sheet and up to two (2) updates to fact sheet content throughout the project. Fact sheets are assumed to be color, double-sided 8.5x11" pieces that provide a clear overview of key project information.
  - Develop content and graphical layout for up to four (4) mailers at key milestones to share public meeting opportunities. Mailers are assumed to be postcard size.
  - Develop content and template for a PowerPoint presentation providing key information, for use by CITY staff at various briefings and meetings. Includes up to two (2) updates to original presentation as work progresses.

#### Assumptions:

- The CITY will maintain a stakeholder email list (via the CITY's Shoreline Alert system) of interested parties, and send any electronic communications about the project directly to interested parties.
- The CONSULTANT will coordinate with CITY-approved mail house to confirm mailing list and coordinate mailing schedule and final PDF for printing.
- The CITY will schedule, prepare for, staff and summarize requested briefings with The CONSULTANT support (beyond presentation development described above).
- The CITY will be billed directly for all printing, translation vendor and/or mailing costs.
- The CITY will post project updates on the CITY's project website.

CONSULTANT Deliverables:

- Project fact sheet (including up to 2 updates)
- Project mailer (up to 4)
- Project presentation (including up to 2 updates)
- Presentation materials to be used at a range of outreach events, including at open houses and focused briefings

CITY Responsibilities:

- Schedule and secure locations for public meetings, set-up and facilitate meetings.
- Support partner agencies and other stakeholder groups
- Preparation and maintenance of meeting records with partner agencies
- 8.5 Right of Way Acquisition Policies and Procedures Manual. A guideline will be prepared for the land acquisition and relocation process to be followed as a part of the 145th Street Corridor Project. This manual will be in compliance with all State and Federal Guidelines and will contain specific detail relating to special terms and conditions applied to the process by the City of Shoreline. A public process will be used to develop the draft manual. The CONSULTANT will provide five (5) copies of the draft manual to the CITY. Up to four (4) meetings will be held with the ad hoc group. All arrangements for these meetings will be the responsibility of the CITY. The Right of Way Acquisition Policy and Procedures manual will be confirmed at the Open House.

Adoption of the final version of this manual will be requested of the Council.

- 8.6 Workshop/Openhouse Flyers. The CONSULTANT will develop a flyer/announcement for Public Meetings and the Openhouse. The CITY will stamp and mail or distribute the project flyers.
- 8.7 Property Owner Coordination and Property Access Meetings. The CONSULTANT will conduct several meetings with the local owners and tenants to discuss and resolve design issues and project impacts. The Property Owner Coordination meetings will include the following:
  - The CONSULTANT and the CITY will attend up to twelve (12) parking and access meetings with groups of abutting property owners and/or tenants. The group meetings will be a working meeting to discuss the "refined" preliminary design alternative, property interface designs, and potential right-of-way and easement needs. These meetings will be held prior to the CITY Council Update.
  - Six (6) additional property owner group meetings will be budgeted to resolve remaining concerns that are not resolved in the first round of property owner meetings.
  - The CONSULTANT will attend two (2) on-site four hour sessions for "on-call" meetings with individual business owners and property owners to address specific critical impacts. Interested parties will sign up for designated blocks of time during the five sessions.
  - Five additional meetings with individuals will be held to resolve remaining concerns not addressed by the on-site "on-call" meetings.
- 8.8 Council Meetings. The CONSULTANT will support the CITY staff in five (5) CITY Council meetings. CITY staff will attend the meeting with supporting documents prepared by the CONSULTANT. These documents will include a plan with a layout for the project and graphic boards to illustrate design

elements. One of the meetings will occur when the conceptual alternative is presented to the Council. In another meeting, the CONSULTANT will support CITY staff in the presentation of the refined alternative. This meeting will occur prior to Open House #2. The CONSULTANT will support the CITY for the presentation of the Right-of-Way Policies and Procedure manual at another Council meeting. The Consultant will support the CITY for an update Council meeting. The final Council meeting will include the presentation of the preferred design alternative as developed from the community workshops. This presentation will include a plot of the preferred proposed design as well as an informational packet to identify critical issues. The intent is to achieve consensus on the preferred design alternative and have the council formally adopt it.

- 8.9 145th Corridor Art Program. The CONSULTANT team will work with the CITY to develop an ongoing art program for the 145<sup>th</sup> Street Corridor. Participants in this program may include the Shoreline Arts Commission, the Shoreline Parks Department, and the City Manager's Office. This program will provide design input to the CONSULTANT team as well as serve to identify a process to provide art for the project. The CONSULTANT will support the Art Program by providing background materials, providing a site tour for Program group or selected artist(s), work directly with Art Program Group or selected artist(s) to identifying opportunities for art integration. Up to four (4) meetings will be held to accomplish this work element.
- 8.10 Senior City Staff Briefings. The CONSULTANT will provide informational briefings to the City's Senior Staff for discussion of project status and outstanding project issues. This briefings will occur at milestones or prior to major council decisions. Up to six (6) briefings will be provided under this task.
- 8.11 Off-corridor Bike Network Engagement. The CONSULTANT will assist the CITY in providing targeted outreach to inform stakeholders and the public about development of the off-corridor bike network associated with improvements to the 145<sup>th</sup> Street Corridor.
  - The CONSULTANT will draft a fact sheet highlighting the off-corridor bike network. This may be posted online, distributed to residents along the corridor, displayed and available at strategic locations along the corridor, and made available as accessory information at project open houses.
  - The CONSULTANT will support the CITY staff in hosting a weekend walking tour of the bike corridor to inform and engage residents and members of the cycling community.
  - The CONSULTANT will support the CITY staff in four community group briefings highlighting the bike network.

# Assumptions:

- The CONSULTANT will coordinate with CITY-approved mail house to confirm mailing list and coordinate mailing schedule and final PDF for printing.
- The CITY will be billed directly for all printing, translation vendor and/or mailing costs.
- The CITY will post project updates on the CITY's project website.

# CONSULTANT Deliverables:

- Off-corridor bike network fact sheet (including 1 update)
- One weekend/evening walking tour of the bike corridor
- Up to four (4) community briefings with interested stakeholder groups

# 9.0 Right-of-Way Requirements

The CONSULTANT will establish right-of-way centerlines and perform a preliminary analysis of right-ofway requirements to identify potential right-of-way impacts and costs.

9.1 Right-of-Way Centerline. The CONSULTANT will establish the right-of-way centerline for 145<sup>th</sup> Street from Linden Avenue to 6<sup>th</sup> Avenue NE.

The CONSULTANT will establish the right-of-way centerline for each of the side streets noted below. Centerlines will be established on the side streets 200 feet from the centerline of 145th Street. The CONSULTANT will perform records research and calculations. Field survey required for this task will be performed under this Task 4.0.

- Ashworth Avenue
- Meridian Avenue
- First Ave NE
- 9.2 Right-of Way Analysis. Prepare an analysis of preliminary right-of-way requirements based on existing property lines, required takes, and changes to current access. This preliminary analysis will be utilized to help establish preliminary opinion of cost. It is assumed that stormwater capture, conveyance and treatment facilities will be located within the project limits and no easements or right-of-way will be required or obtained for those facilities. Review ownership information for each parcel. 70 parcels are assumed for this work. Final parcel calculations will not be performed.
- 9.3 Right-of-Way costs. Review standard right of way acquisition costs for the area within the project limits. The CONSULTANT will use a certified appraiser to estimate a project wide per square foot average cost for right of way acquisition. Specific parcels costs will not be prepared.
- 9.4 Building Impact Opinion of Cost. Provide order of magnitude costs to address potential impacts to structures based on square footage cost by building type. Assume up to 5 buildings would be impacted. Opinions of cost will be based upon written assumptions and will be order of magnitude only.

# Attachment A – Estimated Sheet List

Drawing Title	Scale	Preliminary	
		Submittal	
		Estimated No. of Sheets	
General Plans		01011000	
Cover Sheet	N/A	1	
Notes Sheet	, N/A	2	
Survey Control Plans	, N/A	2	
Horizontal Alignment Plans	1 inch = 20 feet	16	
General Plans Subtotal		21	
Civil Plans and Details			
Grading and Paving Plans	1 inch = 20 feet	16	
Roadway Profiles	1 inch = 20 feet	16	
Roadway and Paving Details	N/A	2	
Typical Roadway Sections	N/A	3	
Curb Ramp Plans	N/A	9	
Stormwater and Utility Plans	1 inch = 20 feet	16	
Drainage and Utility Details	N/A	4	
Channelization and Signing Plans	1 inch = 40 feet	10	
Retaining Wall Plan and Elevation	1 inch = 10 feet	4	
Retaining Wall Details	N/A	2	
Off-Corridor Bike Network Plans	1 inch = 40 feet	20	
Planting Plan	1 inch = 20 feet	16	
Planting Details	N/A	3	
Civil Plans and Details Subtotal		121	
Electrical Plans and Details			
Traffic Signal Plans	1 inch = 20 feet	4	
Traffic Signal Detection and Schedules	N/A	4	
ITS and Illumination Plans	1 inch = 20 feet	16	
Electrical Details	N/A	3	
Electrical Plans and Details Subtotal		27	
ESTIMATED TOTAL NO. OF SHEETS		169	

Attachment A



7b-40