

236th Street NE Corridor – Fish Culvert Passage Design Request for Proposal

The Stillaguamish Tribe of Indians (Tribe) would like to request proposal for engineering and environmental services to design a fish passage culvert and stream re-alignment at a perennial stream located on 236th Ave NE between 19th Avenue NE/Kackman Road and 23rd Drive NE in Snohomish County. The selected consultant will need to develop a design and construction documents that meets Tribal and regulatory requirements (Snohomish County, WDFW, USCOE) of a new fish culvert/structure that may require stream re-alignment and habitat features. This element of design and construction documents will be combined with a larger 236th corridor design project currently being designed by others that will extend from Interstate 5 to 35th Avenue NE.

The consultants scope of work and fee shall consider the following items of work:

- Kick-off meeting with Tribe and previously selected Consultant Team.
- **Site Visit and Data Collection:** Consultant will collect data and perform technical analyses that support preparation of alternative concepts and that will be sufficient for design of the permitting package deliverables.

Consultant will need to review existing data to be provided by the Stillaguamish Tribe and by other available sources and compile that data for a geomorphic field investigation and site survey. Consultant will review previously compiled information, including but not limited to the Axis topographic survey, aerial photographs, and other available information. In addition, stakeholders should be consulted to advise on specific fish and wildlife management objectives for ecological outcomes as a major determinant in the restoration design to ensure environmental compliance.

- **Hydrology and Hydraulic Modeling:** Consultant will be evaluating scour prism, field indicators of normal and high flows, active channel width, and natural stream and floodplain processes and buffers to incorporate into the design and to meet criteria in design guidelines such as those of Snohomish County and WDFW's 2013 Stream Crossing Guidelines. The Consultant will use the US Geological Survey (USGS) Stream Stats program or regional equations to determine design flows, including the 2-year through 100-year discharges and low flows to ensure fish passage at these times of year.

Consultant may choose to use geomorphic indicators of normal and high flows to calibrate design hydraulics and design for fish (and wildlife) passage, flood and debris conveyance, sediment transport, and erosion impacts.

To meet Snohomish County and WDFW standards for fish passage, the new culvert must be large enough to fully span the channel and simulate natural stream flow, gradient and bed configuration inside.

- **Geomorphic and geotechnical investigations:** Consultant will perform geologic reconnaissance, provide concepts that address constructability concerns, develop preliminary geotechnical engineering recommendations to support the selection of a preferred alternative, and provide geotechnical engineering design recommendations for the preferred alternative.
- **Initial Concepts and Alternatives:** The Consultant will meet with the Tribe and provide graphic representations of elevations and sections so the Tribe may choose a preferred option for the project. Consultant will need to prepare conceptual-level design documents (schematic plans, preliminary construction cost estimate, and design memorandum) in coordination with the rest of the design team to determine feasibility and costs of alternatives.

- **30%, 60%, and 90% Design Development:** Updates at 30%, 60% for review and final documents provided at 90% before submission for permits and should include Title Sheet (1); Notes (1); Site Plans (3); and Details. A conceptual-level construction cost estimate should be included at each deliverable.

Consultant will complete a preliminary design report to document the basis of the preliminary design. This document will be compliant with WDFW, and Snohomish County.

- **Construction Documents:** Incorporating feedback from the 90% design and regulatory agency permit conditions, Consultant will submit a complete set of final 100% construction documents (plans, specifications, and estimate), verified and approved, stamped, and signed by a Washington Professional Engineer. The plan sets will show all necessary plans, elevations, sections, and details for use by the project team.
- **Project Management and Coordination:** The selected consultant will need to work closely with previously selected firms performing the following tasks for the project: SCJ Alliance (roadway design), Cardno (permitting, wetland impacts/ wetland mitigation), Axis (survey). These firms are eligible to and may elect to submit a proposal on this additional task that is outside of their current scope of work.

Attached Documents:

- 236th Corridor Exhibit
- Stillaguamish Tribe Preliminary Jurisdictional Determination and Wetland Delineation 2014.

Please submit all questions to Carole Kirk at (ckirk@stillaguamish.com). Please have a cost proposal based upon the scope of work above and attachments submitted to Carole no later than close of business on August 4, 2017.