



Special Transportation Planning Study Agreement Work by Planning Organization - Actual Cost		Organziation and Address Lewis County Public Works 57 W Main Street Chehalis, WA 98532
		Statewide Vendor No.: SWV0001232 18
Agreement Number GCC 1070	Total Amount Authorized \$1,656,243.00	Project Title and Description Westside Connector Corridor Improvements Work by the County and its consultant to complete Phase II design efforts based on recommendations identified during development of the I-5 NLCIA feasibility study.
Project Manager Laurie Lebowsky-Young	Agreement Expiration Date June 30, 2025	

This Agreement is between the Washington State Department of Transportation (WSDOT) and the above-named organization (Planning Agency) hereinafter referred to individually as the "Party" and collectively as the "Parties."

Recitals

1. WSDOT and the Planning Agency recognize the need for the transportation planning project, herein after Project, as described above, and
2. It is deemed in the best interest of WSDOT to participate in funding said Project for the mutual benefit of local and state roadway planning in the area of the Project, and
3. WSDOT and the Planning Agency now wish to define responsibility for preparation of the transportation planning Project.

Now therefore, pursuant to chapter 47.80 RCW , the above recitals, which are incorporated herein as if set forth below, and in consideration of the terms, conditions, covenants, and performances contained herein, and in the Exhibits attached hereto and hereby made a part of this Agreement, it is mutually agreed as follows:

1. Scope of Work

- 1.1 The Planning Agency shall undertake the Project as described above, which shall include the tasks set forth in Exhibit A, attached hereto.

2. Period of Performance

- 2.1 This Agreement shall be effective upon execution and shall terminate upon the expiration date listed above or final payment has been accepted.

3. Payment

- 3.1 WSDOT agrees to reimburse the Planning Agency's actual direct and related indirect costs of the Project. The maximum amount that WSDOT shall reimburse the Planning Agency shall not exceed the "Total Amount Authorized" listed above. Payment by task shall be made as set forth in Exhibit B. All costs must be consistent with the Federal cost principles contained in 2 CFR 200.
- 3.2 The Planning Agency may submit requests to the WSDOT for reimbursement of funds as they are expended on activities at any time, but not more frequently than one (1) such request every month. Such requests for reimbursement shall document the amount of funds that have been expended during the contract period, as well as for the current billing period. The request for reimbursement shall contain sufficient detail to inform WSDOT and any other entities providing funding for the work as to the progress on the planning effort. WSDOT shall review and approve each request for payment and shall reimburse the Planning Agency thirty (30) business days after the date of receipt of invoice.
- 3.3 All indirect costs will be consistent with the federal de minimus rate found in 2 C.F.R. 200 or based on an indirect cost rate proposal that is approved by Planning Agency annually and maintained on file by for audit purposes. If indirect costs are based on an approved indirect cost allocation plan, the Planning Agency will provide a copy to WSDOT annually, or when updated.

4. Reports

- 4.1 The Planning Agency shall prepare and present to WSDOT an annual progress report. The report shall be completed and submitted to WSDOT within 30 calendar days following the end of each fiscal year. This annual report shall summarize work accomplished under the scope of work, costs incurred by work element, and shall identify any carryover of funds.
- 4.2 WSDOT however, reserves the right to request an interim report(s) during the fiscal year. The interim report(s) is due to WSDOT within 21 calendar days of being notified in writing by WSDOT. The interim report(s) shall include a summary of work progress during the course of the fiscal year, costs incurred in accordance with the approved scope of work and budget, and progress to date, including any problems or work delays. WSDOT may delay reimbursement of billings if the requested interim report(s) is not submitted in a timely manner.
- 4.3 The final product of this agreement will provide documentation of all technical data and their analysis. The Planning Agency shall submit copies of the final product to WSDOT for acceptance. Electronic submittal is acceptable. This requirement for a final product may be waived in writing by WSDOT, with email being acceptable.

5. Modifications or Amendments

- 5.1 Either Party may request changes in these provisions. Such changes which are mutually agreed upon shall be incorporated as written amendments to this Agreement. No variation or alteration of the terms of this Agreement shall be valid unless made in writing and signed by authorized representatives of the Parties hereto.

6. Audits, Inspection, and Retention of Records

- 6.1 All records related to this Agreement shall be held and kept available for inspection and audit for a period of six (6) years from the date of termination of this Agreement or any final payment authorized under this Agreement, whichever is later. Each Party shall have full access to and right to examine said records, during normal business hours and as often as deemed necessary. In the event of litigation or claim arising from the performance of this Agreement, the Parties agree to maintain the records and accounts until such litigation, appeal or claims are finally resolved. This section shall survive the termination of this Agreement.
- 6.2 In accordance with 2 CFR 200, the Planning Agency is required to arrange for audit of funds expended.
- 6.3 The Public Records Act, RCW 42.56 shall apply to all information and documents, both paper and electronic, submitted to WSDOT. If federal funds are applied the Planning Agency understands and agrees that the Freedom of Information Act (FOIA), 5 U.S.C. § 552 shall also apply to all information and documents, both paper and electronic, submitted to WSDOT. The Planning Agency should therefore be aware that all applications and materials submitted will become agency records and are subject to public release through state and federal disclosure requests.

7. Termination

- 7.1 Termination for Convenience. WSDOT and/or the Planning Agency may suspend or terminate this AGREEMENT, in whole or in part, and all or any part of the financial assistance provided herein, at any time by written notice to the other Party. WSDOT and the Planning Agency shall agree upon the AGREEMENT termination provisions including but not limited to the settlement terms, conditions, and in the case of partial termination the portion to be terminated. Written notification must set forth the reasons for such termination, the effective date, and in case of a partial termination the portion to be terminated. However, if in the case of partial termination, WSDOT determines that the remaining portion of the award will not accomplish the purposes for which the award was made, WSDOT may terminate the award in its entirety. The Parties may terminate this AGREEMENT for convenience for reasons including, but not limited to, the following:
 - 7.1.1 The requisite funding becomes unavailable through failure of appropriation or otherwise;
 - 7.1.2 WSDOT determines, in its sole discretion, that the continuation of the Project would not produce beneficial results commensurate with the further expenditure of funds;
 - 7.1.3 The Planning Agency is prevented from proceeding with the Project as a direct result of an Executive Order of the President with respect to the prosecution of war or in the interest of national defense; or an Executive Order of the President or Governor of the State with respect to the preservation of energy resources;
 - 7.1.4 The Planning Agency is prevented from proceeding with the Project by reason of a temporary preliminary, special, or permanent restraining order or injunction of a court of competent jurisdiction where the issuance of such order or injunction is primarily caused by the acts or omissions of persons or agencies other than the Planning Agency; or
 - 7.1.5 The State Government determines that the purposes of the statute authorizing the Project would not be adequately served by the continuation of financial assistance for the Project.

- 7.2 Termination for Default. WSDOT may suspend or terminate this AGREEMENT for default, in whole or in part, and all or any part of the financial assistance provided herein, at any time by written notice to the Planning Agency, if the Planning Agency materially breaches or fails to perform any of the requirements of this AGREEMENT, including:
- 7.2.1 Takes any action pertaining to this AGREEMENT without the approval of WSDOT, which under the procedures of this AGREEMENT would have required the approval of WSDOT;
 - 7.2.2 Jeopardizes its ability to perform pursuant to this AGREEMENT, United States of America laws, Washington state laws, or local governmental laws under which the Planning Agency operates;
 - 7.2.3 Fails to make reasonable progress on the Project or other violation of this AGREEMENT that endangers substantial performance of the Project; or
 - 7.2.4 Fails to perform in the manner called for in this AGREEMENT or fails, to comply with, or is in material violation of, any provision of this AGREEMENT. WSDOT shall serve a notice of termination on the Planning Agency setting forth the manner in which the Planning Agency is in default hereunder. If it is later determined by WSDOT that the Planning Agency had an excusable reason for not performing, such as events which are not the fault of or are beyond the control of the Planning Agency, such as a strike, fire or flood, WSDOT may: (a) allow the Planning Agency to continue work after setting up a new delivery of performance schedule, or (b) treat the termination as a termination for convenience.
- 7.3 WSDOT, in its sole discretion may, in the case of a termination for breach or default, allow the Planning Agency ten (10) business days, or such longer period as determined by WSDOT, in which to cure the defect. In such case, the notice of termination will state the time period in which cure is permitted and other appropriate conditions. If the Planning Agency fails to remedy to WSDOT's satisfaction the breach or default within the timeframe and under the conditions set forth in the notice of termination, WSDOT shall have the right to terminate this AGREEMENT without any further obligation to Planning Agency. Any such termination for default shall not in any way operate to preclude WSDOT from also pursuing all available remedies against Planning Agency and its sureties for said breach or default.
- 7.4 In the event that WSDOT elects to waive its remedies for any breach by Planning Agency of any covenant, term or condition of this AGREEMENT, such waiver by WSDOT shall not limit WSDOT's remedies for any succeeding breach of that or of any other term, covenant, or condition of this AGREEMENT.
- 7.5 If this AGREEMENT is terminated, whether for convenience or for default, before the specified end date set forth in the caption header, "Term of Agreement", WSDOT and the Planning Agency shall execute an amendment to this AGREEMENT identifying the termination date and the reason for termination.

8. Applicable Laws

- 8.1 The Planning Agency agrees to abide by all applicable state and federal laws and regulations including but not limited to, those concerning employment, equal opportunity employment, nondiscrimination assurances, project record keeping necessary to evidence compliance with such federal and state laws and regulations, and retention of all such records. The Planning Agency will adhere to all applicable nondiscrimination provisions in chapter 49.60 RCW. Except when a federal statute or regulation preempts state or local law, no provision of the AGREEMENT shall require the Planning Agency to observe or enforce compliance with any provision, perform any other act, or do any other thing in contravention of state or local law. If any provision or compliance with any provision of this AGREEMENT violate state or local law, or would require the Planning Agency to violate state or local law, the Planning Agency agrees to notify WSDOT immediately in writing. Should this occur, WSDOT and the Planning Agency agree to make appropriate arrangements to proceed with or, if necessary, expeditiously, terminate the AGREEMENT.

9. Indemnification

- 9.1 Each Party to this Agreement will protect, defend, indemnify, and save harmless the other Party, its officers, officials, employees, and agents, while acting within the scope of their employment as such, from any and all costs, claims, judgments, and/or awards of damages (both to persons and property), arising out of, or in any way resulting from, each Party's negligent acts or omissions with respect to the provisions of this Agreement. Neither Party will be required to indemnify, defend, or save harmless the other Party if the claim, suit, or action for injuries, death, or damages (both to persons and property) is caused by the sole negligence of the other Party. Where such claims, suits, or actions result from the concurrent negligence of the Parties, their agents, officials or employees, and/or involve those actions covered by RCW 4.24.115, the indemnity provisions provided herein will be valid and enforceable only to the extent of the negligence of the indemnifying Party, its agents, officials or employees.
- 9.2 Further, the Planning Agency specifically assumes potential liability for actions brought by its own employees or agents against WSDOT and, solely for the purpose of this indemnification and defense, the Planning Agency specifically waives any immunity under State industrial insurance laws, Title 51 RCW.
- 9.3 The provisions of this Section shall survive the termination of this Agreement.

10. Subcontracting

- 10.1 The services of the Planning Agency are to be directed by the Project Manager identified above. The Planning Agency shall not assign, sublet, or transfer any of the work provided for under this Agreement without prior written approval from WSDOT, and WSDOT shall review and approve the Planning Agency's consultant agreement prior to execution. The Planning Agency shall comply with all Federal and State laws and regulations governing the selection and employment of consultants. WSDOT reserves the right to appoint a representative to serve on the Consultant Selection Committee. Subcontracts greater than \$10,000 must contain all the required provisions of this contract.

11. Travel

- 11.1 Current state travel rates shall apply to all in-state and out-of-state travel for which reimbursement is claimed during the term of this Agreement. Reimbursement of travel expenses is limited to travel necessary for the completion of the Scope of this Agreement. All travel by the Planning Agency using state funds is subject to state travel rules as outlined in the State Administrative & Accounting Manual (SAAM). All travel by the Planning Agency using federal funds is subject to federal rules and regulations as outlined in 2 C.F.R. pt. 200. In addition, all travel by the Planning Agency using federal funds must be in compliance with its own internal policies, those of the fiscal agent, or the State's policies, whichever is more restrictive.
- 11.2 Any out-of-state travel must have prior written approval of WSDOT to be eligible for reimbursement. Current WSDOT travel regulations and rates shall apply to all in-state and out-of-state travel for which reimbursement is claimed during the term of this Agreement.

12. Liability

- 12.1 No liability shall attach to WSDOT or the Planning Agency by reason of entering into this Agreement except as expressly provided herein.

13. Venue

- 13.1 In the event that either Party deems it necessary to institute legal action or proceedings to enforce any right or obligation under this Agreement, the Parties hereto agree that any such action shall be initiated in the Superior Court of the State of Washington situated in Thurston County. The Parties agree that the laws of the State of Washington shall apply.

14. Independent Contractor

- 14.1 The Planning Agency shall be deemed an independent contractor for all purposes and the employees of the Planning Agency or any of its contractors, subcontractors, and the employees thereof, shall not in any manner be deemed to be employees of WSDOT.

15. Severability

- 15.1 If any covenant or provision in this Agreement shall be adjudged void, such adjudication shall not affect the validity, obligation, or performance of any other covenant or provision which in itself is valid, if such remainder would then continue to conform to the terms and requirements of applicable law and the intent of this contract.

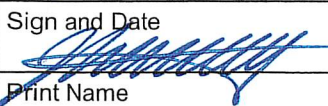
16. Equipment

- 16.1 All equipment to be purchased under this Agreement shall be listed in the scope of work. All equipment must be purchased, managed, and disposed of in accordance with 2 CFR 200

17. Counterpart and Electronic Signature

- 17.1 This Agreement may be signed in multiple counterparts, each of which constitutes an original and all of which taken together constitute one and same Agreement. Electronic signatures or signatures transmitted via e-mail in a "PDF" may be used in place of original signatures on this Agreement. The Parties intend to be bound by its electronic or "PDF" signature on this Agreement, are aware that the other Parties are relying on its electronic or "PDF" signature and waives any defenses to the enforcement of this Agreement based upon the form of signature.

In Witness Whereof, the Parties hereto have executed this Agreement as of the Party's date last signed below

Planning Agency - Lewis County Public Works	Washington State Department of Transportation
Sign and Date  10/29/24	Sign and Date
Print Name Josh Metcalf, PE	Print Name Scott Langer, PE
Title Director	Title ARA - Operations and Planning

GCC 1070
EXHIBIT A – Scope of Services
WESTSIDE CONNECTOR CORRIDOR IMPROVEMENTS

- River Crossing Type, Size, and Location (TS&L) Update
- Scheuber Road North Extension (Galvin Road to Ives Road) Design and Plans, Specification, and Engineer's Estimate

Introduction

The Planning Agency (hereinafter referred to as Lewis County and COUNTY) in partnership with the City of Centralia (CITY) issued a Request for Proposals for qualified architectural and engineering firms to provide services for the Westside Connector (Project). The Request for Proposals was issued in April 2023 and the services requested include engineering, environmental, geotechnical, public involvement, floodplain modeling, right-of-way, design, and PS&E development services for Westside Connector North Link and to update of the previous proposed Chehalis River crossing bridge Type, Size, and Location (TS&L) completed in 2008. The COUNTY is operating as the Project lead on behalf of the COUNTY and the CITY, providing management and oversight of the project development and delivery.

Phase I of the Project, from Mt. Vista Road to Galvin Road, is currently in design and construction of the improvements is planned for 2025. This Scope of Services is specific to Phase II of the Project as defined below.

TS&L Update and Design

Stage 2 limits are between Cooks Hill Road and Mt Vista Road. This work will include an update of the 2008 TS&L study for a new bridge over the Chehalis River.

Scheuber Road North Extension (Galvin Road to Ives Road)

The limits are N. Scheuber Road between Galvin Road and the Ives Road / Harrison Avenue intersection. The evaluation will include an assessment of intersection improvements at the Galvin Road / N. Scheuber Road intersection and includes coordination with the Washington Utilities and Transportation Commission (UTC) for a new at-grade railroad crossing north of Galvin Road. The work will include design of the north link improvements, and development of plans, specifications, and an engineer's estimate of probable construction cost for the North Link improvements.

General Project Information

Based on the results of the proposals submitted, the COUNTY and CITY agreed HDR Engineering, Inc. and their team of subconsultants, was qualified to perform the work as requested. HDR Engineering, Inc. was selected as the CONSULTANT (CONSULTANT) along with their subconsultants, MIG, Northwest Hydraulics CONSULTANTS (NHC), HWA Geosciences Inc (HWA), MTN2Coast (MTC) Surveying, and The Beckett Group (TBG).

The CONSULTANT's work on Phase II Improvements under this Agreement will commence upon execution of this Agreement and will be completed by June 30, 2025.

Design Criteria

The following criteria shall be the basic premises and criteria for conducting the work. Plans, reports, and supporting documentation shall be developed in accordance with the latest edition of the following publications as of the date of the signing of this Agreement. Revisions to these standards or requirements after work has begun may result in additional work.

- Measurements will be in English units.
- Drafting Standard per the American Public Works Association
- Survey Datums, Coordinate System and Notes provided by COUNTY/CITY

Lewis County Publications

- Lewis County Code
- Road Development Standards
- Stormwater Management Regulations

City of Centralia Publications

- Design and Development Guidelines
- Standard Drawings

Washington State Department of Transportation (WSDOT) Publications

- WSDOT Design Manual – M22-01.
- WSDOT Bridge Design Manual LRFD – M23-50.
- Most current version of WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction, English edition (M4110).
- WSDOT – Amendment and GSPs
- Washington State Department of Transportation Standard Plans – M21-01.
- Local Agency Guidelines – (M36-63).
- WSDOT Hydraulics Manual (March 2022)

American Association of State Highway and Transportation Officials (AASHTO) Publications

- A Policy on Geometric Design of Highways and Streets (Current Version).
- LRFD Bridge Design Specification, 9th Edition, and Interims.
- Guide Specifications for LRFD Seismic Bridge Design, 2nd Edition, and Interims.
- LRFD Bridge Construction Specifications, 4th Edition, and Interims.
- Guide Specifications for Design and Construction of Segmental Concrete Bridges, Second Edition, and Interims.

U.S. Department of Transportation (USDOT) Publications

- Manual on Uniform Traffic Control Devices for Streets and Highways.

Federal Highways Administration

- Americans with Disabilities Act of 1990 (ADA).
- FHWA Evaluating Scour at Bridges, Fifth Edition – April 2021 (HEC No. 18)
- FHWA Bridge Scour and Stream Instability Countermeasures, Third Edition – September 2009 (HEC No. 23)

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TASK 1 PROJECT MANAGEMENT

This work will consist of providing overall direction, management, and control for the Project. The CONSULTANT will be responsible for administering the communication plan, including creation and updates of the project schedule, implementation of quality control measures, project reporting, project documentation, and overall performance of the project.

Task 1.1 – Project Coordination and Management

The CONSULTANT shall administer the Project and coordinate with the COUNTY/CITY to facilitate efficient progress and timely completion. Elements of work for this task will include:

- Manage Project activities.
- Manage Project budget and schedule.
- Sub-CONSULTANT coordination.
- Perform management and business reviews.

Task 1.2 – Project Schedule

The CONSULTANT shall develop a Gantt chart project schedule for the Project using Microsoft Project.

Task 1.3 – Meetings

The CONSULTANT, in addition to attending specific meetings as described in other tasks, shall attend the following meetings to discuss all stages of the Project:

Project management team meetings: These virtual team management coordination meetings will be held every two weeks and will provide the opportunity to discuss progress, action items, schedule, budget, and upcoming issues including key meetings that will need preparation. The CONSULTANT will prepare a running emailed agenda that summarizes progress by discipline, action items, contract items (scope, schedule, budget), upcoming meetings, and completed items.

Internal Project team coordination meetings: These internal coordination meetings will be held monthly over the Project duration. Meetings will be attended by the CONSULTANT PM and discipline leads. The following attendance is anticipated:

- PM and Roadway, Structures, Floodplain discipline leads (17 meetings)
- Utility, Cultural, Environmental, Railroad and Right-of-Way discipline leads (8 meetings)

Task 1.4 – Filing and Documentation

The CONSULTANT shall establish a system for filing of documents and drawings (hard copy and electronic) generated over the duration of the project. This information will be filed in a manner that enables ready and selective retrieval. All correspondence of any kind to, from, or copied to the agency shall be filed in separated files in the system. In addition, all comments related to the contractual items of this work (Personal Service Agreement, contract supplements, contract amendments, etc.) will be maintained in files separate from the technical project files.

Task 1.5 – Progress Reports and Invoicing

CONSULTANT will prepare monthly progress reports to accompany the monthly invoices submitted for the work. The progress report shall identify meetings attended and describe work items that have been

completed during the invoice period, status of pending work, work planned for the next period, key milestones, and identify of any out-of-scope work items.

CONSULTANT will provide a monthly invoice identifying the total hours worked and cost incurred during the invoice period including staff names, rates, hours worked, and remaining project balance.

Task 1.6 – Quality Assurance / Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the COUNTY/CITY as part of this Task. The reviews will follow the QA/QC plan established for this Project.

Task 1 - Assumptions:

- Duration of this scope of services is from Agreement execution through June 30, 2025.
- A total of 34 virtual project management team meetings are included. Meetings are assumed to be an average of 1 hour in duration.
- A total of 17 project team meetings are included. Meetings are assumed to be an average of one (1) hour in duration.
- Project coordination and management efforts are assumed to be an average of four (4) hours per month.
- An emailed running agenda will be transmitted at least one day before each meeting.

Task 1 - Deliverables:

- Meeting agendas/meeting minutes
- Monthly progress reports/invoices
- Project Schedule in MS Project and PDF format

TASK 2 TOPOGRAPHIC SURVEY

CONSULTANT will provide topographic surveying and right-of-way base mapping services for the Project.

TASK 2.1 – Right-of-Way Base Map

CONSULTANT will complete the appropriate field and office work to establish the right-of-way base map for the PROJECT. A Record of Survey drawing will be prepared and recorded with the County Auditor's office for any revision to right-of-way, as required by law. All existing searched for and found monuments based on record of surveys and recorded plats shall be documented on the right-of-way base map.

TASK 2.2 – Topographic Survey Base Map

CONSULTANT will complete a topographic survey of the project as shown in **Figure 1**. The topographic survey shall be conducted within the Project limits and within the proposed R/W.

Topographic survey features to be mapped:

- Roadways, driveways, sidewalks, and other surface features with material or surface types.
- Centerlines, channelization, and angles of intersection of the side streets with main roadway centerline.

- One-foot contours with tops, toes and breaks.
- Buildings and other structures on site with finished floor elevations.
- Other visible improvements such as curbs, mailboxes, light poles, etc.
- Trees (2" caliper and larger), shrubs, special landscaping, and irrigation features.
- Locations of other landscaping materials such as grass lawns, rock structures, sculptures, etc.
- Type, locations and elevations of sprinkler heads, sprinkler control boxes, and other sprinkler devices that may become a design and R/W negotiation considerations.
- Fences and retaining walls.
- Toe and top of slopes within drainage features.
- Locate and confirm all existing utilities and appurtenances with types, sizes, and materials, as possible for all public and private owned utilities.
- All other features not explicitly stated as required for design in accordance with standard survey practices.

Water Mains and Appurtenances:

- Size and material type of water mains from CITY records, locate service markings and observations by CONSULTANT.
- Size and type of manholes, meters, and fire hydrants from CITY records, locate service markings and observations by CONSULTANT.
- Size and type of valves from CITY records, locate service markings and observations by CONSULTANT, with operating nut elevation by CONSULTANT.

Storm Drains and Open Channels:

- Size and material type of storm drains with flow direction from CITY records, locate service markings and observations by CONSULTANT.
- Size and type of appurtenances including inlet, catch basin, junction box etc. from CITY records and observations by CONSULTANT.
- Rim elevation and flowline elevations of all lines entering and exiting drainage structure.
- Open channels and culverts with material and elevations if visible.
- Width and height of all box culverts as well as the entry and exit elevations.
- Elevations, widths and locations of any headwalls, retaining walls, aprons or other objects within the limits of the survey.

Sanitary Sewer and Appurtenances:

- Size and material type of sewer lines with flow direction from CITY records, locate service markings and observations by CONSULTANT.
- Size and type of manhole (brick, concrete, fiberglass, drop manhole, etc.).
- Rim elevation and flowline elevations of all lines entering and exiting manhole.
- Manhole access device, cleanout and other appurtenances.

Gas Mains:

- Size and type of appurtenances including meter, manhole, valve etc. from locate service markings, utility company records and observations by CONSULTANT.

Underground Telephone:

- Size and type appurtenances (manhole, telephone pole, guy wire, vault, etc.) from locate service marking, utility company records and observations by CONSULTANT.

Electric:

- Location, size and type appurtenances (manhole, vault, power pole, guy wire, overhead lines, etc.) from locate service marking, utility company records and observations by CONSULTANT.

Underground Fiber Optic:

- Location, size and type appurtenances (manhole, vault etc.) from locate service marking, utility company records and observations by CONSULTANT.

Field Sketch and Notes:

- Field sketches and notes depicting any special field information shall be furnished, if available.

TASK 2.3 – Right-of-Way Plans, Exhibits and Legal Descriptions

CONSULTANT will develop R/W exhibits (legal description and exhibit) for property acquisitions and temporary construction easements.

R/W staking for appraisals and negotiations. Set temporary hubs on the proposed new R/W at the intersection of the sidelines of existing parcels.

Task 2 - Assumptions:

- CONSULTANT will obtain existing utility records from private utilities and coordinate with professional locate services.
- Survey will be provided in AutoCAD format.
- Survey control will be established by CONSULTANT. Benchmarks or Control Points shall be established at the project ends and at intermediate locations spaced at 500 feet.
- COUNTY/CITY will provide right of entry permits for survey efforts.
- CONSULTANT will obtain Title Reports for use in developing the right-of-way base map.
- The topographic survey prepared by CONSULTANT for the CITY's facilities on 79th Avenue and Trails End Road will be provided to the design team for the FRONTAGE project efforts.
- Datums: Horizontal datum will be the Washington State Plane Coordinate System
 Vertical datum will be NGVD 29

Task 2 - Deliverables:

- Up to eleven Title Reports.
- Up to nine (9) parcels will require partial acquisition.

- Up to two (2) parcels may require relocation assistance.
- Right-of-Way base map in AutoCAD format.
- Topographic survey map in AutoCAD format with 3d surface of the project areas.

This task includes efforts for the CONSULTANT to review the survey files provided by the CITY and convert the digital files for printing.

TASK 3 GEOTECHNICAL ENGINEERING SUPPORT

CONSULTANT will complete geotechnical engineering investigations and reporting to support the engineering and design efforts. The geotechnical engineering effort will include the following activities:

Task 3.1 – Review Existing Geotechnical Information

CONSULTANT will collect and review readily available and relevant geotechnical information along the project corridor. This review will include online geotechnical databases, geologic maps, and CONSULTANT's library.

Task 3.2 – Geotechnical Field Explorations

CONSULTANT will plan and coordinate a geotechnical exploration program for the Project. The exploration program will consist of conducting a series of geotechnical borings along the project alignment to support the TS&L evaluation with emphasis on the river crossing. Planning will include identification of the location of the geotechnical borings, development of traffic control plans, and coordination of required equipment and utility clearance.

Prior to generating the geotechnical work plan, CONSULTANT will mark proposed exploration locations and arrange for utility locates using the Utility Notification Center. An upland site reconnaissance of the project corridor will be conducted at the same time the exploration locations are marked for utility locates. Utility location marks will be used to verify proposed field exploration locations prior to development of traffic control plans. A second site visit will be made one week after marking the proposed locations to verify utility clearances.

CONSULTANT will conduct a reconnaissance of the Chehalis River in the vicinity of the proposed crossing. This reconnaissance will be conducted from the river (via watercraft) to document areas of observed soil outcroppings, evidence of slope instability, and evidence of erosion.

CONSULTANT will conduct a series of six (6) geotechnical borings, north of the Chehalis River crossing. Each of these borings will be drilled to a depth of approximately 75 feet below ground surface with a track mounted drill rig. Five (5) of these borings will be drilled at the locations of proposed bridge abutment and interior piers. CONSULTANT assumes the previous geotechnical boring drilled near the edge of the river will be used for design of the bridge pier nearest the riverbank. One (1) additional boring will be drilled along the proposed fill embankment area. Instrumented groundwater monitoring wells will be installed in two (2) of the borings to monitor and record seasonal variations in groundwater levels. This work is anticipated to take six (6) days to complete.

CONSULTANT will conduct a series of five (5) geotechnical borings, south of the Chehalis River crossing. Each of these borings will be drilled to a depth of approximately 75 feet below ground surface with a track mounted drill rig. Four (4) of these borings will be drilled at the locations of proposed bridge abutment and interior piers. CONSULTANT assumes the previous geotechnical boring drilled near the edge of the river will be used for design of the bridge pier nearest the riverbank. One (1) additional bore will be

completed along the fill embankment area. Instrumented groundwater monitoring wells will be installed in two (2) of the borings to monitor and record seasonal variations in groundwater levels. This work is anticipated to take five (5) days to complete.

CONSULTANT will install a groundwater monitoring transducer in the four (4) proposed monitoring wells. These transducers will be set to acquire groundwater elevation readings every half an hour for the duration of 6 months. CONSULTANT will make four (4) site visits to download and process the groundwater data. This data will be used to provide geotechnical design recommendations and accurate representation of the seasonal groundwater variations across the site.

Task 3.3 – Laboratory Testing

CONSULTANT will prepare summary boring logs and perform laboratory testing to evaluate relevant physical properties of the site soils. Laboratory testing would include moisture content, grain-size distribution, direct shear, one dimensional consolidation, and Atterberg Limits.

Task 3.4 – Geotechnical Engineering Analysis

Based on the field explorations and the laboratory test results of selected samples, CONSULTANT will generate estimates of the soil strength and other properties needed to evaluate the effects the subsurface conditions will have on the proposed improvements.

CONSULTANT will generate 1 geologic cross section extending along the centerline of the proposed bridge alignment. This cross section will be used to evaluate geotechnical challenges associated with the river crossing.

Based on the soils encountered along the alignment, CONSULTANT will determine the Site Class for seismic design. The design spectral acceleration parameters will then be selected in accordance with the General Procedure of the AASHTO LRFD Bridge Design Specifications and the WSDOT Bridge Design Manual (BDM).

CONSULTANT will evaluate the susceptibility to liquefaction of the soils along the project alignment for the design event required by AASHTO. Once the susceptibility to liquefaction is determined the CONSULTANT will evaluate the potential for liquefaction induced slope instability.

CONSULTANT will evaluate the existing riverbanks and the proposed roadway embankments for slope stability under static, pseudo-static, and post liquefaction loading conditions.

In the event slope instability is predicted at the site, CONSULTANT will provide options for stabilization. Stabilization options will include both the riverbank and proposed roadway embankment.

CONSULTANT will perform analyses of foundation vertical capacities using accepted drilled shaft and/or driven piles provided in the AASHTO LRFD Bridge Specifications and the WSDOT Geotechnical Design Manual (GDM).

CONSULTANT will develop bridge foundation lateral parameters. The lateral parameters will be provided in the form of LPILE input parameter tables for drilled shaft and/or driven pile foundations.

CONSULTANT will provide lateral earth pressure recommendations for proposed abutment structures and wing walls. Earth pressure diagrams for both static and seismic loading conditions will be generated using the procedures outlined in the WSDOT GDM.

CONSULTANT will provide concept level design recommendations for retaining wall structures proposed near the abutments.

Task 3.5 – Geotechnical Report

CONSULTANT will prepare a draft geotechnical engineering report for the Stage 2 improvements. This report will contain the results of the geotechnical engineering investigation, including description of surface and subsurface conditions; a site plan showing exploration locations and other pertinent features; summary boring logs; and laboratory test results. The report will provide geotechnical recommendations for Stage 2 improvements. Geotechnical data from Stage 1 will also be used for the North Link evaluation and design.

CONSULTANT will finalize the geotechnical report to address review comments received from the CONSULTANT design team and the COUNTY/CITY.

CONSULTANT will provide up to 12 hours of miscellaneous geotechnical assistance during the Project development process (4 hours per stage).

Task 3.6 – Quality Assurance / Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the COUNTY/CITY as part of this Task. The reviews will follow the QA/QC plan established for this Project.

Task 3 - Assumptions:

- The geotechnical explorations proposed herein will not be used to assess site environmental conditions. However, visual, or olfactory observations regarding potential contamination will be noted. Analysis, testing, storage, and handling of potentially contaminated soil and ground water (either sampled or spoils from drilling) are beyond this scope of services. If contaminated soils and/or ground water are encountered, the material will be properly contained on-site for disposal as mutually agreed upon without additional cost to CONSULTANT.
- No site-specific site response analyses will be required for seismic design.
- All non-contaminated drilling spoils and related debris will be drummed on site and transported off site for disposal by the drilling subcontractor.
- All Field explorations will be conducted between the hours of 7AM to 4PM. CONSULTANT assumes that establishment of traffic control will also abide by these hours.
- No Phase 1 or Phase 2 Environmental Site Assessment are included in the scope.
- All required rights of entry will be provided by the COUNTY/CITY.
- Relatively disturbed subsurface soil samples will be collected from the borings using the Standard Penetration Test (SPT) at intervals of 2.5 feet to 5 feet.
- The wells installed as part of these investigations will be maintained throughout design and abandoned by the contractor during construction.
- Groundwater monitoring for Stage 2 will be completed over a period of 12 months.
- Pilot infiltration tests are not included in this scope.
- CONSULTANT will respond to a maximum of one round of consolidated review comments on the draft geotechnical report.
- Luminaire foundation design will be provided by the COUNTY/CITY.

- Luminaire foundation design will be in accordance with WSDOT standard plans except where a conflict exists with the COUNTY/CITY foundation design.
- The proposed Bridge structure will consist of 2 abutments and 9 interior piers.
- One geotechnical boring will be drilled at each proposed bridge abutment (assume 2), one geotechnical boring will be drilled at all but two proposed interior pier foundation locations (assume 7), and one geotechnical boring will be drilled at the midpoint of each proposed approach embankment (assume 2).
- CONSULTANT assumes that no boring will be drilled within the river channel and the proposed crossing options will clear span the river.
- Survey bathymetry of the river channel will be provided to CONSULTANT in support of our riverbank stability evaluations.
- All permits required for clearing and grading associated with access to boring locations, within forested areas, will be obtained by others.
- Clearing and grubbing activities will be of a scale such that it will not be necessary for CONSULTANT to hire and excavation subcontractor.

Task 3 - Deliverables:

- Draft Geotechnical Report
- Final Geotechnical Report

TASK 4 PUBLIC OUTREACH

Task 4.1 – Public Outreach Materials

CONSULTANT will develop maps, exhibits, and other project graphics for the COUNTY/CITY to include on the Project webpage. COUNTY/CITY will provide comments and direction on development of the webpage materials.

An overall graphic will be developed for the corridor improvements. Graphics will also be developed for each stage of the corridor.

CONSULTANT will develop a frequently asked questions sheet (FAQ) to be included on the Project webpage. The FAQ sheet will be printed on a single sheet of letter size paper.

CONSULTANT will provide information to the COUNTY/CITY for the project webpage including a Project overview, schedule, purpose and need, exhibits, maps, and FAQ sheet.

CONSULTANT will provide updated Project webpage information to the COUNTY/CITY at the 60% and final design stages. The update of the Project webpage will occur after the public open house has been conducted. Updated Project information will include a summary of the public open house results.

Task 4.2 – Public Outreach Meetings

Two public open houses will be held to inform the public on the Project and to solicit public comments. The public outreach activities will be designed and implemented based upon the state and national environmental review requirements and the Project schedule.

CONSULTANT will prepare for and attend two public open house meetings that will include a presentation of the PROJECT, current updates, and a FAQ sheet handout. The public open house meetings will be held after the 60% design of Stage 1 is complete and concept graphics have been developed for Stage 2 and Stage 3.

A summary of activities and comments will be prepared, submitted to the COUNTY/CITY for review, and posted to the Project webpage as appropriate.

CONSULTANT will develop a summary of the public open house results that will be uploaded to the Project webpage.

Task 4.3 – Quality Assurance / Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted as part of this Task. The reviews will follow the QA/QC plan established for this Project.

Task 4 - Assumptions:

- The COUNTY/CITY will provide a list of contact names for key Project partners.
- The Open Houses will be scheduled after the concept graphics have been developed for Stage 2.
- Information gathered in the public outreach efforts will be used to refine the Project design.
- The CONSULTANT is not responsible for the creation or maintenance of the Project website except as outlined in Task 4.

Task 4 - Deliverables:

- Two public open house agendas and summaries
- Public open house presentation materials for two open houses (PDF and PowerPoint)
- Public open house results summary for both open houses

TASK 5 CULTURAL RESOURCES ASSESSMENT

Task 5.1 – Review Existing Information

The purpose of this task is to support the COUNTY/CITY with review of cultural resources data to prepare NEPA and SEPA documentation, CITY application packages, and supporting cultural resources documentation.

CONSULTANT shall perform a desktop review of available cultural resources information identified within the TS&L study and North Link areas within WISAARD and other publicly available data sources.

CONSULTANT will perform archaeological monitoring of the geotechnical borings outlined in Task 3. A monitoring and inadvertent discovery plan will be prepared in advance of the monitoring. CONSULTANT will provide email notification to the Indian Tribes who may have interests in the Stage 1 area in advance of the fieldwork and will provide email summary of monitoring results to the Indian Tribes after fieldwork is completed.

Task 5.2 – Cultural Resources Reporting

CONSULTANT shall review the 2008 TS&L study and update the cultural resources section to be consistent with the information gathered in Task 5.1 The results of the desktop review and the archaeological

monitoring will be presented in a short technical report that complies with Section 106 of the National Historic Preservation Act (NHPA) and submitted to the COUNTY/CITY. CONSULTANT can assist the COUNTY/CITY with submitting the report to DAHP and Indian tribes, if requested.

Task 5.3 – Quality Assurance / Quality Control

QA/QC Reviews: CONSULTANT shall perform senior level review of all Task 5 deliverables and document the reviews according to the Project QA/QC Plan.

Task 5 - Assumptions:

- Due to the high probability for the Stage 2 area to contain archaeological resources, geotechnical monitoring is included. Monitoring provides opportunities to observe the subsurface sediments, assess the potential for archaeological resources and anthropogenic deposits, and develop recommendations for future projects (e.g., survey, construction monitoring, adherence to inadvertent discovery plan, etc.).
- Stage 2 will utilize federal funding and must comply with Section 106 of the NHPA and the RCW.
- No tribal coordination is included beyond notification and summary of the geotechnical monitoring.
- No archaeological or historic built environment surveys are included.
- Cultural resource results for the North Link will be documented in the Stage 1 cultural resources report.

Task 5 - Deliverables:

- Stage 2 draft and final monitoring and inadvertent discovery plan (Word and PDF format)
- Stage 2 draft and final Section 106 of the NHPA compliant cultural resources short technical report (Word and PDF format) to be integrated into the TS&L study.

TASK 6 ENVIRONMENTAL REVIEW AND PERMITTING DOCUMENTATION

This task includes high-level environmental review to support the Stage 2 TS&L update and review of regulatory requirements that will be key to future permitting of the project.

Task 6.1 – Environmental Conditions and Regulatory Requirements Documentation

CONSULTANT will review applicable federal, state, and local regulations and policies. CONSULTANT will identify Resources, Agencies, and Policies that will be key to future environmental review and permitting. Results of the review will be documented in a regulatory requirements summary technical memorandum.

CONSULTANT will conduct a desktop review of publicly available information and conduct reconnaissance-level site investigation of the project area to identify presence or absence of environmental elements that may be affected by the TS&L update:

- Water resources including streams, rivers, and lakes
- Groundwater wells and wellhead protection zones
- Land use designations and Sections 4(f) and 6(f) resources
- Wetlands

- Federal and state endangered and threatened species and habitat
- Environmental justice populations

The purpose of the field work shall be to verify existing environmental conditions information through visual observations and inform the TS&L. The results of the site visit will be presented in an environmental conditions technical memorandum.

After the site investigation has been completed, the CONSULTANT will review the aforementioned environmental elements of the 2008 TS&L and identify where revisions are needed.

Task 6.2 – Quality Assurance / Quality Control

QA/QC Reviews: CONSULTANT shall perform senior level review of all Task 6 deliverables and document the reviews according to the Project QA/QC Plan.

Task 6 - Assumptions:

- Right-of-entry agreements will not be required for site investigation.
- The site investigation for environmental conditions will be completed by two environmental staff in one day.
- Changes to the project description and/or project area may necessitate modifications to this scope of services.
- No permit applications will be prepared or submitted under this scope.
- The CITY will lead the SEPA permitting efforts for the North Link improvements.
- Stage 2 does not include meetings with resource agencies or interested Tribes.

Task 6 - Deliverables:

- Draft and Final Regulatory Requirements Summary Technical Memorandum
- Draft and Final Environmental Conditions Assessment Technical Memorandum.

TASK 7 UTILITY COORDINATION

The effort in this task includes a review of existing facilities and potential impacts or conflicts and coordination with private utility company representatives during the design of the improvements.

Task 7.1 – Preliminary Utility Coordination

Utility coordination efforts will include reviewing existing utilities located within the Stage 2 and North Link limits and confirming that the 2008 TS&L study includes the most current information.

CONSULTANT will develop a preliminary utility base map for coordination with utility companies and to confirm the location of existing utilities and document the evaluation of potential utility impacts.

Task 7.2 – Utility Conflict Evaluation

Review the existing utility base map to identify locations of potential conflicts with the proposed improvements and evaluate potential solutions to avoid the identified conflicts.

CONSULTANT will evaluate resolutions to avoid utility conflicts where possible and coordinate with utility companies to identify utility relocations required with the corridor improvements.

Task 7.3 – Quality Assurance / Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the COUNTY/CITY as part of this Task. The reviews will follow the QA/QC plan established for this Project.

Task 7 - Assumptions:

- The COUNTY/CITY will provide a list of contact names for each utility located within the Project limits.

Task 7 - Deliverables:

- Preliminary and Final Utility Base Map (PDF)

TASK 8 RIGHT-OF-WAY SERVICES

The effort in this task includes determining an estimate of right-of-way costs associated with acquiring the right-of-way required for the Stage 2 corridor improvements.

Task 8.1 – Right-of-Way Task Management

CONSULTANT will provide overall task management including coordination of all real estate services, appraisals and appraisal reviews.

CONSULTANT will attend up to 17 monthly right-of-way meetings to discuss the progress of the real estate services efforts, document action items, and discuss the right-of-way schedule.

COUNTY/CITY Responsibilities:

- Review and approve meeting summaries.

Task 8.2 – Preliminary Right-of-Way Activities

COUNTY/CITY will obtain right of entry agreements needed for the project. CONSULTANT effort in this task is for review of the right of entry documents.

CONSULTANT will review available preliminary plans & confirm property rights identified by COUNTY/CITY needed for the Project.

CONSULTANT will order and distribute Title Reports for the following parcels within the North Link and Stage 2 areas and perform title reviews to identify any issues with the title that need clearing on the parcels:

North Link

- Parcel 021920000000 (Potential Partial Acquisition)
- Parcel 023965001000 (Full Acquisition and Relocation Assistance)
- Parcel 023592001000 (Full acquisition and Relocation Assistance)
- Parcel 023980008000 (60 ft wide easement across railroad right-of-way)
- Parcel 023962003000 (60 ft wide right-of-way)

- Parcel 023962004001 (60 ft wide right-of-way)

Stage 2 Area

- Parcel 009694000000 (80' right-of-way width with embankment impacts)
- Parcel 009695000000 (80' right-of-way width with embankment impacts)
- Parcel 009692000000 (80' right-of-way width with embankment impacts)
- Parcel 009687000000 (80' right-of-way width with embankment impacts)
- Parcel 009684000000 (80' right-of-way width with embankment impacts)

CONSULTANT will prepare all parcel files and diaries for assigned acquisition files.

CONSULTANT will make site visits, estimate relocation costs, interview potential displaces, and prepare a Relocation Plan for the Project.

CONSULTANT will review right-of-way plans for the improvements that identify impacted parcels and summarize impacts to each parcel.

CONSULTANT will develop a right-of-way funding estimate following procedures outlined in Chapter 25 of the Local Agency Guidelines Manual & using WSDOT LPA-005b form to determine a high-level estimate of anticipated right-of-way acquisition costs. The estimate of right-of-way costs will be a rough order of magnitude based on assessed value of the property being acquired (and abutting properties when necessary), using a cost per square-foot for the proposed acquisition areas.

COUNTY/CITY Responsibilities:

- Pay approved invoices for title reports and attachments.
- Review and authorize all early landowner contacts.
- Review and approve relocation plan and cost estimates.
- Review and approve right-of-way funding estimate spreadsheets.
- Confirm and authorize any identified parcels needing right of entry agreements.

Task 8.3 – Valuation Process (Appraisal and Appraisal Review)

CONSULTANT will manage the valuation process for up to eleven (11) parcels. As part of the valuation process, Administrative Offer Summary (AOS) or Appraisal reports will be prepared including before and after reports as needed. CONSULTANT shall meet all requirements set forth in 49 CFR 24.103.

This task will include the following efforts:

- Prepare a schedule for delivery of AOS and Appraisal reports
- Assemble all needed valuation data and scope for each AOS and Appraisal report
- Send out landowner contact letters to all affected parcels in advance of the valuation
- Manage the delivery of one (1) AOS report and up to ten (10) Appraisal reports.
- Manage preparation of Before and After appraisal reports for all parcels identified for acquisition and supply all completed reports to the appraisal reviewer.

COUNTY/CITY Responsibilities:

- Review and approve valuation schedule
- Provide signed Determination of Value for all AOS and Appraisal reports.

Task 8.4 – Right-of-Way Acquisitions and Negotiations

CONSULTANT will perform the following activities as part of this task:

- Prepare an acquisition schedule for all parcels identified for acquisition.
- Prepare title encumbrance reports for each fee and permanent easement parcels.
- Prepare all documents required for all parcels identified for acquisition.
- Participate in legal description review and prepare QC redline of legal descriptions.
- Act as the agent for COUNTY/CITY in all negotiations inclusive of leases (tenants) and personal property.
- Provide justification in the negotiator's diary for any settlement of up to \$5,000.00 above the approved offering price.
- Prepare administrative settlement memos and condemnation packages as needed.
- Transmit completed files to COUNTY/CITY.

COUNTY/CITY Responsibilities:

- Review and approve all acquisition schedules.
- Prior to the beginning of negotiations, review and approve title encumbrance reports.
- Approve the format of all documents and deeds used.
- Approve all administrative settlements in excess of \$5,000.00 and all condemnation packages. These will require BOCC and acceptance by Local Programs if and when certification is required.
- Manage escrow closing of all acquisitions and clearing of all encumbrances through title company.
- Make prompt payment to the owner or escrow company for all approved acquisitions.
- Review and approve all transmitted files.

Task 8.5 – Relocation Services

CONSULTANT will advance the relocation plan and perform the following efforts as part of this task:

- Update the relocation plan for COUNTY/CITY approval if needed.
- Develop a written appeals process, to include a relocation review panel, and provide one staff member for the relocation review panel.
- Prepare all relocation documents.
- Act as the COUNTY/CITY relocation agent for all affected parcels.
- Administer relocation reviews and approvals.
- Process all relocation payments.
- Transmit completed files to COUNTY/CITY.

COUNTY/CITY Responsibilities:

- Review and approve the relocation plan.
- Review and approve the relocation appeals process and provide at least two COUNTY/CITY (or project partner) staff members to sit on the relocation review panel.
- Approve the format of all documents used.
- Review and authorize all relocation payments in advance.
- Make prompt payment to displacees for all approved relocations.
- Review and approval all transmitted files.

Task 8.6 – Right-of-Way Certification Package

CONSULTANT will prepare all files for certification to the standards of the WSDOT LAG manual, prepare a certification memo for the COUNTY/CITY, and perform the following efforts as part of this task:

- Prepare files for certification.
- Prepare certification memos.
- Participate in LPA certification reviews.

COUNTY/CITY Responsibilities:

- Review certification files.
- Transmit final certification memo(s) to Highways and Local Programs.
- Participate in LPA certification reviews

Task 8.7 – Quality Assurance / Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the COUNTY/CITY as part of this Task. The reviews will follow the QA/QC plan established for this Project.

Task 8 - Assumptions:

- CONSULTANT will follow the Uniform Relocation Act, WSDOT LAG manual guidelines, all applicable State and local laws and COUNTY/CITY administrative rules for right-of-way acquisition for all real estate services provided for this Project contract.
- Right-of-Way Evaluation will include up to 11 parcels identified by COUNTY/CITY.
- COUNTY/CITY will pre-approve all real estate forms used for this Project prior to CONSULTANT's use.
- COUNTY/CITY agrees to provide CONSULTANT with all available Project information such as but not limited to the COUNTY and CITY approved right-of-way procedures, environmental documentation, construction and right-of-way plans, and any pre-approved COUNTY/CITY right-of-way forms.
- CONSULTANT and COUNTY/CITY agree to establish clear lines of communication, determine and document the appropriate decision-making process to achieve project goals and to provide open access to all available data that is pertinent to the Project.

- The first monthly right-of-way coordination meeting will serve as the kick-off meeting for right-of-way services.
- CONSULTANT will prepare and distribute a monthly right-of-way report in advance of monthly right-of-way status meetings.
- CONSULTANT will prepare meeting minutes and distribute meeting summaries for review and approval within three days of completion of any meeting.
- CONSULTANT will have one to three staff members attending scheduled right-of-way meetings.
- The right-of-way team will provide review comments on the preliminary right-of-way plans.
- There will be a maximum of two (2) public open house meetings.
- A minimum of one and a maximum of two CONSULTANT staff will attend public open house meetings in person as support only to the COUNTY/CITY for real estate services.
- There will be a maximum of eleven (11) right of entry agreement requests with a maximum of four (4) substantive contacts by the CONSULTANT for each parcel.
- Title reports will be ordered by CONSULTANT.
- The relocation plan will be developed in WORD format.
- The relocation plan cost estimate will be developed in EXCEL format.
- There will be a maximum of two (2) relocation parcels.
- The Preliminary Right-of-Way Funding Estimate will be created using costs per square foot that are based on the assessed value of the subject parcels. If an assessed value isn't available for the subject parcel, the abutting property values may be utilized.
- There will be a maximum of two (2) right-of-way funding estimate spreadsheets.
- COUNTY/CITY to provide CONSULTANT potential condemnation costs if negotiations with the property owner are unsuccessful that will be included in the Right-of-Way Funding Estimate.
- It is anticipated there will be a total of one (1) parcel AOS report, ten (10) appraisal reports and ten (10) appraisal reviews.
- If it is determined that the value of any parcel is more than \$35,000, or the valuation is determined to be complex in nature, an Appraisal is necessary, along with an appraisal review. This will add scope, and additional fee will be required.
- COUNTY/CITY will approve the just compensation to be offered to each owner in a timely manner.
- When an Appraisal is needed the following applies:
 - All valuation services will be performed by a certified independent appraiser.
 - Appraisals will be before and after short form narrative appraisal reports.
 - NTP for the appraiser will be the date of receipt of sufficient right-of-way plans or exhibits; title information; and landowner contact information.
 - The estimated delivery schedule for the appraisal reports and AOS documents is within ten (10) weeks from the date of NTP.

- NTP for the review appraiser will be upon delivery of the appraisal report. Estimated delivery time is 30 days from NTP.
- COUNTY/CITY will have sufficient funding to pay for the acquisition of any parcel to be acquired.
- The CONSULTANT will have settlement authority with justification of up to \$5,000.00 over the approved offer for each individual parcel.
- All offers will be made in person or by certified mail. There will be a maximum of four (4) substantive contacts by the CONSULTANT for each parcel assigned.
- A substantive contact will be considered either an in-person meeting with a landowner or a detailed phone or email conversation with a landowner followed by a confirmation or request for action email or letter by the CONSULTANT.
- Negotiations will be deemed complete on a parcel if any of the following occur: The offer is rescinded; the parcel is forwarded to condemnation; all documents are signed and recorded, and all payments have been made.
- All fee acquisitions and permanent easement parcels shall be closed in escrow.
- COUNTY/CITY will be responsible for all encumbrances to be cleared or accepted.
- One draft and one final version of the relocation plan and appeals process will be prepared.
- There will be a maximum of two (2) residential relocations
- All relocation services will follow the Uniform Relocation Act and WSDOT LAG manual standards.
- If right-of-way acquisition is completed without the expenditure of federal funds, then no right-of-way certification will be required.
- A maximum of eleven (11) acquisition files shall be prepared for certification.
- There will be a maximum of two (2) certification memos prepared.
- There will be a maximum of two (2) certification review meetings of 1-hour duration each.
- If there is an increase or change in the proposed number of impacted parcels, this may result in an additional level of effort and will require authorization from the COUNTY/CITY.

Task 8 - Deliverables:

- Monthly Right-of-Way Status Reports
- Meeting Agendas and Summaries
- Documentation of early landowner contact meetings through right of entry negotiations.
- Right of Entry Documents and signed agreements.
- Summaries of relocation site visits and interviews
- Relocation plan and relocation cost estimates.
- Right-of-way funding estimate spreadsheets and worksheets.
- Valuation schedule
- Administrative Offer Summary Reports

- Landowner contact letters, if applicable
- Appraisal Reports
- Appraisal Reviews
- Acquisition schedules
- Title encumbrance reports
- Completed Acquisition Documents
- Redline QC of Legal Descriptions, Survey Exhibits and Right-of-Way Plans
- Administrative Settlement Memos.
- Completed acquisitions or condemnation packages.
- Certification files.
- Final Certification Memo(s).

TASK 9 FLOODPLAIN MODELING

Task 9.1 – Channel Survey

CONSULTANT will conduct the necessary bathymetric survey approximately 1 mile upstream and 1 mile downstream of the proposed crossing location, as conditions safely allow. CONSULTANT will combine bathymetric data with other available survey and LiDAR data to create a combined existing conditions terrain for modeling.

Task 9.2 – Geomorphic Assessment

CONSULTANT will collect existing data and information that may be needed for the geomorphic and hydraulic evaluations. Typical information includes the most recent topography, LiDAR data, existing hydraulic models, river discharge records, aerial photos, flood data, any anecdotal information on prior flood events, geotechnical reports and/or borings, geomorphologic and/or CMZ studies, the history of previous bridges and/or bank revetments within the hydraulic model extents, and original TS&L report.

CONSULTANT will evaluate geomorphic conditions in the river to support the design of the proposed bridge. A field geomorphic assessment will extend from approximately one mile upstream and downstream. It will document:

- The composition of the bed material
- Locations of eroding banks
- Bank stratigraphy
- Condition of riparian vegetation role in channel stability
- Any observed indications of historical channel aggradation or degradation, and
- Any observed barriers or controls on channel migration or degradation
- Role of large woody material in the reach.

COSULTANT will conduct a geomorphic assessment using available LiDAR and survey data, SSURGO soils mapping, as-built drawings, aerial photos, and findings from the field reconnaissance. The purpose of this

assessment is to provide site context by identifying processes contributing to existing scour conditions and estimating likelihood of future channel adjustments (i.e., long-term degradation and lateral migration). These data are needed to assess geomorphic risks associated with the bridge and support the channel migration analysis, scour calculations at the bridge, and countermeasure design.

Task 9.3 – LAND Alternatives Considerations

CONSULTANT will coordinate with the LAND alternatives liaisons to review previous work performed and identify considerations for the Stage 2 hydraulics analysis and floodplain modeling efforts of the TS&L update.

CONSULTANT will review the floodplain modeling results from the bridge alternatives and provide feedback to the project design team for consideration in the TS&L update. The peer review will include review of floodplain modeling results for each of the bridge alternatives evaluated.

The LAND alternatives liaisons will develop a technical memorandum to document the peer review of the floodplain modeling results. The technical memorandum will be included in an appendix of the updated TS&L.

Task 9.4 – Floodplain Modeling

A hydraulic model of the bridge reach is necessary to aid engineering design in addition to demonstrating compliance with regulatory criteria. The model will support computing expected scour at the bridge and assist in the design of countermeasures should they be determined necessary. To efficiently evaluate hydraulic conditions and flood hazards at the Project crossing, the existing calibrated RiverFlow2D model of the Chehalis River will be used as a reference.

CONSULTANT will utilize HEC-RAS 2D model generated from Chehalis River FRE project to perform hydraulic analysis. Additional refinements will be made to better analyze hydraulic parameters at the bridge crossing to inform relative freeboard, water surface elevation impacts, and scour assessments to be completed in Task 11.7. Hydrologic flows will be generated from a Bulletin 17C analysis using USGS Gage Station 12027500 - Chehalis River Near Grand Mound, WA. Additional analysis will be performed to determine flows coming from the Skookumchuck River.

CONSULTANT will model up to five (5) bridge scenarios and provide water surface elevations for each scenario. The proposed crossing is in a FEMA special flood hazard area Zone AE with a FEMA floodway. As such, the bridge must meet FEMA's No-Rise criteria (and by default Lewis County's Zero-Rise analysis), meaning it cannot cause a rise to the 100-year flood elevation (floodway and un-encroached conditions). However, if the bridge cannot be designed to this standard and it impacts the regulatory water surface elevation or regulatory floodway boundary, then pursuing the proposed bridge design may necessitate a Conditional Letter of Map Revision (CLOMR), which notifies FEMA and the surrounding communities of intent to increase the 100-year flood profile. If a CLOMR is pursued, significant additional effort will be required that is beyond this scope of services.

In addition to meeting FEMA, Lewis County, and Centralia floodplain regulations, new bridges must comply with Washington Administrative Code (WAC), specifically WAC 220-660-190. Key constraints for new bridges identified in the WAC include no increase to the main channel velocity is permitted, freeboard from the bottom of the bridge structure to the 100-year water surface elevation must meet or exceed three feet, the bridge must account for lateral migration expected during the bridge's lifespan, and the need for scour protection must be minimized.

Up to three bridge design scenarios will be modeled with up to two LAND Alternatives. This will result in a maximum of six additional model runs. Review of LAND Alternatives and coordination with LAND Alternatives Technical Advisors will be completed before selecting model runs.

Task 9.5 – Scour Evaluation

CONSULTANT will use results of the geomorphic assessment and develop a hydraulic model of the bridge reach only to support computing expected scour at the bridge and assist in the design of countermeasures should they be determined necessary.

CONSULTANT will utilize SRH-2D to simulate hydraulics through the bridge reach and inform scour assessments and countermeasure design. Federal Highway Administration (FHWA) (2019) recommends that the U.S. Bureau of Reclamation's SRH-2D model be used for crossing hydraulic design and scour assessment. CONSULTANT will follow the modeling guidelines included in Two-Dimensional Hydraulic Modeling for Highways in the River Environment - FHWA-HIF-19-061 (FHWA, 2019), the FHWA and WSDOT standard for crossing design.

To efficiently evaluate hydraulic conditions and flood hazards at the Project crossing, CONSULTANT will utilize existing calibrated RiverFlow2D model and HEC-RAS 2D models of the Chehalis River as references. Using the RiverFlow2D model as a starting point, CONSULTANT will develop a detailed SRH-2D model with a domain no larger than that covered by the channel bathymetry survey to analyze hydraulic parameters at the bridge crossing. Inflows and downstream water surface elevations for the detailed model will be extracted from the HEC-RAS 2D model. The existing site condition will be modeled and calibrated to the HEC-RAS 2D model simulation results. Up to three crossing alternatives will be simulated for the site.

CONSULTANT will analyze the potential for long term degradation, contraction scour, and local scour at the abutments and/or piers of the proposed design per methodology prescribed in the FHWA HEC-18 guidelines. Channel bank stability will be assessed during the field survey and geomorphic reach assessment and scour estimates at the proposed bridge will be computed with the hydraulic model. Results from the detailed SRH-2D model and geomorphic assessment will be used as inputs for the scour evaluation and may include recommendations for scour countermeasures. CONSULTANT will document the findings from the scour analysis in a technical memorandum.

Task 9.6 – Floodplain Permitting

CONSULTANT shall prepare and submit documentation and required applications per LCC 15.35. At minimum, floodplain development permit and a zero-rise analysis report will be provided.

Task 9.7 – Quality Assurance / Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the COUNTY/CITY as part of this Task. The reviews will follow the QA/QC plan established for this Project.

Task 9.8 – CLOMR (Optional Task)

A Conditional Letter of Map Revision (CLOMR) is required for projects in a regulatory floodway if the project increases the regulatory elevation by any amount.

CONSULTANT shall assemble a FEMA MT-2 form and compile data, maps, reports, models, design plans for submittal to FEMA for a CLOMR.

CONSULTANT shall submit the CLOMR based on the updated 60% design and will provide technical assistance (as a major submittal) for review, coordination and updates with the FEMA during the 90-day review. This includes up to two revisions and resubmittals in the CLOMR submittal process.

Task 9 - Assumptions:

- Channel bathymetric survey will not be conducted by a PLS and will only be used for hydraulic modeling and related analysis.
- Water surface elevations and scour will be calculated for up to three alternatives.
- Hydraulic modeling efforts will use available models that have been developed for the basin.
- Hydraulic reporting will be included in the updated TS&L Report
- Results of the scour analysis and scour countermeasure analysis will be included in a standalone letter report.
- One round of consolidated comments on the Draft Geomorphic Conditions Technical Memo will be incorporated into a final version.
- Results of the geomorphic assessment will be documented in a stand-alone letter report.
- One round of consolidated comments on the Draft Floodplain Modeling Peer Review Technical Memo will be incorporated into a final version.

Task 9 - Deliverables:

- TIN surface of bathymetric data in AutoCAD format
- Combined existing conditions surface terrain
- Draft Geomorphic Conditions Technical Memo (PDF)
- Final Geomorphic Conditions Technical Memo (PDF)
- Draft Floodplain Modeling Peer Review Technical Memo (PDF)
- Final Floodplain Modeling Peer Review Technical Memo (PDF)
- Hydraulics reporting will be included in the updated TS&L Report
- Detailed HEC-RAS hydraulic model for the bridge reach (native electronic format)
- Detailed SRH-2D hydraulic model for the bridge reach (native electronic format)
- Draft Scour Analysis Memo (PDF)
- Final Scour Analysis Memo (PDF)
- FEMA CLOMR application forms and descriptive memorandum (PDF)
- Lewis County – Floodplain Development Permit (PDF)

TASK 10 BRIDGE CONCEPT DEVELOPMENT AND SCREENING

Task 10.1 – Level 1 Bridge Concepts Development and Screening

Up to five (5) high-level concepts will be evaluated for the approach bridges. The approach bridge concepts will be developed using information gathered in the geotechnical and floodplain modeling tasks. The roadway cross-section for the approach bridges will be defined by the COUNTY/CITY.

Up to five (5) high-level concepts will be evaluated for the main span bridge. The main span bridge concept will be developed using information gathered in the geotechnical and floodplain modeling tasks. The roadway cross-section for the main span bridge will be defined by the COUNTY/CITY.

CONSULTANT will develop up to five (5) concept plan view layouts, elevation views and typical cross-sections for each of the high-level bridge concepts evaluated. These layouts, elevations and sections will be developed in AutoCAD.

CONSULTANT will develop a rough order of magnitude construction cost estimate for each of the bridge alternatives evaluated using square-foot unit costs for bridge structures and other approximate means.

The CONSULTANT and LAND alternatives liaisons will attend a two (2) hour virtual meeting with the COUNTY/CITY to evaluate bridge concepts and discuss recommendations for the level 1 screening documentation. The efforts in this task will validate the feasibility of the different types of structures proposed in the bridge concepts before moving to the level 2 alternatives development and screening.

CONSULTANT will develop a technical memorandum documenting the results of the level 1 screening.

Task 10.2 – Level 2 Bridge Alternatives Development and Screening

Up to three (3) bridge alternatives will be advanced from the concept screening efforts. The bridge alternative designs will be developed using information gathered in the geotechnical and floodplain modeling tasks.

Alternative plan views and typical cross-sections developed as part of Task 11.2 will be updated to reflect revisions made during the bridge alternatives development.

CONSULTANT will update the construction cost estimates to include more detailed costs for each bridge structure type proposed.

The CONSULTANT and LAND alternatives liaisons will attend a two (2) hour virtual meeting to evaluate each bridge concept and discuss recommendations for the level 2 screening documentation.

CONSULTANT will develop a technical memorandum to document the results of the level 2 screening.

Task 10.3 – Comment Response and Resolution

CONSULTANT will document comments received from the COUNTY/CITY on the Level 1 and Level 2 screening results deliverables. Comment response forms will document the comment resolution and direction provided by the COUNTY/CITY.

Task 10.4 – Quality Assurance / Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the COUNTY/CITY as part of this Task. The reviews will follow the QA/QC plan established for this Project.

Task 10 - Assumptions:

- COUNTY/CITY will provide the cross-section widths for the proposed bridge structures.
- Hydraulic modeling efforts will use available models that have been developed for the basin.
- A CLOMR is not included in this scope of services.
- Results of the geomorphic assessment will be documented in a stand-alone letter report.
- Level 1 and Level 2 screening meetings will be attended virtually.

- One round of comments will be received on the Level 1 and Level 2 results memorandums and exhibits.

Task 10 - Deliverables:

- Level 1 screening results memorandum and exhibits (PDF)
- Level 2 screening results memorandum and exhibits (PDF)

TASK 11 TYPE, SIZE, AND LOCATION STUDY (TS&L)

Task 11.1 – TS&L Kickoff Meeting

CONSULTANT will review the existing TS&L in preparation for the TS&L kickoff meeting. The CONSULTANT design team will coordinate with the LAND alternatives liaison(s) and other SUBCONSULTANTS in advance of the TS&L kickoff meeting to prepare materials for the TS&L kickoff meeting.

At this meeting, the project management team will identify the TS&L constraints and design parameters, and clearly define the TS&L goals and objectives including the target level of protection for the Project.

The TS&L kickoff meeting will be in-person and attended by the COUNTY/CITY project management team, the CONSULTANT project manager, and CONSULTANT team discipline leads, up to five (5) team members. (roadway/structural, environmental, geotechnical, floodplain modeling, public outreach).

CONSULTANT will document the kickoff meeting discussion, decisions and direction provided by the COUNTY/CITY in the meeting minutes.

Task 11.2 – TS&L Study Update

CONSULTANT will update the 2008 TS&L Study to reflect the information gathered as part of the Stage 2 geotechnical efforts, and the results of the coordinated effort between the floodplain modeling and bridge alternatives evaluation tasks. The update efforts will include documentation of the LAND alternatives considerations and recommendations that are developed as part of the LAND liaison coordination.

The updated TS&L report will include the results of the bridge screening process, cost estimates for the evaluated alternatives, and recommendations for the preferred approach and main span bridge alternatives to be advanced to the preliminary design task.

CONSULTANT team will address COUNTY/CITY comments received on the Draft TS&L Study and develop the Final TS&L Study for submittal.

Task 11.3 – Comment Response and Resolution

CONSULTANT will document comments received from the COUNTY/CITY on the Draft TS&L Study. CONSULTANT will provide responses to the comments in a comment response form.

Task 11.4 – Quality Assurance / Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the COUNTY/CITY as part of this Task. The reviews will follow the QA/QC plan established for this Project.

Task 11 - Assumptions:

- The TS&L Kickoff Meeting will be held before floodplain modeling efforts begin.
- The TS&L Kickoff Meeting will be attended in-person.

- The TS&L Report will follow section 2.1.5 of the WSDOT Bridge Design Manual (BDM)
- One round of comments will be received on the Draft TS&L Study.

Task 11 - Deliverables:

- Draft TS&L Report (PDF)
- Final TS&L Report (PDF)

TASK 12 TRAFFIC ENGINEERING

Task 12.1 – Traffic Data

CONSULTANT will collect existing traffic counts at the intersection of N. Scheuber Road and Galvin Road to use in the traffic evaluation. Traffic data will be analyzed, and peak hour periods will be determined for the analysis.

CONSULTANT will use available data from the Harrison Avenue project that is analyzing the intersection improvements at the intersection of Scheuber Road and Harrison Avenue. Projected corridor volumes will be used for analysis of future traffic conditions.

CONSULTANT will coordinate with Puget Sound and Pacific (PSAP) and/or Union Pacific Railroad (UPRR) representatives to obtain RR crossing data that will be used to evaluate traffic queues associated with train crossing events.

Task 12.2 – Traffic Analysis

The CONSULTANT shall evaluate traffic conditions at the intersection of N. Scheuber Road and Galvin Road. This task will also include evaluation of impacts associated with an at-grade crossing located north of the intersection.

CONSULTANT will complete an operational analysis, evaluating the operations of the following intersection control alternatives:

- Traffic Signal
- Stop Control
- Roundabout

The evaluation will include peak hour periods for the anticipated opening year of the intersection. The design year used will be consistent with other corridor traffic modeling efforts.

Synchro will be used for the traffic signal and stop control alternatives and Sidra will be used for the roundabout analysis. WSDOT protocol for Sidra parameters and settings will be used.

CONSULTANT will evaluate how traffic queues from each intersection alternatives will impact the RR crossing. The queuing analysis will also include evaluation of queues associated with RR crossing events and the impacts to intersection operations.

The queuing analysis will include evaluation of lane configurations that can provide storage for queues during train crossing events while maintaining traffic flow for other movements that are not destined for the at-grade crossing.

CONSULTANT will develop a technical memorandum to document the results of the operational and queuing analysis and a recommendation for the intersection improvements.

Task 12.3 – Quality Assurance / Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the COUNTY/CITY as part of this Task. The reviews will follow the QA/QC plan established for this Project.

Task 12 - Assumptions:

- Design year traffic data being used on the COUNTY/CITY Harrison Avenue project will be used for future conditions at the intersection of N. Scheuber Road and Galvin Road.

Task 12 - Deliverables:

- Traffic Analysis Technical Memorandum (PDF)

TASK 13 ALTERNATIVES ANALYSIS

This task includes evaluation of the intersection control type at the N. Scheuber Road and Galvin Road intersection but does not include evaluation of a grade separated crossing. See the Railroad Coordination task for evaluation of railroad crossing alternatives.

Task 13.1 – Alternatives Development

CONSULTANT will develop high-level layouts of the intersection alternatives using lane configuration data from the traffic analysis. The layouts will be used to evaluate the footprint and impacts of each alternative.

CONSULTANT will develop rough order of magnitude estimates for the construction of each alternative for use in the evaluation.

Task 13.2 – Alternatives Analysis

CONSULTANT will evaluate each alternative using the following criteria:

- Safety
- Operations
- R/W Impacts
- Environmental Impacts
- Implementation with RR

CONSULTANT will coordinate with COUNTY/CITY to prioritize the criteria for the alternatives analysis. The evaluation results will be used to support the recommended alternative.

Task 13.3 – Documentation

CONSULTANT will develop an alternatives analysis technical memorandum to document the alternatives evaluation process and results, and recommendations for the intersection improvements.

CONSULTANT will develop a draft alternatives analysis report for COUNTY/CITY review and comment.

CONSULTANT will address COUNTY/CITY comments on the draft report and finalize the alternatives analysis report.

Task 13.4 – Quality Assurance / Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the COUNTY/CITY as part of this Task. The reviews will follow the QA/QC plan established for this Project.

Task 13 - Assumptions:

- Evaluation of a grade separated railroad crossing is NOT included in Task 13 (see railroad coordination task).
- Intersection operational analysis is NOT included in Task 13 (see traffic engineering task).

Task 13 - Deliverables:

- Draft Alternatives Analysis Report (N. Scheuber / Galvin)
- Final Alternatives Analysis Report (N. Scheuber / Galvin)

TASK 14 RAILROAD COORDINATION

This task includes efforts related to evaluating a grade separated crossing and coordination with the railroad and UTC for approval of a new at-grade crossing located within the North Link limits.

Task 14.1 – PSAP and/or UPRR Coordination

CONSULTANT will meet virtually with PSAP and/or UPRR representatives to discuss the project and obtain information related to the design details and crossing equipment required for a new at-grade crossing.

CONSULTANT will coordinate with the railroad owner to acquire right-of-entry to support field activities early in the project design phase.

CONSULTANT will coordinate with PSAP and/or UPRR representatives to address questions on the crossing design during the development of the various design phase packages.

CONSULTANT will coordinate with the railroad owner's Real Estate Department to execute new easements for the at-grade crossing.

CONSULTANT will coordinate with PSAP and/or UPRR representatives to draft the project CMA following submittal of approved plans.

Task 14.2 – RR Crossing Alternative Evaluation

CONSULTANT will develop a high-level concept sketch showing the limits of a grade separated alternative and the impacts to adjacent parcels due to the grade change of N. Scheuber Road. The grade separated concept evaluation will include the following:

- RR clearance criteria and centerline profile for the grade separated roadway.
- Impacts to adjacent parcels due to grade change of N. Scheuber Road
- Rough order of magnitude for the improvements

CONSULTANT will develop crossing exhibits for a new at-grade crossing of Scheuber Road. The at-grade separated concept evaluation will include the following:

- Roadway section, RR crossing signal equipment

- Signing, channelization
- R/W impacts
- Rough order of magnitude for the improvements

CONSULTANT will develop a technical memo to document the evaluation of RR crossing options and document the recommended alternative.

Task 14.3 – Utilities and Transportation Commission (UTC) Coordination

CONSULTANT will coordinate with the UTC to schedule and attend up to three (3) review meetings with UTC staff and respond to UTC comments on submitted deliverable packages.

CONSULTANT will schedule a meeting with the UTC to discuss the project and documentation requirements for the grade separation evaluation and crossing justification and approval.

CONSULTANT will document the discussion, decisions and direction provided at the UTC diagnostic meeting.

Task 14.4 – Railroad Submittals

CONSULTANT will develop a 30% level crossing design based on comments received at the UTC diagnostic meeting for submittal to the railroad for review.

CONSULTANT will develop a 90% level crossing design based on comments received from PSAP and/or UPRR review of draft plans for final approval.

Task 14.5 – Comment Response

CONSULTANT will address comments received on the design phase packages in comment response forms where comment resolution will be documented.

Task 14.6 – Quality Assurance / Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the COUNTY/CITY as part of this Task. The reviews will follow the QA/QC plan established for this Project.

Task 14 - Assumptions:

- Railroad stakeholders include PSAP, UPRR, WUTC, COUNTY and CITY.
- An at-grade crossing will be the recommended alternative.
- Crossing design will be in accordance with PSAP, UPRR, FRA and MUTCD guidelines.
- Final signal design and construction will be performed by PSAP and/or UPRR.
- One round of comments will be received on each design submittal package.
- One diagnostic meeting will be conducted for the Project.
- The scope does not include preparation for, testifying at, or supporting a crossing hearing or other legal matter to the crossing if the Rail Crossing Order be disputed by other individuals or organizations.
- Railroad flagging is not included in this scope of work.
- PSAP and/or UPRR will provide a draft Construction and Maintenance agreement following submittal of approved plans.

- New easements will be drafted by the railroad owner's Real Estate Department.
- All application/permit fees are the responsibility of the COUNTY/CITY.
- Fees and administration associated with the Railroad Engineering Reimbursement Agreement (ERA) between PSAP and/or UPRR and the COUNTY/CITY is the responsibility of the COUNTY/CITY.

Task 14 - Deliverables:

- Right-of Entry Agreement
- Draft/Final RR crossing evaluation memorandum (PDF)
- Draft/Final at-grade crossing exhibits (PDF)
- UTC diagnostic meeting agenda and minutes (PDF)
- Draft/Final UTC petition for new at-grade crossing (PDF)
- Crossing easement documents (by railroad owner's Real Estate Department)
- Draft Construction and Maintenance Agreement (by PSAP and/or UPRR representatives)

TASK 15 PRELIMINARY DESIGN (NORTH LINK and STAGE 2)

This task includes the preliminary design of the North Link improvements and the Stage 2 roadway areas. The work includes improvements to the intersection of N. Scheuber Road and Galvin Road. It is assumed the preferred alternative for the intersection improvements is a roundabout. The preliminary design of the roadway areas within the Stage 2 project limits between Mt Vista Rd and Cooks Hill Rd are also included in this task, but the preliminary design of bridge structure(s) or retaining walls is not included in this scope of work. Efforts in this task take the design to a 30% design level.

Task 15.1 – Roadway/Roundabout Design

CONSULTANT will develop horizontal roadway geometry for a new tangent section of N. Scheuber Road between the intersections of Galvin and Ives Road. The north end of the corridor will match into a roundabout design at Ives Road provided by the COUNTY/CITY.

CONSULTANT will develop the roadway design for the preferred alternative identified in the updated TS&L report. The preliminary design efforts will not include design of retaining walls or bridge structures and will only include the horizontal design of the roadway approaches.

CONSULTANT will develop the horizontal roadway geometry for the Stage 2 improvements between Mt Vista Rd and Southgate Dr.

CONSULTANT shall develop the roundabout configuration identified in the traffic analysis for the N. Scheuber Road / Galvin Road intersection. The design vehicle for the ultimate configuration roundabout shall be a WB-67.

CONSULTANT shall develop exhibits for the roundabout configuration showing the following roundabout design elements:

- Speed Curve Exhibits (identifying speeds for R1 through R5 curves)
- Sight Distance Exhibits (identifying stopping and intersection sight distance)
- Truck Turning Movement Exhibits for intersection and driveway access movements.

Roundabout performance check calculations and accompanying figures for the interim and ultimate configurations will be prepared to document design speeds, vehicle turning templates, and sight triangles at the intersection. The roundabout performance checks will be submitted in PDF and AutoCAD format.

Alignments for N. Scheuber Road and Galvin Road will extend approximately 500 feet down each approach of the intersection, plus an additional 1,000 feet north to the intersection of Scheuber and Ives Road. Work from Stage 1 will be incorporated into the northbound approach of the intersection. Alignments will be developed for roadway centerlines, truck apron curb lines, and the curb line quadrant alignments for the preferred alternative (assumed to be a roundabout). Project survey control points will be tied to the project horizontal alignments. The centerline alignment for Stage 2 will be developed between Mt Vista Road and Cooks Hill Road.

Existing and finished grade profiles will be developed for the roadway centerline, truck apron, and curb line quadrant alignments.

Establishing the curb line quadrant profiles for the roundabout will include development of an auxiliary 3D model that assumes a normal crown throughout the roundabout and does not represent final grading. Centerline superelevation calculations and cross slope grade transitions will be necessary to determine vertical elevations for each quadrant profile. Final curb line quadrant profiles will be developed using profiles cut from the auxiliary 3D model.

A corridor model will be developed for the roadway sections of the Stage 2 area to identify the Project footprint. Design of retaining walls/bridge structures is not included in this scope of services.

Task 15.2 – Stormwater Design

CONSULTANT will conduct a preliminary drainage analysis and evaluate the use of retrofitting existing CITY facilities, new infiltration galleries, low impact development best management practices or any other potential new stormwater treatment facilities within the Project limits.

CONSULTANT shall prepare a DRAFT Stormwater Technical Memorandum. The DRAFT Technical Memorandum will include graphics which document analysis and assumptions.

CONSULTANT will utilize the requirements set forth in the latest edition of the Stormwater Management Manual for Western Washington (DOE Manual), prepared and published by the Washington State Department of Ecology (WSDOE).

Task 15.3 – Illumination Design

This task includes efforts for developing the illumination design for the North Link improvement including the roundabout at the intersection of N. Scheuber Road and Galvin Road.

CONSULTANT will develop a base map for use in the AGI32 street lighting file and import the design line work into the file. Existing street lighting will be built into the AGI32 lighting file. CONSULTANT will verify lamp depreciation values for the AGI32 design parameters.

CONSULTANT will evaluate line loss calculations and identify illumination system circuit wiring.

CONSULTANT will develop a preliminary illumination layout as part of the preliminary roadway/roundabout geometric review/evaluation.

Task 15.4 – Landscaping Design

CONSULTANT will develop a planting layout for roadway landscaping areas within the North Link limits. It is assumed that the roadway cross-section for the North Link will be similar to the Stage 1 improvements with stormwater LID features in the roadway landscaping areas.

CONSULTANT will coordinate with CITY staff to identify the CITY's expectations for the central island landscaping design. CONSULTANT will develop up to three (3) concept sketches for the central island landscaping design for CITY review and comment. CONSULTANT will advance the concept that the CITY selects for the Project.

The irrigation design for the North Link will consist of developing high-level schematic construction documents identifying the landscaping areas that require irrigation. A design performance specification will be developed to define the design/build effort for the installation of the irrigation system.

Task 15.5 – QA/QC Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this Task. The reviews will follow the QA/QC plan established for this Project.

Task 15 - Assumptions:

- The CONSULTANT shall use the Western Washington Hydraulic Model (WWHM) for preliminary sizing of both the water quality and flow control facilities.
- No conveyance analysis is required for the DRAFT Drainage Report.
- The North Link roadway alignment centerline will be centered on the proposed 60-foot R/W.
- The south approach of the intersection at N. Scheuber Road and Gavlin Road will be coordinated with the work being performed in Stage 1.
- The COUNTY/CITY will provide one set of conflict resolved comments for the DRAFT Drainage Report.
- CITY will provide CONSULTANT illumination design standards and luminaire dirt and lamp lumen depreciation.
- All core requirements will be required per the DOE Manual. The Project adds more than 5,000 square feet of new impervious surface (hard surface).
- The Chehalis River is considered flow control exempt.
- The DRAFT Drainage Report for COUNTY/CITY will be a maximum of 10 pages (including graphics).

Task 15 - Deliverables:

- FINAL Roundabout Performance Check Calculations and Figures (pdf & AutoCAD).
- DRAFT Drainage Report for COUNTY/CITY review and comment, delivered electronically in pdf format.
- AGI32 lighting analysis results.

TASK 16 FINAL DESIGN (NORTH LINK)

This task includes addressing comments received on the 30% and 60% PS&E submittals and advancing the design of the North Link improvements to 90% including the intersection of N. Scheuber Road and Galvin Road. It is assumed that the preferred alternative for the intersection improvements is a roundabout.

Task 16.1 – Roadway/Roundabout Design

Horizontal alignments will be updated to reflect any geometric changes resulting from the 30% design review. Horizontal alignments will not change after the 30% design review.

Vertical alignments will be updated to reflect any revisions resulting from the 30% design review. Vertical alignments will need adjustments after the 30% and 60% design reviews.

A final grading plan will be developed for the North Link improvements including the roundabout.

Task 16.2 – Stormwater Design

CONSULTANT will address comments received on the DRAFT stormwater Technical Memorandum submitted with the 60% design submittal and prepare the FINAL Stormwater Site Plan per Core Requirement No. 1 of the DOE Manual.

CONSULTANT will update the Technical Memorandum to reflect the COUNTY/CITY comments.

Task 16.3 – Illumination Design

This task includes efforts for developing the final illumination design for the North Link improvement including the roundabout at the intersection of N. Scheuber Road and Galvin Road.

CONSULTANT will update the illumination design layout and AGI32 file to reflect the final design.

CONSULTANT will update line loss calculations to reflect the final illumination layout.

Task 16.4 – Landscaping Design

CONSULTANT will coordinate with the stormwater design to finalize the roadway landscaping area designs.

CONSULTANT will address COUNTY/CITY comments on the preliminary central island landscaping design and finalize the planting and/or hardscape layout.

The irrigation design high-level schematic layout will be updated to address comments received on the 60% submittal.

Task 16.5 – QA/QC Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this Task. The reviews will follow the QA/QC plan established for this project.

Task 16 - Assumptions:

- The North Link roadway alignment will not change after the 30% design review.
- The south approach of the intersection at N. Scheuber Road and Gavlin Road will be coordinated with the work being performed in Stage 1.
- The COUNTY/CITY will provide one set of conflict resolved comments for the Final Drainage Report.
- FINAL Stormwater Site Plan will be submitted with the 90% PS&E design submittal.
- FINAL Stormwater Site Plan will be up to 40 pages including graphics, conveyance calculations, WWHM output, and Stormwater Pollution and Prevention Plan (SWPPP).

- Conveyance calculations included in the Final Stormwater Site Plan will evaluate the 25-year, 24-hour storm event for capacity and velocity. The Santa Barbara Unit Hydrograph will be used for infrastructure sizing.

Task 16 - Deliverables:

- FINAL Stormwater Site Plan for COUNTY/CITY review and comment, delivered electronically in pdf format.
- AGI32 lighting analysis results

TASK 17 30% PLANS AND ESTIMATE (North Link and Stage 2)

The 30% design documentation effort will consist of roll plots of the plan and profile views of the North Link section and Stage 2 area between Mt Vista Rd and Cooks Hill Road. The 30% submittal will also include a preliminary opinion of probable construction costs for the North Link improvements.

Task 17.1 – 30% Roll Plots

The following roll plots will be provided with the 30% submittal:

North Link Roll Plot – (1 sheet)

Roll plot will include the project improvements including preliminary stormwater infrastructure throughout the limits of the project and proposed improvements at the new at-grade crossing.

North Link Profile View Roll Plot – (1 sheet)

The roll plot will include vertical profiles for the centerline and RAB quadrant alignments.

Stage 2 Roll Plot – (1 sheet)

Roll plot will include the Stage 2 project improvements identified in the final TS&L report including a high-level estimation of stormwater facilities.

Stage 2 Provide View Roll Plot – (1 sheet)

The roll plot will include vertical profiles for the N. Scheuber Road centerline developed as part of the TS&L update task.

Task 17.2 – 30% Opinion of Probable Construction Costs (OPCC)

CONSULTANT will develop a preliminary opinion of probable construction costs based on the 30% design. Quantities will be documented and tracked for QC review.

Task 17.3 – Quality Assurance/Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this task. The reviews will follow the QA/QC plan established for this project.

Task 17 - Assumptions:

- Roll plots and preliminary bridge plans will be submitted in PDF and AutoCAD format.

Task 17 - Deliverables:

- 30% Roll Plots(s), pdf format via email.
- 30% OPCC, pdf format, pdf via email.

TASK 18 60% PS&E (North Link)

The 60% design submittal will consist of construction plans developed based on the 30% design review, a draft of the project special provisions, and a 60% opinion of probable construction costs.

Task 18.1 – 30% Comment Response Resolution

CONSULTANT will develop comment response resolution forms to document the 30% comment resolution process. The 60% design will reflect the approved 30% design.

Task 18.2 – 60% Plans

Construction plans will be developed for the 60% submittal. Plans will be developed in CAD at 20 scale on 22" x 34" borders (40 scale on 11" x 17") unless otherwise noted. The following plans will be included with the 60% design submittal:

Cover Sheet – (1 sheet)

The cover will include a vicinity map, sheet index, and other project information to meet CITY standards.

Legend and Notes – (1 sheet)

This sheet will include general project notes and a general legend to identify existing and proposed features.

Alignment Plans – (1 sheet)

The alignment plans will identify R/W and centerline, and the project construction centerline alignments including critical station information and station equations. This sheet will be developed at a scale that allows for all project alignments to be displayed on one sheet.

Erosion Control Plans – (3 sheets)

Erosion control plan sheets will identify all temporary erosion control measures for construction of the improvements. The erosion control plans will be consistent with the hydraulics design approved by the CITY. Erosion plans will include standard details for BMPs being implemented for the Project.

Demolition Plans – (3 sheets)

Demolition plan sheets will identify the limits of the project impacts including asphalt removal, clearing and grubbing, concrete removal, removal of miscellaneous items in conflict with the Project improvements, trees, or areas to be protected by the contractor, and proposed cut and fill lines for the proposed improvements.

Utility Plans – (2 sheets)

Utility plan sheets will identify the locations of utility adjustments to be performed by the CITY's contractor and utility relocations being performed by private utility company contractors. No water or sewer utility improvements are anticipated for the Project.

Typical Roadway Sections – (2 sheet)

Roadway typical sections will identify the typical roadway section for the N. Scheuber Road and Galvin Road approaches, and a roundabout cross section showing the construction of the circulating lane, truck apron and central island.

Roadway Plan and Profiles – (4 sheets)

Roadway plan views will identify existing conditions and proposed improvements including paving and sidewalk limits, curb and curb ramp locations, construction centerline alignment stationing, and other roadway paving improvements. Stormwater and illumination improvements will be displayed for reference and verification of conflicts.

Roundabout Quadrant Profiles – (5 sheets)

Roundabout Quadrant Profiles will be developed for the curb alignments in each quadrant of the roundabout and the truck apron. The plans will cover the area of the approaches that are not at a 2% normal crown. The quadrant profiles will be used for the stormwater conveyance plan sheets.

Roadway Details – (8 sheets)

Roadway detail sheets will be developed for the 60% design submittal. Details will include sidewalk ramps, the truck apron, and splitter islands.

Stormwater Treatment/Flow Facilities – (8 sheets)

Stormwater treatment facility details will be developed for the 60% design submittal. Plans will identify the type, size, and location of all proposed stormwater treatment facilities including conveyance.

Channelization Plans and Details – (4 sheets)

Channelization plans and details will be developed based on the approved 30% corridor layout. Plans will identify proposed lane widths, and channelization types and limits.

Signing Plans and Details - (4 sheets)

Signing plans and details will be developed based on the approved 30% corridor layout. A sign schedule will be developed that documents the specifications of existing and proposed signs identified in the plans.

Illumination Plans – (6 sheets)

Illumination plans will include station and offsets of all proposed streetlights and identify the location of proposed power sources. The 60% illumination plans will include luminaire and wiring schedules and standard details for streetlight construction.

Landscaping Plans and Details – (6 sheets)

Landscaping plans and planting details will be developed for the 60% design submittal. Landscaping plans will identify type, size, and location of proposed plants and trees along the roadways and within the central island. The landscaping plans will include details for the central island landscaping features.

Traffic Control Plans – (8 sheets)

Construction traffic control plans will be developed for the 60% submittal for each stage of work based on the 60% design. The plans will identify construction activities planned for each stage of work and the proposed traffic control measures.

Task 18.3 – 60% Specifications

CONSULTANT will develop the 60% project specifications using WSDOT/APWA/CITY General Special Provisions (GSPs) and Project special provisions. Comments received on the 30% submittal will be addressed with this submittal.

COUNTY/CITY will provide CONSULTANT with COUNTY/CITY GSPs. The COUNTY/CITY GSPs will be provided in WORD compatible file format. COUNTY/CITY provided GSPs and specials will be used in place of WSDOT GSPs and APWA GSPs where applicable.

Task 18.4 – 60% Opinion of Probable Construction Costs (OPCC)

CONSULTANT will develop an OPCC based on the 60% design. Comments received on the 30% submittal will be addressed in the 60% OPCC. Quantities will be updated, documented, and tracked for QC review.

Task 18.5 – Quality Assurance/Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this task. The reviews will follow the QA/QC plan established for this Project.

Task 18 - Assumptions:

- Plans will be submitted in PDF format.
- Plans will follow APWA and CITY drafting standards.

Task 18 - Deliverables:

- 60% North Link Plans
- 60% North Link Specifications
- 60% North Link OPCC

TASK 19 90% PS&E (North Link)

The 90% design submittal will consist of construction plans developed based on the 60% design review, a draft of the project special provisions, and a 90% Opinion of Probable Construction Costs.

Task 19.1 – 60% Comment Response Resolution

CONSULTANT will develop comment response resolution forms to document the 60% comment resolution process. The 90% design will reflect the approved 60% design.

Task 19.2 – 90% Plans

Construction plans will be updated to address comments received on the 60% design submittal. The list of plans for the 90% submittal shown below will be the same as the 60% PS&E task:

- Cover Sheet – (1 sheet)
- Legend and Notes – (1 sheet)
- Alignment Plans – (1 sheet)
- Erosion Control Plans – (3 sheets)
- Demolition Plans – (3 sheets)
- Utility Plans – (2 sheets)
- Typical Roadway Sections – (2 sheet)
- Roadway Plan and Profiles – (4 sheets)
- Roundabout Quadrant Profiles – (5 sheets)
- Roadway Details – (8 sheets)
- Stormwater Treatment/Flow Facilities – (8 sheets)
- Channelization Plans and Details – (4 Sheets)
- Signing Plans and Details – (4 sheets)
- Illumination Plans – (6 sheets)
- Landscaping Plans – (6 sheets)
- Traffic Control Plans – (8 sheets)

Task 19.3 – 90% Specifications

CONSULTANT will update the 60% project specifications to address comments received on the 90% design submittal.

CITY will provide CONSULTANT with COUNTY/CITY GSPs. The CITY GSPs will be provided in WORD compatible file format. CITY provided GSPs and specials will be used in place of WSDOT GSPs and APWA GSPs where applicable.

Task 19.4 – 90% Opinion of Probable Construction Costs (OPCC)

CONSULTANT will develop an OPCC based on the 90% design. Comments received on the 60% submittal will be addressed in the 90% OPCC. Quantities will be updated, documented, and tracked for QC review.

Task 19.5 – Quality Assurance/Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this task. The reviews will follow the QA/QC plan established for this Project.

Task 19 - Assumptions:

- Plans will be submitted in PDF format.

Task 19 - Deliverables:

- 90% North Link Plans
- 90% North Link Specifications
- 90% North Link OPCC

TASK 20 FINAL PS&E (North Link)

The Final design submittal will consist of construction plans developed based on the 90% design review, a draft of the Project special provisions, and a Final Opinion of Probable Construction Costs.

Task 20.1 – 90% Comment Response Resolution

CONSULTANT will develop comment response resolution forms to document the 90% comment resolution process. The Final design plans will reflect the approved 90% design.

Task 20.2 – Final Plans

Construction plans will be updated to address comments received on the 90% design submittal. The list of plans for the Final submittal shown below will be the same as the 90% PS&E task:

- Cover Sheet – (1 sheet)
- Legend and Notes – (1 sheet)
- Alignment Plans – (1 sheet)
- Erosion Control Plans – (3 sheets)
- Demolition Plans – (3 sheets)
- Utility Plans – (2 sheets)
- Typical Roadway Sections – (2 sheet)
- Roadway Plan and Profiles – (4 sheets)

- Roundabout Quadrant Profiles – (5 sheets)
- Roadway Details – (8 sheets)
- Stormwater Treatment/Flow Facilities – (8 sheets)
- Channelization Plans and Details – (4 Sheets)
- Signing Plans and Details – (4 sheets)
- Illumination Plans – (6 sheets)
- Landscaping Plans – (6 sheets)
- Traffic Control Plans – (8 sheets)

Task 20.3 – Final Specifications

CONSULTANT will develop the Final project specifications as part of this task. Comments received on the 90% submittal will be addressed with this submittal.

Task 20.4 – Final Opinion of Probable Construction Costs (OPCC)

CONSULTANT will develop an OPCC based on the Final design. Comments received on the 90% submittal will be addressed in the Final OPCC. Quantities will be updated, documented, and tracked for QC review.

Task 20.5 – Quality Assurance/Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the CITY as part of this task. The reviews will follow the QA/QC plan established for this Project.

Task 20 - Assumptions:

- Plans will be submitted in PDF format.

Task 20 - Deliverables:

- Final North Link Plans
- Final North Link Specifications
- Final North Link OPCC

TASK 21 GRANT FUNDING SUPPORT

Task 21.1 – Data Collection

The COUNTY/CITY will provide background information for the application narrative and available data for the benefit-cost analysis (BCA). A partial list of data needs is below. Additional data needs may be identified as the application is developing. Should additional data be required the CONSULTANT will work with the COUNTY/CITY to clarify what data is needed and how to generate it.

- Description of project purpose and need
- Design plans, detailed cost estimates and schedule for construction
- Summary of environmental issues and NEPA clearances
- Information on local environmental justice populations and community facilities
- Information on community engagement efforts

- Photos of corridor that illustrate conditions the grant funds are seeking to correct
- Information for Innovation discussion
- Information for risk analysis
- Information on economics, quality of life, goods, and services needs
- Traffic and safety data (traffic volumes, traffic patterns, travel market served, safety data)
- Existing conditions (issues the project will address)
- Information on COUNTY/CITY operations, maintenance, and asset management for the facility
- Information on funding and cost share
- Information on systemwide resiliency

Task 21.2 – COUNTY/CITY Coordination Meetings

Grant application kick-off meeting to review the scope of work for Stage 2 and 3, data needs and assumptions for the Project, application preparation milestones, roles and responsibilities, data needs, and other administrative needs. At the meeting, CONSULTANT and the COUNTY/CITY will review available/applicable grants and the associated guidelines, assess how well the improvements in Stage 2 and 3 meets the program's criteria, and discuss the overall strategy to prepare a strong application including the potential local match. If needed, CONSULTANT can provide guidance to the client on potential stakeholders (e.g., Congressional delegation, local decision-makers, and other stakeholders) who can provide support letters.

CONSULTANT team members will attend up to three (3) other coordination meetings with the COUNTY/CITY to provide updates and discuss the grant application process.

Task 21.3 – Grant Submittals

CONSULTANT will work with COUNTY/CITY to develop content and provide technical writing, review services, and graphics for the application documents.

The narrative will be presented in a design template tailored to the project. CONSULTANT will structure the narrative to be reader friendly and graphical so that the project's strengths with key themes are easily interpreted by the reviewers. CONSULTANT will develop two to four maps, graphics and/or charts to support the narrative.

CONSULTANT will work with the COUNTY/CITY to clearly define the project elements and confirm that the project will substantially meet the grant criteria for a strong application. The project description also includes a detailed statement of work, schedule, and budget. This is often summarized in the narrative, and additional detail is provided in an Appendix to the application.

The grant application will require a breakdown of the project's budget that includes project costs (future costs separate from those already incurred), sources of funds identified for the project other than the grant, and a breakdown of how each source of funds will be spent and how each funding source will share in each major project activity, presented in dollars and percentages. CONSULTANT will work with the COUNTY/CITY to align budget and funding requests with grant requirements.

CONSULTANT will strategize with the COUNTY/CITY to develop supporting data and narrative for each of the merit criteria defined in the selected grant NOFO. Sometimes additional technical analysis is needed to support the project's ability to meet the criteria. Depending on the level of effort required,

CONSULTANT will perform the work under this scope of work or develop a separate scope of work and budget.

CONSULTANT will work with COUNTY/CITY staff to identify the material risks to the project and strategies to mitigate those risks.

CONSULTANT will work with the COUNTY/CITY to compile the required grant forms.

CONSULTANT will provide a sample letter of support for the COUNTY/CITY to provide to stakeholders.

CONSULTANT will perform quality control, technical review, and technical editing for the application documents. Required forms will be checked for completeness, and documents will be labeled to meet grant requirements. CONSULTANT will assemble and transmit the documents for the COUNTY/CITY to upload to grants.gov. CONSULTANT can also assist the COUNTY/CITY in uploading the documents.

Task 21.4 – Benefit-Cost Analysis

The purpose of this task is to quantify the public benefits expected to be derived from the project that demonstrates adherence with grant criteria. The BCA will be conducted to provide compelling evidence to the grant agency of the merit of the Project and its quantitative benefits.

CONSULTANT will work with COUNTY/CITY to clarify baseline condition and alternative scenario for consideration.

CONSULTANT will hold a strategy session with the COUNTY/CITY to discuss the various components of the project and fully define which elements should be included in the project definition to increase the probability of a grant award. For each benefit category identified, logic models will be developed that represent the methodology used to monetize each project benefit. HDR will collect model inputs from a variety of sources, such as COUNTY/CITY, grant agency guidance, and other project documentation (e.g., its Feasibility Study, Environmental Assessment, cost estimates, etc.).

Key variables will be flagged for testing and the model will be re-run and results generated based on key material events. Additionally, a senior economist familiar with BIP grant requirements, but who did not develop the BCA model, will conduct a quality control review of the model and its results.

CONSULTANT will compile Materials for inclusion in the grant application will be prepared. This includes the BCA model; a one- to two-page summary of the BCA results, key data, and assumptions for the application narrative; and a technical appendix that describes the evaluation approach, data and assumptions used, and the results and the sensitivity analysis conducted.

Document results of the BCA and develop a summary to be included in the grant application narrative.

Task 21.5 – Quality Assurance / Quality Control Review

CONSULTANT shall perform a review of all deliverables submitted to the COUNTY/CITY as part of this Task. The reviews will follow the project QA/QC plan.

Task 21 - Assumptions:

- Estimated hours in the budget are based on submittal of one grant for Stage 2.
- COUNTY/CITY will gather letters of support from stakeholders to provide for the application.
- COUNTY/CITY will be responsible for verifying that they have a SAM UEI number.
- COUNTY/CITY will be responsible for submitting the grant.
- CONSULTANT will develop a BCA model tailored to the project.

Task 21 - Deliverables:

- Completed Grant Application documents
 - Narrative and supporting Appendices
 - Letters of Support
 - Required Forms
- Benefit Cost Analysis
 - Technical Appendix
 - BCA model (in an MS Excel file)
 - BCA Summary of results for inclusion in application narrative

End Scope of Services

GCC 1070
Exhibit B - Project Costs
Westside Connector Corridor Improvements

Project Task Number	Project Task Title	Project Task Cost
1	Project Management	\$70,812.00
2	Topographic Survey	\$88,867.00
3	Geotechnical Engineering Support	\$216,863.00
4	Public Outreach	\$68,996.00
5	Cultural Resources Assessment	\$15,604.00
6	Environmental Review and Permitting Documentation	\$28,692.00
7	Utility Coordination	\$4,816.00
8	Right-of-Way Services	\$218,735.00
9	Floodplain Modeling	\$313,555.00
10	Bridge Concept Development and Screening	\$158,620.00
11	Type, Size, and Location Study (TS&L)	\$60,570.00
12	Traffic Engineering	\$37,824.00
13	Alternatives Analysis	\$23,728.00
14	Railroad Coordination	\$36,437.00
15	Preliminary Design (North Link and Stage 2)	\$43,609.00
16	Final Design (North Link)	\$33,130.00
17	30% Plans and Estimate (North Link and Stage 2)	\$11,543.00
18	60% PS&E (North Link)	\$79,580.00
19	90% PS&E (North Link)	\$45,857.00
20	Final PS&E (North Link)	\$22,167.00
21	Grant Funding Support	\$76,238.00
	Total Project Cost	\$1,656,243.00