RESOLUTION NO. 2018-3471

A resolution to authorize the city manager to enter into a professional services agreement with Keller Associates, Inc. to design the city's NE Chehalem Wastewater and Waterline Extension Project

RECITALS:

1. The Newberg Wastewater and Water Master Plans identified the need to extend wastewater and water utility lines to prepare for growth within the City's Urban Growth Boundary.

2. The Newberg Water Master Plan identified a number of Capital Improvement Projects that included the NE Chehalem Drive water main extension and the W Illinois fire flow projects.

3. The Newberg Wastewater Master Plan identified a number of Capital Improvement Projects that included the NE Chehalem Drive wastewater extension project.

4. The purpose of SDCs are to impose a portion of the cost of capital improvements upon those developments that create the need for or increase the demands on capital improvements in the City.

5. The proposed wastewater and waterline project will allow for orderly future development within the City's Urban Growth Boundary and address the fire flow issue identified in the area of W Illinois Street.

6. The City advertised the NE Chehalem Drive Wastewater and Water Extension Project in the Daily Journal of Commerce and also through the city's Proposal and Bid Management System on March 12, 2018 and received five qualified proposals. Keller Associates, Inc. was selected as the most qualified consultant per ORS.279C.110.

7. Keller Associates, Inc. submitted a detailed proposal outlining the scope of work with a reasonable phase-by-phase cost breakdown, which is attached as Exhibit "A" and by this reference incorporated.

THE CITY OF NEWBERG RESOLVES AS FOLLOWS:

1. The City Council, acting as contract review board for the city, does hereby authorize the City Manager to enter into a Professional Services Agreement with Keller Associates, Inc. for the city's NE Chehalem Drive Wastewater and Waterline Extension Project that includes the engineering design, permitting, bid and construction phase services in the amount of $328,310.00.

2. The City Attorney will modify and approve all contracts and agreements as to form and content.

3. The City Manager is authorized to amend the Professional Services Agreement up to ten (10) percent of the original contract amount.

- **EFFECTIVE DATE** of this resolution is the day after the adoption date, which is: July 3, 2018.

ADOPTED by the City Council of the City of Newberg, Oregon, this 2nd day of July, 2018.

Sue Ryan, City Recorder

ATTEST by the Mayor this 5th day of July, 2018.

Bob Andrews, Mayor

EXHIBIT "A" for Resolution No. 2018-3471

City of Newberg

Scope of Work

Chehalem Drive Wastewater and Water Extension Project

(Newberg Project # 706479, 707479, and 707481)

The engineering services scope of work for the Chehalem Drive Wastewater and Water Extension Project (Project) includes preparation of pipeline construction contract bid documents, bidding and construction phase administrative services. The Project includes the installation of approximately 2,750 linear feet (LF) of 18-inch diameter sewer pipe and 700 LF of 8-inch diameter potable water pipe, including appurtenances.

The Project requires the design of City of Newberg wastewater and water pipelines within the Highway 240 corridor. This includes crossing a tributary stream of Chehalem Creek with one or both pipelines making an aerial crossing attached to or adjacent to the bridge. Permitting assistance (wetland delineation, assessment, mitigation, ODOT, USACE, and Yamhill County) will be required for the crossing, work within the right-of-way, and connecting to the Hwy 240 bridge.

The waterline portion of this project will extend the City of Newberg's water distribution system to the intersection of Highway 240 with NE Chehalem Drive. The wastewater portion will continue within the NE Chehalem Drive corridor, a Yamhill County road, from Highway 240 to W Columbia Drive.

Task A Project Management & Meetings

Task A.1 General Project Administration

A.1.1 Provide project management services for sewer and water pipeline design project. Coordinate project team, including Consultant staff and subconsultants for the design, bidding and construction phase of the project. Communicate with project team members to maintain project team coordination. Communicate with City project manager to provide status updates on project.

A.1.2 Request for information: Prepare one (1) Request for Information (RFI) and review data provided by the City. Prepare subsequent RFIs (if needed) to clarify data, request additional information, or complete analysis.

Task A.2 Kickoff Meeting: Attend kickoff meeting with City's staff. The purpose of the meeting will be to define project goals, outline project and management goals, identify roles and responsibilities and review scope and schedule.

Task A.3 Project Schedule

A.3.1 Prepare project schedule using Microsoft Project or similar scheduling tool. Schedule will include design and approval activities for the project and coordination milestones for the design, permitting, and project meetings. Identify specific activities that need to occur during the early phase Oregon Department of Transportation (ODOT) coordination.

A.3.2 Update the project schedule on a regular basis (no more frequently than monthly) through final design. Periodically review critical path items with City.

Task A.4 Progress Reports: Prepare a monthly progress report summarizing work performed, issues and risks, and upcoming critical activities. Progress reports will include financial and schedule status of the project. Progress reports will be submitted with each monthly invoice.

Task A.5 Project Quality Control (QC) Management: Maintain and track QC for major deliverables. Budget for QC reviews is included within each design task.

Assumptions:

- Project management budget assumes duration of the design, bidding and construction phase of the project is 18 months.
- City will provide information to fulfill RFI requirements. Available data should be provided within 10 days of the RFI being issued.
- City will provide access to the facilities and available documents.

Deliverables:

- Monthly Progress Reports
- Meeting agendas and minutes.

Task B Public Meetings

Participate in two public involvement meetings. Coordinate with City and use services of subconsultant, Angelo Planning, to provide technical materials. These are anticipated to correspond to the 30% and 90% design phases.

Assumptions:

- City will assist with scheduling meetings and notifying the public.

Deliverables:

- Presentation Materials for public involvement.
- Meeting minutes and responses to public comments.

Task C Surveying and Mapping

Consultant will utilize the services of Magness Surveying to complete topographic surveys for the Project.

Task C.1 Utility Coordination: Request existing ODOT bridge as-builts. Review existing utilities that may be impacted by construction. Contact existing utility companies, request as-built/constructed or record drawings, pothole and survey existing utilities and incorporate information into pipeline design. Consultant shall coordinate with local agencies, municipalities, and Oregon Utility Notification Center (OUNC) through City for all surveying and utility location work required. Consultant shall contact OUNC Call: 1-800-332-2344 (or 811) to request field marking of all utilities along the pipeline alignment.

Task C.2 Base Topo and Right-of-Way Research: Search County survey records to obtain highway and street right-of-way information. Mark limits for the utility locate. A network of horizontal points will be established in the project. The project benchmark will be established using RTK-GPS and will be distributed through the project area using a closed level loop. Measurements to above ground objects such as pavement, mail boxes, fence lines, and water features will be obtained. Utility locates will include invert measurements on storm drainage, sanitary sewer and water valves structures. Pick up all roadway monuments within the project boundary. Survey will also include wetland boundary information flagged by the wetlands subconsultant and trees (and associated diameter) in the stream crossing corridor. Measurements will also be obtained on the top and bottom sides of the bridge to allow the project engineer to calculate proposed attachment of sewer and water lines. Survey will include critical upstream elevations for future pipeline extensions to displace the Chehalem and Creekside Lift Stations, including pipe invert elevations and low point elevations of likely draw/waterway crossings. Survey will also include horizontal and vertical location at the surface for all pothole locations.

Task C.3 Datum Rectification Assistance: This work will include coordination with ODOTs Bridge Department to check the vertical and horizontal datum that each is using in their utility mapping process and developing a conversion factor with respect to an accepted base datum (Horizontal – NAD 83, Oregon State Plane North, Vertical – NAVD 88).

Task C.4 Field Potholing: Subcontract with a company experienced in potholing to provide up to 8 hrs. of potholing utilities. If additional effort is required, this will be authorized by City and accomplished as an additional service.

Task C.5 Topographic Base Map: Incorporate research data, available mapping and survey data into a topographic map for the Project.

Assumptions:

- The survey base map will be based on NAVD 88 datum and coordinate system that is consistent with Newberg's datum and coordinate system.
- Information will be provided by contacting utility companies (anticipated to be: CI/ASCE 38-02 Level "D" or better).
- Scope excludes relocation design of existing utilities.
- This task does not include locating services for private utilities outside of OUNC.

Deliverables:

- CAD and PDF files for base map

Task D Design

Task D.1 15% Design for Chehalem Creek Tributary Crossing: This design level is to show Chehalem Creek Crossing plan concept to expedite permitting and agency buy-in.

D.1.1 Conduct Preliminary Site Review: Conduct an "on the ground" site visit to visually review field conditions.

D.1.2 General Plan Sheets: Prepare cover sheet, sheet index and key map, general notes, abbreviations, and symbols.

D.1.3 Plan and Profile along Chehalem Creek Crossing: Develop pipeline horizontal and vertical location in the Chehalem Creek crossings and preliminarily identify pertinent pipeline features such as blow-offs, hydraulics, isolation valves, air/vacuum valves and manhole locations. Coordinate plan and profile with the Newberg masterplan, existing lift-station stub-out and existing ODOT bridge.

D.1.4 Stream Crossing Details: Develop concepts for proposed pipe hangars and placement on existing bridge for ODOT buy-in.

D.1.5 Preliminary Design Criteria: Prepare a two-page summary of design criteria to be included with the 15% design drawings.

D.1.6 QC Review: Perform QC review on deliverable.

D.1.7 15% Design Review Meetings: Participate in two review meetings with the City. The first one is to review base mapping information and discuss alternatives. The second will be to review 15% draft deliverables after 1 week review and coordinate ODOT meeting.

Task D.2 30% Design

D.2.1 General Plan Sheets: Update general plan sheets. Incorporate project notes specific to pipeline project. Update sheet index and key map.

D.2.2 Plan and Profile

D.2.2.1 Revise plan and profile drawings to reflect comments from 15% review. Adjust stationing to reflect changes in pipeline and road alignment. Add 30% level key notes, trench types, survey control, and reference call-outs.

D.2.2.2 Coordinate with utilities to check base map against utility maps (where available), and check for utility crossing requirements. Participate in up to two utility franchise meetings.

D.2.2.3 Water Main Sizing. Discuss with City potential cost and fire flow implications associated with upsizing waterline from 8-inches in diameter to 10 or 12-inches in diameter.

D.2.3 Details: Identify special non-standard details that are not in Newberg Design Standards Manual.

D.2.4 30% Specifications: Prepare list of applicable specifications (CSI 16 Division format). Review City of Newberg prepared general conditions, bid and contract documents, and standard construction specifications and identify supplemental conditions and special provisions that will be added.

D.2.5 Bid schedule and Opinion of Probable Construction Cost: Prepare bid schedule to identify items, quantities, and unit costs for pipeline construction. Prepare planning level estimate based on local knowledge and bidding climate. Target an AACE accuracy level Class 3 (Low -20% to High +30%).

D.2.6 30% Site Review: Conduct an "on the ground" site visit to visually check the 30% Design and field conditions.

D.2.7 QC Review: Perform QC review on deliverable.

D.2.8 Design Review Workshop: Conduct a Design Review Workshop after submittal to City.

Task D.3 90% Design: Incorporate 30% review comments and advance plans and specifications to 90% complete.

D.3.1 General Plan Sheets: Finalize index, symbols, key map.

D.3.2 Plan and Profile: Finalize alignment and profile, call-outs (including northing/easting), key notes, and ODOT coordination requirements.

D.3.3 Details: Prepare non-standard details not in Newberg Design Standard's Manual (scope assumes up to 8 details). Add final structural, civil, seismic, corrosion, and appurtenance details.

D.3.4 90% Specifications: Prepare project supplemental specifications and special provisions. Revise City of Newberg prepared general conditions, bid and contract documents, and standard construction specifications from 30% deliverables and bring to 90% level.

D.3.5 Opinion of Probable Construction Cost: Update the bid schedule to identify items, quantities, and unit costs for pipeline construction. Prepare estimate based on local knowledge and bidding climate. Target an AACE accuracy level Class 1, (Low -10% to High +15%).

D.3.6 Conduct 90% Site Review: Conduct an "on the ground" site visit to visually check the 90% Design and field conditions.

D.3.7 QC, Constructability, and Bid Review: Perform QC review on deliverable.

D.3.8 Design Review Meeting: Two design review meetings are anticipated. One at approximately the 60% design phase and another following the 90% design deliverable. The 90% design review meeting will occur approximately two weeks after delivery to the City.

Task D.4 - Final Design

D.4.1 Final Design Drawings for Permit Submittal: Incorporate 90% review comments and package documents for bidding. Include elements of the 90% Design Submittal, advanced to bid ready set. Update plans to reflect potential bid schedules identified by the City as part of the 90% Design review workshop and available City budget.

D.4.2 Bid/Contract Docs and Final Specifications: Incorporate City and agency comments into final bid/contract docs and specifications. Update specifications to reflect City selected bid schedules.

D.4.3 Final Opinion of Probable Construction Cost: Prepare final bid schedules for pipeline construction to reflect target City-funded projects. Prepare estimate based on local knowledge and bidding climate. Target an AACE accuracy level Class 1, (Low -10% to High +15%).

D.4.4 Meeting: Participate in Final Design progress meeting. Assuming this meeting will be a phone conference.

Assumptions:

- Consultant will use the Newberg standards manual where applicable for the following items: pipeline design criteria, alignment and profile, pipe wall thickness and joint design, coatings and linings, trench design, and appurtenances.
- For working with ODOT right-of-way, plan and profiles will be based on the same horizontal and vertical scale as required by ODOT for utility design drawings. Assumed to be 1"=40' horizontal and 1"=10' vertical on 11x17 plan sheets.
- Design budget assumes that ODOT will not require the completion of a new load rating.
- Pipeline plans will be prepared using AutoCAD Civil 3D.
- City review comments will be consolidated and provided in a single review set to Consultant.
- City will be doing the risk and legal review of the contract documents.

- Scope assumes one set of bid documents with up to two bid schedules.
- Design budget assumes the sewer pipeline will be attached to the bridge and that this decision is made in the 15% design phase.
- 15% design phase deliverables will be limited to the Hwy 240 corridor.
- Design includes mainlines only. No service stubs are anticipated to be included with this project. Pipeline sizes will be per master plan, unless directed otherwise by City.
- All opinions of probable cost prepared by the Consultant represent Consultant's judgment as an experienced and qualified design professional. Since Consultant has no control over the cost of labor, materials, equipment, or services furnished by others, or over the City's and other contractor's methods of determining prices, or over competitive bidding or market conditions, the Consultant does not guarantee that proposals, bids, or actual construction cost will not vary from opinions of probable cost prepared by the Consultant.

Deliverables:

- 15% Drawings (plan and profile) and design criteria summary.
- 30% Drawings, specifications and opinion of probable cost.
- 90% Drawings, Specifications and opinion of probable cost.
- Provide six (6) half size (11"x17") stamped copies of the plans and specifications (8.5"x11") as part of the submittal package. The stamped documents along with pay items and bid schedule will also be provided as a PDF. Also provide final opinion of probable construction costs.

Task E Permit Support

Task includes coordination efforts with project team members and permit agency staff.

Task E.1 Wetland Delineation, Assessment, Mitigation: Construction activity in the creek will require state and federal permits and approvals. Impacts to the creek will also require approval of the Stream Corridor Overlay Subdistrict (SC) from the City. Consultant intends to use the services of Pacific Habitat Services (PHS) to assist in the wetlands delineation and permitting support services.

E.1.1 Wetland Delineation Field Work and Report: This work will include conducting a wetland delineation using the criteria and methodologies of the Corps of Engineers *Wetland Delineation Manual Technical Report Y-87-1* (Environmental Laboratory, 1987) and the *Western Mountains, Valleys and Coast Region* regional supplement to the 1987 Manual. PHS will also identify and delineate the top of bank and centerline of Chehalem Creek. Following receipt of the survey, a wetland delineation report will be prepared that can be submitted to the US Army Corps of Engineers (Corps) and the Oregon Department of State Lands (DSL).

E.1.2 Joint Permit Application: This work will include on site visit with regulatory agencies and preparing a joint permit application (JPA) which will be submitted to the Corps, DSL, the Department of Environmental Quality (DEQ), and the National Marine Fisheries Services (NMFS). Consultant will respond to any comments. The Corps will likely issue a Nationwide Permit; DSL will issue an Individual Permit; DEQ will issue 401 Water Quality Certification; and NMFS will issue their concurrence that the project meets the Standard Local Operating Procedures for Endangered Species (SLOPES). Mitigation will likely be limited to restoration of the disturbed areas. Permanent impacts (if any) will require the purchase of credits from a local wetland mitigation bank.

E.1.3 Stream Corridor Impact and Report: This work will include identifying and inventorying trees six inches or greater in diameter at breast height within the anticipated pipeline construction corridor of the stream crossing in accordance with City Code Section 15.342.080A. Each tree will be marked so that it can be surveyed. A SCIR will be prepared, which will include all requirements outlined in City Code Section 15.342.080A. The report will contain an analysis of the site's physical conditions; development recommendations and methods of mitigating impacts; an inventory of plant and animal species occurring on the site and a discussion of their relationship to the environment; and an enhancement plan to increase the natural values and quality of the stream corridor.

Task E.2 Oregon Department of Transportation (ODOT): Participate in up to three (3) meetings with ODOT to maintain integration between the existing Chehalem Creek bridge and Newberg pipeline project. Coordination with ODOT will address: bridge pipe hangars, bridge load rating appurtenance (blow-off, air valve, manholes, etc.) locations/configuration in ROW, isolation of appurtenances, and pipeline location within the road prism/cross section. Design work for these activities will be performed under other tasks in the scope of work. Prepare agenda items and minutes for meetings. Topics will include alignment, profile, geotechnical, survey, right-of-way, specifications, bid documents, and construction administration and inspection requirements.

Task E.3 US Army Corps of Engineers (USACE) and Oregon Department of State Lands (DSL): Coordination with USACE/DSL to address concerns related to the creek crossing and required permits associated with potential riparian corridor and wetland impacts, including permit review periods.

Task E.4 Yamhill County Coordination: Coordinate with Yamhill County and provide information to them to get buy-in for pipeline project and to understand potential

permitting requirements and ramifications. Participate in one planning meeting with County.

Task E.5 Miscellaneous Permits: Applications for the following permits:

E.5.1 -Prepare ODOT Utility and ROW Permits and respond to any comments.
E.5.2 -Prepare Oregon DEQ erosion control plans 1200C.
E.5.3 -Prepare Yamhill County ROW permit.
E.5.4 -Prepare City of Newberg Type II Land Use Permit and Mitigation Plan.
E.5.4 -City Public Improvement Permit

Assumptions:

- City will be responsible for paying all permit fees including review fees.
- JPA assumes that no gravel access roadway will be constructed in the delineated wetlands area, and that Project applications will be for a Joint Permit DSL and Corps nationwide Permit 12 – Utility Line Activities. A DSL removal fill permit, if required will be additional services.
- Information used in the JPA will be based on 30% design which is assumed to not change appreciably from 30% design to final design.
- Budget assumes one round of comments from permitting agencies. Additional field work, environmental permitting (i.e. biological assessments and archeological investigations) are not included in this scope but can be provided as an additional service if required. Similarly, if additional permits are required, these can be provided as an additional service.

Deliverables:

- Wetland Delineation Report
- Stream Corridor Impact and Report
- Joint Permit Application
- City of Newberg Type II Land Use Permit and Mitigation Plan
- Permit Applications

Task F. Geotechnical Characterization for Pipe Design

The services of Shannon & Wilson will be employed to characterize the subsurface conditions underlying the proposed pipeline locations and creek crossing.

Task F.1 Geotechnical Explorations, Field Logs, and Lab: Subconsultant shall prepare for and conduct geotechnical explorations and prepare a geotechnical report (combined data and engineering report). Specifically, Subconsultant will perform the following tasks:

- Conduct field explorations along the proposed pipeline alignment:

- Three geotechnical borings to 25 feet to 30 feet. In two borings a 2-inch PVC piezometer will be installed and covered with a flush mount monument to allow for slug testing.
- Additional geotechnical borings to 10 feet, as time permits within two 8-hour work days.
- Analyze samples by laboratory testing to refine the field descriptions. The laboratory testing program will be developed based on the soils encountered during the field exploration. However, for budgetary purposes it is assumed Atterberg limits, grain size analysis, and corrosion testing will be performed.
- Submit permits for work in public right-of-way.

Task F.2 Geotechnical Engineering Analyses: Subconsultant shall perform the following analyses:

- Chehalem Creek static, seismic, and post-seismic case (if required due to liquefaction analysis results) slope stability;
- Lateral earth pressures for below grade structures;
- Hydraulic conductivity from slug test data;
- Coefficient of friction between concrete and native soils and base materials;
- Total settlement estimates at vault and manhole locations;
- Shallow foundation recommendations including allowable bearing pressure at vault and manhole locations;
- Minimum cover over pipe for various loading conditions and to prevent floatation of pipe in high groundwater areas;
- Cut and fill slope requirements;
- Specifications for trench backfill and structures:
- Seismic design parameters and recommendations for seismic resiliency design (this includes liquefaction screening and estimations of vertical ground displacements caused by liquefaction); and
- Recommended minimum pipe depth and creek bank offsets to avoid seismic slope failure.

Task F.3 Geotechnical Report: Subconsultant shall prepare a Geotechnical Engineering Report that includes the following items:

- Regional geology and seismicity;
- Subsurface conditions and boring logs;
- Potential for liquefaction based on selected explorations;
- Potential liquefaction-induced settlement;
- Potential for slope failure for static, seismic, and post-seismic (liquefied) conditions;
- Ground movement using Newmark type analyses, where potential seismic slope instability is identified;
- Ground movement using empirical formulas (Youd et al.) if lateral spread is

identified;

- Shallow foundation recommendations including allowable bearing pressure and expected total settlement;
- Lateral earth pressure recommendations for below grade structures; and
- Discussion of related construction recommendations.

In addition to the Geotechnical Engineering Report, the subconsultant shall perform the following tasks:

- Prepare for and facilitate a review meeting with the City to present the geotechnical report and to discuss the review comments;
- Finalize the geotechnical report.

Assumptions:

- Contaminated soils will not be encountered;
- Scope assumes all drilling and field work will be within existing right-of-ways. The City of Newberg will notify property Owner and obtain access for Subconsultant to be on the property (if needed).
- For Chehalem Creek stability evaluations of the open-cut crossing, pipeline plan and profile drawings, including survey in the creek, if required, will be completed as an additional service.
- Piezometers will be left in place and decommissioned by the contractor during construction.
- Geotechnical services will be provided during the 30% design phase.

Deliverables:

- Prepare a draft report;
- Two hard copies of the final report within 2 weeks of receiving comments on the draft report.

Task G. Bidding Phase Services

Task G.1 Bid Phase Services:

G.1.1 Participation in pre-bid meetings and site visit with prospective bidders. Pre-bid meeting will be chaired by Consultant at City provided facility. Consultant will provide meeting agenda and minutes.

G.1.2 Respond to Contractor questions, and development of addenda.

G.1.3 Review bid results and provide recommendation.

Assumptions:

- City will pay for advertising costs and will manage the bid process, including maintaining plan holders list, plan and specification reproduction and distribution,

distribution of addenda, conducting the bid opening, providing legal review of bid documents, and handling any bid protests.

- Up to three addenda will be prepared for the pipeline project.
- Scope assumes one bid process and award to a single contractor.

Deliverables:

- Pre-bid meeting materials
- Addenda (up to three)

Task H. Construction Phase Services

Task H.1 Services During Construction: Consultant will provide limited support services during construction for the project. City is responsible to provide day-to-day construction management, inspection, materials testing, construction meetings, forwarding RFIs, funding administration, legal services, distributing submittals to and from Consultant, review of pay requests, and contract administration.

H.1.1 Submittals: Consultant will review submittals and shop drawings and provide responses. Consultant will review submittals and provide written comments and recommended submittal review action within ten (10) business days of notification that submittal is available for review. Consultant will provide responses through Microsoft SharePoint. The term submittal used herein includes technical submittals, shop drawings, samples, operations and maintenance manuals, product data, record drawings, and other required Contractor submittals.

H.1.2 Requests for Information: Consultant will provide responses to the Contractor's Requests for Information (RFIs) through Microsoft SharePoint. Consultant shall provide written responses within five (5) Days of notification.

H.1.3 Design Clarifications: Consultant will prepare revised drawings, specifications, and summary memoranda for Design Clarifications. Revised documents shall include "clouds" showing where changes have been made, and sequential "delta" revision numbers per the Design Guide. Design Clarification responses shall provide a description of the change to the construction contract documents.

Drawings and specifications that are revised by Design Clarifications shall be re-issued for the Contractor's use. Revised drawings resulting from Design Clarifications shall be maintained by Consultant in CAD and PDF formats.

H.1.4 Construction Progress Meetings: Consultant will attend the preconstruction meeting and periodically attend construction progress meetings. Consultant will prepare meeting agendas and minutes.

H.1.5 Site Observations: Consultant will visit the site at key construction milestones to review the progress and quality of the construction work. The visits shall observe the general quality of the work at the time of the visit and address any specific items of work that are brought to the attention of Consultant by the Contractor or City. For each site visit, Consultant shall prepare a site observation report documenting the areas observed and comments regarding general conformance with the design requirements. Consultant's observation of the work is not an exhaustive observation or inspection of all work performed by the Contractor, nor is it intended to supplement the day-to-day inspection efforts provided by the City. While visits will endeavor to protect the City, the Contractor shall remain solely responsible for their means, methods, safety, and compliance with the contract documents.

H.1.6 Change Order and Field Order Support: Consultant shall support City as requested with evaluation of change orders, potential change orders, value engineering proposals, Contractor notices, and differing site conditions. Advise City on recommended actions. City's construction management staff has primary responsibility for evaluation of and responses to Contractor-issued notices and correspondence.

Task H.2 -Testing, Startup, and Closeout: City will provide Contractor testing, startup, and closeout activities, including signoff of Contractor's work. Consultant's support services will be limited to the following:

H.2.1 Site Walk: Consultant shall participate in a one-day site walk near the completion of the project for the purposes of identifying deficiencies in the work and assisting with the development of the preliminary deficiency list. This effort is anticipated to focus on the creek crossing.

H.2.2 Construction As-built Surveying: Survey manhole rim/invert elevations, fire hydrants, valves, blow offs, air release valves, and cleanouts.

H.2.3 Record Drawings: Consultant shall prepare Record Drawings of the final construction using the latest revised drawing versions prepared by Consultant along with drawing markups of construction changes, utility locations provided by the Contractor and Newberg, and information collected with the construction

as-built survey (H.2.2). Consultant shall submit draft record drawings within sixty (60) Days after receipt of the Contractor's as-built drawings.

H.2.4 GIS Integration: Provide as-built survey information in GIS shape file format for integration into City's GIS by City. City to provide attribute field data and asset IDs.

Assumptions:

- Budget assumes up to forty (40) submittal reviews (including re-reviews), up to twenty (20) RFIs, four (4) change order / field orders, and five (5) Design Clarifications
- Budget assumes one participation in (1) preconstruction meeting and fourteen (14) construction progress meetings.
- A total of eight (8) site visits to be coordinated with attendance at construction progress meetings. Budget assumes that half of these visits will be coordinated with project meetings. About half of the site visits are anticipated to focus on the creek crossing.
- Contractor will provide one set of as-built drawings, which will be relied upon by Consultant for accuracy. Consultant shall not be responsible for missing or incomplete information.

Deliverables:

- Submittal review comments.
- Responses to RFIs, field orders, and design clarifications.
- Site Observation Reports
- Set of record drawings in PDF and CAD format.

Task I. –Contingency for Additional Services

This task establishes a budget for other services that are not included in the above scope of work, or that may be dependent on design decisions yet to be made. These services will be authorized by the City in writing by the City and may include either time and material or lump sum tasks. Services may include, but are not limited to the following:

- **Legal Descriptions and Exhibits for Easements:** Provide requested legal descriptions and exhibits for crossings and easements. The exhibits will show property lines and right-of-way lines in the area of the easement. Collect deed documents and surveys for the properties impacted by the easements. The fee in the contingency budget assumes two easements.

- **Chehalem Creek Scour Analysis:** Perform hydraulic and scour analysis to approximate minimum creek cover required for waterline open trench creek crossing. This will only be required if the waterline will be installed under the creek.
- **As-Needed Construction Support:** Consultant shall provide as-needed support to City for review and evaluation of Contractor claims or disputes or provide other construction phase support services. Support may include review of project records and participation in meetings to assist with preparation of a response. Consultant shall only perform this task as directed by City. Scope assumes up to 26 hours of support services and the budget will be provided with the additional services budget.
- **Additional Pot holing**
- **Additional permitting support or public outreach efforts**

Project Budget

The Consultant will be compensated based on a lump sum basis using the following breakdown of expenses. Expenses incurred un Task I, Contingency Budget will be completed on a time and materials basis as approved by the City.

Task	Billing Basis	Budget
Task A: Project Management & Meetings	LS	$19,990
Task B: Public Meetings	LS	$8,240
Task C: Surveying and Mapping	LS	$36,780
Task D.1: 15% Design	LS	$26,400
Task D.2: 30% Design	LS	$29,580
Task D.3: 90% Design	LS	$45,720
Task D.4: Final Design	LS	$10,280
Task E: Permit Support	LS	$56,830
Task F: Geotechnical	LS	$21,530
Task G: Bidding Phase Services	LS	$4,710
Task H.1: Services During Construction	T&M	$36,510
Task H.2: Testing, Startup and Closeout	T&M	$13,240
Total Project Budget		**$309,810**
Task I: Contingency Budget	T&M	$18,500
Total Consultant Budget		**$328,310**

LS = Lump Sum T&M = Time and Materials

Project Schedule

A preliminary schedule of milestones is as follows:

- Chehalem Drive Wastewater and Water Extension Design and Permitting– July 1, 2018 to January 31, 2019 (7 mos.)
- Bid Services – February 1, 2019 to March 31, 2019 (2 mos.)
- Construction Services – April 1, 2019 to November 31, 2019 (9 mos.)