City Council Workshop Agenda
Monday, October 07, 2024, 4:30 PM
Council Chambers, 616 NE 4th AVE

NOTE: The City welcomes public meeting citizen participation. TTY Relay Service: 711. In compliance with the ADA, if you need special assistance to participate in a meeting, contact the City Clerk's office at (360) 834-6864, 72 hours prior to the meeting so reasonable accommodations can be made (28 CFR 35.102-35.104 ADA Title 1)

To observe the meeting (no public comment ability)
- go to www.cityofcamas.us/meetings and click "Watch Livestream" (left on page)

To participate in the meeting (able to public comment)
- go to https://us06web.zoom.us/j/84065790336
(public comments may be submitted to publiccomments@cityofcamas.us)

CALL TO ORDER

ROLL CALL

PUBLIC COMMENTS

WORKSHOP TOPICS

1. Review of Crash Involving Camas Police Officer
   Presenter: Tina Jones, Chief of Police
   Time Estimate: 15 minutes

2. Mayor's Recommended City of Camas Budget 2026-2027
   Presenter: Cathy Huber Nickerson, Finance Director, Debra Brooks, Financial Analyst
   Time Estimate: 30 minutes

3. PSA's for Water System and Sewer System Plan Updates
   Presenter: Rob Charles, Utilities Manager
   Time Estimate: 10 minutes

4. PSA for Environmental Permitting Boulder Creek Dam/Intake
   Presenter: Rob Charles, Utilities Manager
   Time Estimate: 5 minutes

5. NW Lake Road and Sierra Street Intersection Improvements Professional Services Agreement Amendment
   Presenter: James Carothers, Engineering Manager
   Time Estimate: 5 minutes

6. 343 Zone Reservoir Design Professional Services Agreement
   Presenter: James Hodges, Project Manager
   Time Estimate: 5 minutes

7. Staff Miscellaneous Updates
   Presenter: Doug Quinn, City Administrator
   Time Estimate: 10 minutes

COUNCIL COMMENTS AND REPORTS

PUBLIC COMMENTS

CLOSE OF MEETING

Staff Report

October 7, 2024 Council Workshop Meeting

REVIEW OF CRASH INVOLVING CAMAS POLICE OFFICER

Phone	Email
360.817.1502	tjones@cityofcamas.us

BACKGROUND:

In prior budgets, investments were made in vehicles, fleet and body cameras, and training for Camas Police Department staff. In over 20 years, there have been no added supervisory positions to the Camas Police Department.

SUMMARY:

On September 8, 2024, a Camas Police Department Officer was involved in an injury crash. Fleet and body camera video footage show different views of what occurred. A review of the incident will highlight the significance of the investments in safe vehicles, radio equipment, and training. It will also highlight the challenges faced with gaps in supervisory coverage.

BENEFITS TO THE COMMUNITY:

Continuing to invest in critical equipment, such as safe vehicles, video equipment and training, help the community receive timely emergency response from police. Having adequate supervision helps our agency provide consistent service that adheres to policies and laws.

POTENTIAL CHALLENGES:

Mitigating risk to the city and providing adequate law enforcement service requires investment over time to meet the ever-increasing requirements of the profession and our growing community's needs. These investments compete with other city-wide needs. There is not a significant designated funding source beyond the general fund for the Camas Police Department.

BUDGET IMPACT: See Mayor's budget proposal.

RECOMMENDATION: This review provides some context for Council to consider for the upcoming budget conversations and decisions.

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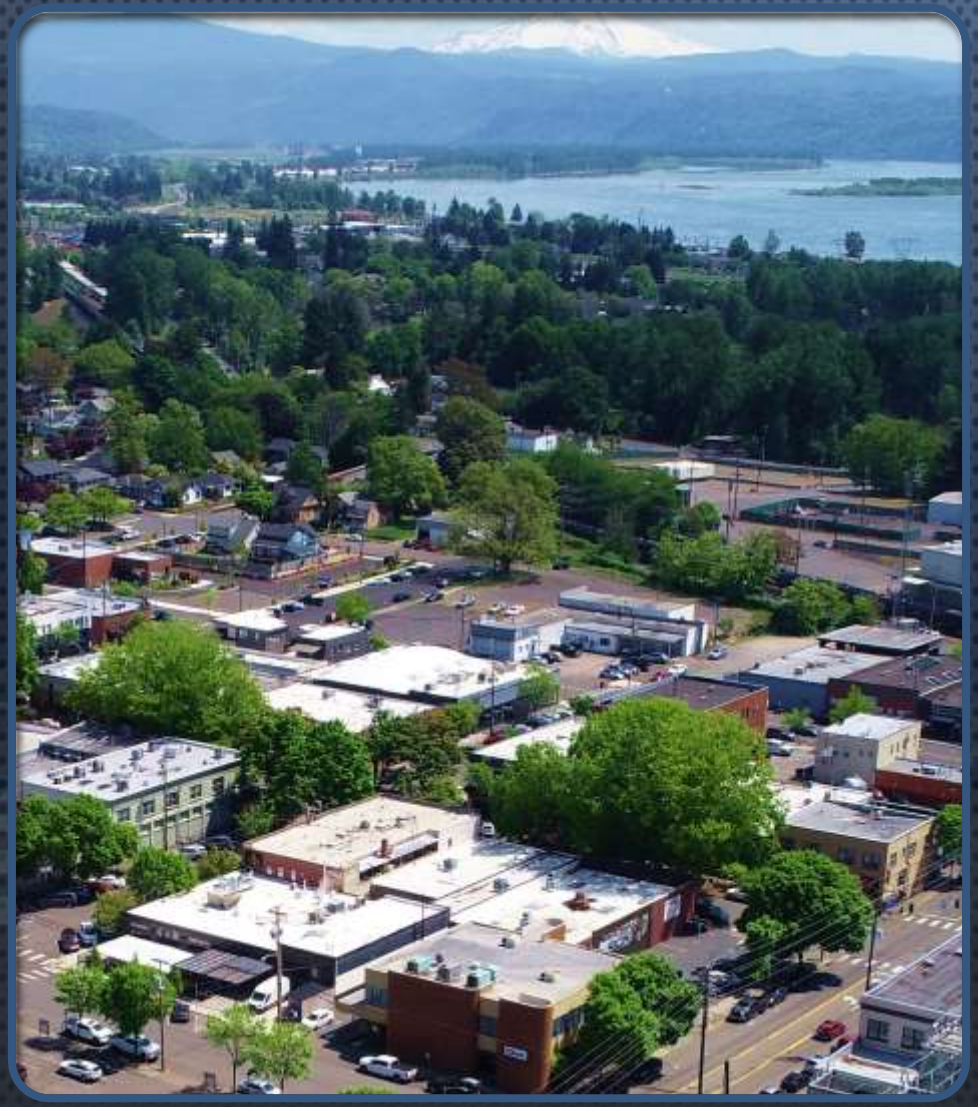
Handley Body Camera.mp4



MAYOR'S 2025 - 2026 RECOMMENDED BUDGET

CITY OF CAMAS

OCTOBER 7, 2024

BUDGET TIMELINE

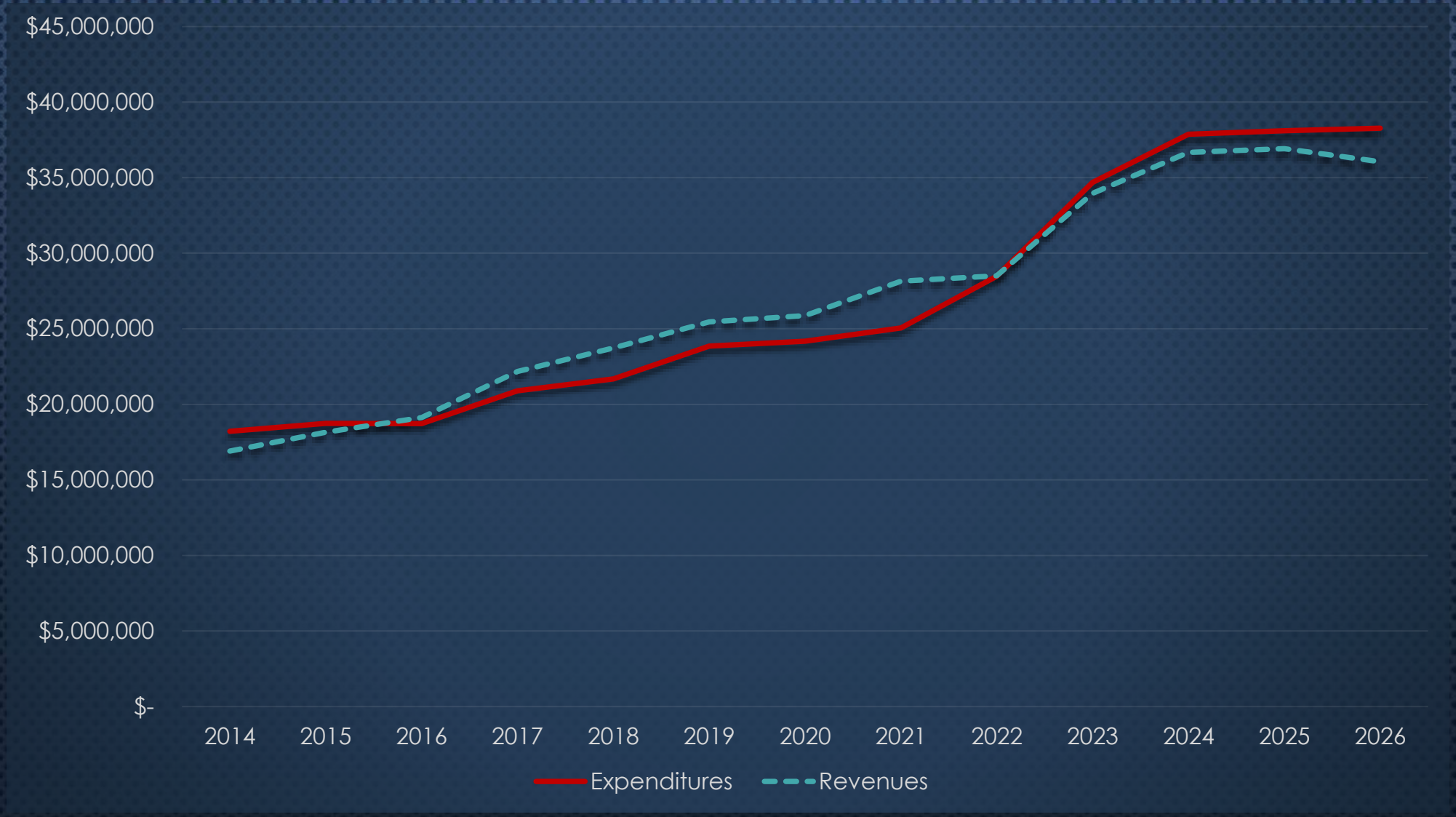
10/07/2024 Workshop	Mayor's 2025 -2026 Recommended Budget
10/21/2024 Workshop	Revenue and Funding Options Presentation
11/04/2024 Workshop	Capital Budget Presentation
11/18/2024 Regular Meeting	Public Hearing: Property Taxes Public Hearing: Revenue Options Fee Schedule Resolution
12/02/2024 Regular Meeting	Mayor's 2025 – 2026 Final Proposed Budget

2024 GOVERNMENTAL FUND ESTIMATES

	2023 Actuals (Millions)	2023 Change Over 2022	2024 Estimate (Millions)	2024 Change Over 2023
Salaries & Benefits	31.11	10.3%	31.82	2.3%
Supplies & Services	10.18	7.8%	12.97	27.4%
Intergovernmental	1.07	-0.9%	1.27	18.7%
Debt Service	3.91	16.4%	4.39	12.3%

- Inflation of 3% or more for expenses, while the City's largest source of revenue increased by only 1%
- Continued slowing of commercial construction adversely affected the growth of property taxes
- Large adjustments to negotiated contracts that were beyond cost-of-living increases have accelerated the funding gap over recent years

STRUCTURAL DEFICIT



PROJECTED FUND BALANCE, REVENUES, AND APPROPRIATIONS

Fund	Projected Beginning Fund Balance	2023-2024 Revenues	2023-2024 Appropriation	Projected Ending Fund Balance	Change in Fund Balance
General	$ 12,978,708	$ 74,108,611	$ 78,416,291	$ 8,671,028	$ (4,307,680)
City Street	$ 2,705,464	$ 11,113,065	$ 11,498,913	$ 2,319,616	$ (385,848)
Tree Fund	$ 38,145	$ 685	$ -	$ 38,830	$ 685
C/W Fire and EMS	$ 1,194,349	$ 35,898,660	$ 35,127,407	$ 1,965,602	$ 771,253
Lodging Tax	$ 88,210	$ 78,637	$ 100,000	$ 66,847	$ (21,363)
Cemetery	$ 131,635	$ 601,423	$ 590,545	$ 142,513	$ 10,878
Unlimited G.O. Bond Debt Service	$ -	$ -	$ -	$ -	$ -
Limited G.O. Bond Debt Service	$ -	$ 8,578,630	$ 8,578,630	$ -	$ -
Real Estate Excise Tax Capital	$ 11,645,949	$ 8,774,494	$ 10,584,530	$ 9,835,913	$ (1,810,036)
Park Impact Fee Capital	$ 4,130,076	$ 3,548,901	$ 3,726,498	$ 3,952,479	$ (177,597)
Transportation Impact Fee Capital	$ 3,773,486	$ 5,217,689	$ 2,526,511	$ 6,464,664	$ 2,691,178
Fire Impact Fee	$ 819,341	$ 1,294,466	$ -	$ 2,113,807	$ 1,294,466
NW 38th Ave Phase 3 Construction	$ 1,021,286	$ 7,775,200	$ 7,775,200	$ 1,021,286	$ -
Facilities Capital	$ 1,850,092	$ 4,311,130	$ 5,250,570	$ 910,652	$ (939,440)
Legacy Lands Project	$ 21,947,000	$ 885,711	$ 383,757	$ 22,448,954	$ 501,954
SR500 and Everett Project	$ -	$ 1,700,000	$ 1,700,000	$ -	$ -
Storm Water Utility	$ 1,553,434	$ 7,619,048	$ 8,086,149	$ 1,086,333	$ (467,101)
City Solid Waste	$ 3,699,437	$ 7,488,275	$ 7,326,700	$ 3,861,012	$ 161,575
Water-Sewer	$ 26,582,967	$ 62,567,309	$ 62,222,661	$ 26,927,615	$ 344,648
Water-Sewer Capital Projects	$ -	$ 27,081,198	$ 27,081,198	$ -	$ -
2019 Water Construction Projects	$ 6,397,755	$ 526,336	$ 6,575,524	$ 348,567	$ (6,049,188)
Water-Sewer Capital Reserve	$ 21,571,109	$ 7,709,539	$ 26,978,748	$ 2,301,900	$ (19,269,209)
Water-Sewer Bond Reserve	$ 1,856,640	$ 147,642	$ -	$ 2,004,282	$ 147,642
Equipment Rental	$ 2,906,244	$ 5,574,933	$ 6,979,375	$ 1,501,802	$ (1,404,442)
IT Internal Service	$ -	$ 990,000	$ 990,000	$ -	$ -
Firefighter's Pension	$ 982,200	$ 37,482	$ 194,402	$ 825,281	$ (156,920)
Retiree Medical	$ 11,456	$ 344,131	$ 361,707	$ (6,120)	$ (17,576)
LEOFF 1 Disablity Board	$ 335,189	$ 382,051	$ 592,583	$ 124,657	$ (210,532)
Total City Budget 2025-2026	**$ 128,220,172**	**$ 284,355,246**	**$ 313,647,898**	**$ 98,927,520**	**$ (29,292,653)**

SUMMARY OF RECOMMENDED BUDGETED REVENUES, EXPENDITURES, AND RESERVES

	General Fund	Special Revenue Funds	Debt Funds	Capital Funds	Enterprise Funds	Internal Support Funds	Reserve Funds	Total
Estimated Beginning Fund Balance 1/1/2025	$ 12,978,708	$ 4,157,803	$ -	$ 45,187,230	$ 61,661,342	$ 2,906,244	$ 1,328,845	$ 128,220,172
Revenues								
Taxes	$ 50,160,988	$ 7,633,142	$ -	$ 4,658,768				$ 62,452,898
Licenses and Permits	$ 4,788,140	$ 456,279						$ 5,244,419
Intergovernmental	$ 1,560,437	$ 2,230,534		$ 8,165,000	$ 1,517,497			$ 13,473,468
Charges for Services	$ 15,928,857	$ 16,272,283		$ 9,817,728	$ 59,755,407	$ 4,983,179		$ 106,757,454
Fines and Forfeitures	$ 266,125	$ 31,264						$ 297,389
Miscellaneous Revenue	$ 1,384,064	$ 99,164		$ 1,622,765	$ 2,685,245	$ 91,754	$ 53,291	$ 5,936,283
Non-Revenues	$ -			$ 1,103,500	$ 18,000,000			$ 19,103,500
Transfers	$ 20,000	$ 20,946,121	$ 8,578,630	$ 8,139,830	$ 31,181,198	$ 1,490,000	$ 710,373	$ 71,066,152
Total Revenue	$ 74,108,611	$ 47,668,787	$ 8,578,630	$ 33,507,591	$ 113,139,347	$ 6,564,933	$ 763,664	$ 284,331,563
Total Available Resources	$ 87,087,319	$ 51,826,590	$ 8,578,630	$ 78,694,821	$ 174,800,689	$ 9,471,177	$ 2,092,509	$ 412,551,735
Expenditures								
Salaries and Benefits	$ 39,508,804	$ 31,230,647			$ 10,682,059	$ 1,271,547	$ 954,290	$ 83,647,347
Supplies and Services	$ 15,871,012	$ 9,172,548		$ 597,774	$ 23,676,287	$ 1,608,062	$ 3,796	$ 50,929,479
Intergovernmental	$ 2,328,712	$ 591,935			$ 2,273,033	$ 46,757		$ 5,240,437
Capital	$ 734,222	$ 5,607,379		$ 27,044,778	$ 60,834,219	$ 5,024,188		$ 99,244,786
Debt Service			$ 8,578,630		$ 8,754,968			$ 17,333,598
Transfers	$ 19,973,541	$ 714,356		$ 18,118,414	$ 32,050,414	$ 18,821	$ 190,605	$ 71,066,151
Total Expenditures	$ 78,416,291	$ 47,316,865	$ 8,578,630	$ 45,760,966	$ 138,270,980	$ 7,969,375	$ 1,148,691	$ 327,461,798
Estimated Ending Fund Balance	$ 8,671,028	$ 4,509,725	$ -	$ 32,933,855	$ 36,529,709	$ 1,501,802	$ 943,818	$ 85,089,937
Total Expenditures and Reserve Balance	$ 87,087,319	$ 51,826,590	$ 8,578,630	$ 78,694,821	$ 174,800,689	$ 9,471,177	$ 2,092,509	$ 412,551,735

MAYOR'S BUDGET PRIORITIES

STEWARDSHIP THROUGH ACTIVE AND PRUDENT MANAGEMENT

- UPHOLD STRONG CREDIT RATING
- REBUILD LONG-TERM STABILITY
- IMPROVE REVENUE DIVERSITY
- ADDRESS ENVIRONMENTAL NEEDS

KEY BUDGET POINTS

- Strategic addition of 3 uniformed officers (FTE) to begin catching up to the needs of the growing community
- Use of opioid settlement funds to provide first responders with protective equipment and tools for combating opioids
- Increased funding for Pavement Preservation
- Operating expenses held at the lowest possible increase to keep pace with inflation

BUDGET MESSAGE FROM MAYOR HOGAN

Q&A TO FOLLOW

EXHIBIT A

CITY OF CAMAS
SCOPE OF SERVICES

WATER SYSTEM PLAN UPDATE

The following Scope of Services has been developed to assist the City of Camas (City) with the update of its Water System Plan (WSP). The objective of this project is to update and review the elements of the WSP documents, in accordance with Washington Administrative Code (WAC) 246-290-100 and State of Washington Department of Health (DOH) regulations. The following tasks under this Scope of Services have been prepared based on Carollo Engineers, Inc.'s (Consultant) and its subconsultant's current understanding of the proposed project, and through discussions with City staff.

PROJECT BACKGROUND

The City initiated this WSP update recognizing the importance of planning, developing, and maintaining water system facilities that provide reliable and efficient service for existing customers and to serve anticipated growth. The WSP is designed to meet state, county, and local requirements. The project represents a limited update of the City's existing WSP (Carollo, 2019) to align with recent Comprehensive Plan updates, which extend the land use planning period through 2045. This project will consider system needs in the context of providing water service to meet updated population and economic development projections presented in the updated Comprehensive Plan. Limited additional effort will involve evaluating water system needs in portions of the City's service area not considered in the existing WSP.

PROJECT ASSUMPTIONS

- Carollo Engineers, Inc. will be referred to as "Consultant" in this document.
- City of Camas and its staff will be referred to as "City" in this document.
- All meetings will be held on Microsoft Teams, unless otherwise specified.
- Draft chapters will be provided in electronic copy (PDF and/or Microsoft Word) transmitted via email or secure file transfer.
- City comments on draft chapters will be documented in the Project Comment Response Log by the Consultant. The Consultant will prepare responses to address the comments in the Comment Response Log for the City's review and acceptance. Resulting changes will be incorporated in the Draft Agency Review Plan, rather than reissuing a draft chapter at the time. However, revised draft chapters can be produced upon City request.
- Electronic Demand Tool will be provided in .xlsx format.
- The Consultant will prepare an agenda, presentation materials, and document discussions, including action items and decisions, in meeting minutes for Consultant-led meetings.
- Meeting notes and related materials will be transmitted electronically in MS Word and/or PDF formats via email.
- The City will print and produce all documents as necessary for its use. Consultant will not provide any deliverables in a paper format.

- In providing opinions of cost, financial analyses, economic feasibility projections, schedules, and quantity and/or quality estimates for potential projects, the Consultant has no control over cost or price of labor and material; unknown or latent conditions of existing equipment or structures that may affect operation and maintenance costs; competitive bidding procedures and market conditions; time or quality of performance of third parties; quality, type, management, or direction of operating personnel; the incoming water quality and/or quantity; the way the City's plant(s) and/or associated processes are operated and/or maintained; and other economic and operational factors that may materially affect the ultimate project elements, including, but not limited to, cost or schedule. Therefore, the Consultant makes no warranty that the City's actual project costs, financial aspects, economic feasibility, schedules, and/or quantities or quality realized will not vary from the Consultant's opinions, analyses, projections, or estimates.
- The Consultant shall not be responsible for acts and decisions of third parties, including governmental agencies, other than the Consultant's subconsultants, that impact project completion and/or success other than noted elsewhere in this scope of work.
- The City will furnish the Consultant with available studies, reports and other data pertinent to the Consultant's services; obtain or authorize the Consultant to obtain or provide additional reports and data as required; furnish to the Consultant services of others required for the performance of the Consultant's services hereunder, and the Consultant shall be entitled to use and reasonably rely upon all such information and services provided by the City or others in performing the Consultant's services hereunder.
- The WSP update will follow this organization of chapters and meetings as listed in Table 1.

Table 1 Summary of Chapters and Appendices

Chapter/Appendix		Lead
Executive Summary		Consultant
Chapter 1	Introduction	Consultant
Chapter 2	Planning Considerations	Consultant
Chapter 3	Existing System	Consultant
Chapter 4	Operations and Maintenance	Consultant
Chapter 5	Water Requirements	Consultant
Chapter 6	Water Use Efficiency	City
Chapter 7	Water Quality	Consultant
Chapter 8	Water Resources	Consultant with Mott MacDonald
Chapter 9	Water System Analysis	Consultant
Chapter 10	Capital Improvement Plan	Consultant
Chapter 11	Financial Plan	Consultant with FCS
Appendix A	Notice of DNS	City
Appendix B	SEPA Checklist	City
Appendix C	Local Government Consistency Determination Form	City
Appendix D	Agency Comment Letters and Responses	City
Appendix E	Ordinances and Approvals	City

Chapter/Appendix		Lead
Appendix F	Water System Plan Submittal Form	Consultant
Appendix G	DOH Water System Plan Checklist	Consultant
Appendix H	Service Area and Interlocal Agreements	City
Appendix I	Water Facilities Inventory Form	City
Appendix J	Water Rights Self-Assessment Forms	Consultant
Appendix K	Demographic and Demand Forecast	Consultant
Appendix L	Wellhead Protection Plan	City
Appendix M	Water Quality Sampling Procedures and Program	City
Appendix N	Coliform Monitoring Plan	City
Appendix O	Emergency Response Plan	City
Appendix P	Water Shortage Response Plan and Service Reliability	City
Appendix Q	Cross-Connection Control Program	City
Appendix R	Hydraulic Model Development and Calibration TM	Consultant
Appendix S	Standard Construction Specifications for Distribution Mains	City
Appendix T	CIP Cost Estimates	Consultant

Notes:
CIP - capital improvement program; DNS - determination of non-significance; SEPA - State Environmental Policy Act; TM - technical memorandum

Table 2 Summary of Meetings

Meetings	Title	Type
Pre-Plan DOH Meeting	DOH Pre-Meeting	Virtual
Meeting No. 1	Kickoff Meeting	Virtual
Meeting No. 2	Policies and Criteria, Existing System, and Service Area	Virtual
Meeting No. 3	Water Demand Forecasts, Water Use Efficiency, and Conservation	Virtual
Meeting No. 4	Water Management Plan and Hydraulic Model Development	Virtual
Meeting No. 5	Preliminary System Deficiencies	Hybrid
Meeting No. 6	Recommendations Workshop	Virtual
Meeting No. 7	Capital Improvement Plan	Hybrid
Meeting No. 8a, 8b, 8c, and 8d	Financial Review	Virtual
Meeting No. 9	City Review comments	Virtual
Meeting No.10	Agency Review comments	Virtual
	Up to 2 council meetings	In Person
Project Management	36 Coordination Calls (joint with GSP)	Virtual

TASKS

To meet the objectives of this Scope of Services, the Consultant shall complete the tasks as summarized in Table 3 and discussed in detail in the text that follows.

Table 3 Task Summary

Task Number	Task Name
Task 100	Project Management
Task 200	Planning Considerations
Task 300	Existing System
Task 400	Operations and Maintenance
Task 500	Water Requirements
Task 600	Water Use Efficiency
Task 700	Water Quality
Task 800	Water Resources
Task 900	Water System Analysis
Task 1000	Capital Improvement Plan
Task 1100	Financial Plan
Task 1200	Plan Development

TASK 100 - PROJECT MANAGEMENT

The purpose of this task is to direct activities within the WSP as assigned by the City and maintain the project within the contracted scope, schedule, and budget. This consists of project administration, monthly invoicing, client and team coordination and quality assurance/quality control review necessary to successfully complete the WSP to the City's expectations. Additionally, the Consultant will develop a Project Management Plan (PMP) and lead the initial team kickoff meeting. This task consists of the following activities:

TASK 100 ACTIVITIES

Subtask 101 - Monthly Progress Reports and Invoices

This subtask consists of production and implementation of the project plan, schedule, and budget. Assist the project team members in the implementation of the task items, reviewing the work-in-progress reports. Prepare and submit monthly activity reports showing current project status and identifying key issues or elements of the project that will need to be addressed in the proceeding weeks. An electronic version of the monthly progress reports will be sent to the City for review and approval. This task assumes that no hard copy of the monthly progress reports will be distributed.

Subtask 102 - Project Management Plan

Prepare a Project Management Plan (PMP) that describes deliverables, plan outline, anticipated meetings, project roles and responsibilities, lists contact information for the project team, describes communications

protocols, quality management, and includes the scope of services, schedule, and budget. Quality Management includes, but is not limited to, the following elements:

- Project Manager overview of all primary documents to verify technical consistency and compliance with contract requirements.
- Organization of the work into logical deliverables with qualified staff for each task assigned to the work.
- Resolution of all review comments summarizing key comments and the manner in which each was addressed in the work.

Subtask 103 - Pre-Plan DOH Meeting

- Attend DOH Pre-Planning meeting with City staff.

Subtask 104 - Meeting No. 1- Kickoff Meeting

- Facilitate a kickoff meeting to review project management and initial data requests.

Subtask 105 - Client Coordination

- Manage the consultant project team to track time and budget, work elements accomplished, work items planned for the next period, manpower, scope changes, time and budget needed to complete the project.
- Create and maintain a working project schedule based on the schedule in the PMP.
- Review project status, including scope, budget, and schedule.
- Bi-Monthly Virtual Status Meeting. Facilitate virtual PM meetings two times per month to review status of project.

Task 100 Assumptions

1. The PMP will be updated with full incorporation of review comments after the City review of the draft PMP.
2. The total length of the project is 18 months.
3. City provides required documents for appendices.
4. Thirty-six bi-monthly status meetings will be held over Microsoft Teams.
5. Bi-monthly Status Meetings will be jointly held on the WSP and GSP.

Task 100 City Input

1. Team member contact information.
2. Receive, review, and process Consultant invoices in a timely manner.

Task 100 Consultant Deliverables

1. Draft WSP outline.
2. Eighteen monthly progress reports and invoices.

Task 100 Meetings

1. Pre-Plan DOH Meeting.
2. Meeting No. 1 - Kickoff Meeting.
3. PM Virtual Meetings.

TASK 200 - PLANNING CONSIDERATIONS

The objective of this task is to document the planning considerations that influence the WSP. These include the study area, policies, criteria, and related documents.

TASK 200 ACTIVITIES

Subtask 201 - Data Request

Prepare a data request for the required information. The request is expected to consist of updates in the following categories provided by the City since the 2019 WSP:

- Agreements with neighboring jurisdictions.
- Interlocal agreements.
- Review of updated Comprehensive Plan.
- Study area.
- Legislation, regulations, and permits.
- Policies and criteria.

Subtask 202 - Summarize Related Documents

Review list of City, County, and Regional Planning documents related to the 2019 WSP. Summarize information that is important to the operation of the City's water system. It is expected that this will include the updated Comprehensive Plan.

Subtask 203 - Draft and Final Chapter 1 - Introduction

Prepare draft Chapter 1 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final plan.

Subtask 204 - Draft and Final Chapter 2 - Planning Considerations

Prepare draft Chapter 2 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final plan.

Task 200 Assumptions

1. No site visit will be performed.
2. City can provide elements listed under Task 201.
3. No hard copy of the chapters will be distributed.

Task 200 City Input

1. Requested Data from Task 201.
2. Comments on draft Chapter 1 - Introduction.
3. Comments on draft Chapter 2 - Planning Considerations.

Task 200 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft Chapter 1 - Introduction.
3. Return on cost (ROC) for Chapter 1 - Introduction.

4. Draft Chapter 2 - Planning Considerations.
5. ROC for Chapter 2 - Planning Considerations.

Task 200 Meetings

1. None.

TASK 300 - EXISTING SYSTEM

The purpose of this task is to document the City's existing water system, including supply, storage, booster pump stations, interties, treatment, and distribution. This task will develop Chapter 3 - Existing System.

TASK 300 ACTIVITIES

Subtask 301 - Data Request

Prepare a data request for the required information. The request is expected to consist of updates to the following since the 2019 WSP:

- Geographic information system (GIS) data for existing facilities, service areas, and inventory.
- Data on pipeline materials and age by linear foot, as available.
- Existing renew and replacement program.
- Summary of improvements completed since the last WSP.
- Data on existing infrastructure (e.g., supply, storage, booster pump stations, interties, and distribution).
- Water Facilities Inventory Form.

Subtask 302 - Review and Update of Existing System

Review and update Chapter 3 of the 2019 WSP to reflect the latest information and maintain consistency throughout the WSP, including storage, booster pump stations, and treatment. Facilities will be updated, as required, based on information provided by the City.

Subtask 303 - Meeting No. 2 - Policies and Criteria, Existing System and Service Area

Review and discuss existing policies and criteria, as well as recommendations. Review and update the existing system and service area. Discuss current operations and City concerns during the meeting.

Subtask 304 - Draft and Final Chapter 3 - Existing System

Prepare draft Chapter 3 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final WSP.

Task 300 Assumptions

1. City will provide pertinent information for missing or updated facility data.

Task 300 City Input

1. Requested Data from Task 301.
2. Comments on draft Chapter 3 - Existing System.

Task 300 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft Chapter 3 - Existing System.
3. ROC for Chapter 3 - Existing System.

Task 300 Meetings

1. Meeting No. 2 - Policies and Criteria, Existing System and Service Area.

TASK 400 - OPERATIONS AND MAINTENANCE

The purpose of this task is to review, update, and evaluate the City's Operations and Maintenance (O&M) Program and document in Chapter 4 - Operations and Maintenance of the WSP.

TASK 400 ACTIVITIES

Subtask 401 - Data Request

Prepare a data request for the required information. The request is expected to consist of the following updates since the 2019 WSP:

- Any updates to the City's standard plans, in PDF format; and specifications, in MS Word. It is assumed the City will provide its standard plans and specifications for inclusion in the WSP.
- Any updates to the City's Cross-Connection Control Program.
- Any updates to the City's Water Shortage Response Plan and Service Reliability, if available.

Subtask 402 - Review O&M Analysis

Review O&M analysis to identify deficiencies and recommendations from the 2019 WSP. Summarize and update as necessary the current operations and maintenance programs. Programs may include Operator certificates and training, lead free, routine, and preventive maintenance, Cross Connection Control Program, and Public Notification Plan/Procedures. O&M analysis will include a description of how O&M will be impacted by per- and polyfluoroalkyl substances (PFAS) removal facilities. Review current operation and maintenance program in relation to state and national water operation standards, including American Water Works Association (AWWA) G200-09 Standards. Propose recommendations and develop CIPs, if needed, based on the review.

Subtask 403 - Draft and Final Chapter 4 - Operations and Maintenance

Prepare draft Chapter 4 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final WSP.

Task 400 Assumptions

1. City can provide elements listed under Task 401.
2. A detailed evaluation of City O&M programs will not be conducted.
3. City will provide existing design and construction standards as needed to be included in an Appendix.

Task 400 City Input

1. Requested Data from Task 401.
2. Comments on draft Chapter 4 - Operations and Maintenance.

Task 400 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft Chapter 4 - Operations and Maintenance.
3. ROC for Chapter 4 - Operations and Maintenance.

Task 400 Meetings

1. None.

TASK 500 - WATER REQUIREMENTS

The purpose of this task is to perform a demographic and demand analysis to predict current and future demands within the City's retail water service area (RWSA). Five-year, 10-year, 20-year, and build-out planning horizons will be evaluated using the best available information. This task will develop Chapter 5 - Water Requirements of the WSP.

TASK 500 ACTIVITIES

Subtask 501 - Data Request

Prepare a data request for the required information. The request is expected to consist of the following updates since the 2019 WSP:

- Growth rates by customer class through the end of the water supply planning horizon. The rates should be consistent with regional planning and population and employment projections on a transportation analysis zones (TAZ) basis.
- Historical connection and water use information by customer class for the past 5 years, since the 2019 WSP.
- Historical Production from each source for the past 5 years, since the 2019 WSP, including annual volume and maximum day production.
- Updates to largest customer locations on a map and annual consumption by customer class.
- Accounted-for Non-Revenue Water for the past 5 years, since the 2019 WSP.
- Identify infill capacity and areas of redevelopment. Specific emphasis will be placed on those areas with a high potential for large scale residential or commercial development, as well as new industrial customers.
- GIS Data: Updates to land use and zoning data, vacant and re-developable land, TAZ boundaries.

Subtask 502 - Demographic Projections Review and Update

Demographic projections will be reviewed and updated to project the future growth in customers. Projections will use data from Clark County and the City to calculate rates of growth for each TAZ and each pressure zone. High, low, and average number of accounts will be prepared for the 5-year, 10-year, and 20-year, and build-out by pressure zone, if sufficient data is available. Accounts per acre will be developed based on existing densities.

Subtask 503 - Demand Projections Review and Update

Demand projections will be for the 5-year, 10-year, 20-year, and build-out planning horizons. Demand projections will include the following:

- Evaluate impact of climate change on demand trends based on results of local climate models.

- Develop the historical average day demands (ADD) and maximum day demands (MDD), the accounted-for-revenue water uses, estimated water loss and leakage planning values, and establish equivalent residential unit (ERU) values for the different customer classes.
- Estimate the future ADD and MDD water demand for each pressure zone based on the demographic projections and historical ERU demand. Estimates of the future water demand will be determined. The range will be based on the statistical variation in the historical ERU demand, leakage values, conservation goals, and the high and low ranges of the demographic projection and the effects of climate change. The City's largest connections, potential large scale industrial demands and future wholesale water customers will be evaluated and projected separately and added to other projected system demands. Peak hour demand (PHD) will be calculated using City specific peaking factors.

Demand projections will be provided to the City in an excel database demand projecting and loading tool.

Subtask 504 - Meeting No. 3 - Water Demand Forecast, Water Use Efficiency, and Conservation

Review demographic analysis and demand projection results. Confirm allocation of demand across customer classes and pressure zones. Review Water Use Efficiency (WUE) program and conservation volumes.

Subtask 505 - Draft and Final Chapter 5 - Water Requirements

Prepare draft Chapter 5 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final WSP.

Task 500 Assumptions

1. The City will provide most current information from ongoing Comprehensive Plan update.
2. The City will provide data request for data available from 2019 WSP to present.
3. Demographic projections will update projections from 2019 WSP.

Task 500 City Input

1. Requested Data from Task 501.
2. Comments on draft Chapter 5 - Water Requirements.

Task 500 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft Chapter 5 - Water Requirements.
3. ROC for Chapter 5 - Water Requirements.
4. Electronic demand tool.

Task 500 Meetings

1. Meeting No. 3 - Water Demand Forecast, Water Use Efficiency, and Conservation.

TASK 600 - WATER USE EFFICIENCY

The City will lead the Water Use Efficiency Chapter, which summarizes the WUE program, estimate the water savings from measures in the past 6 years, and project future conservation water demand. The City will author Chapter 6 - Water Use Efficiency of the. The City will summarize the existing and future WUE

program, including program measures, effectiveness, costs, and benefits. The Consultant will develop future demand projections with the WUE program and review and format Chapter 6. The WUE work efforts will be presented as part of Meeting No. 4 - Water Demand Forecast, Water Use Efficiency, and Conservation.

TASK 600 ACTIVITIES

Subtask 601 - Data Request

Prepare a data request for the required information. The request is expected to consist of the following items if they have been updated since the 2019 WSP:

- Historical Word Document of Chapter 6 - Water Use Efficiency.
- Electronic version of figures and large tables.
- Conservation goals.
- Water Use Efficiency Public Meeting Minutes.

Subtask 602 - Review Future Conservation Water Demand

Review conservation demands (both MDD and ADD) based on the established conservation goals provided by the City from the 2019 WSP. MDD and ADD conservation demands will be developed in the same demand years used in demand projections. Demands will be transmitted electronically to the City.

Subtask 603 - Final Chapter 6 - Water Use Efficiency

Review draft Chapter 6 and provide comments. Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final WSP.

Task 600 Assumptions

1. City can provide elements listed under Task 601.

Task 600 City Input

1. Requested Data from Task 601.
2. Draft Chapter 6 - Water Use Efficiency.

Task 600 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Comments on Draft Chapter 6 - Water Use Efficiency.
3. Final Chapter 6 - Water Use Efficiency.

Task 600 Meetings

1. None.

TASK 700 - WATER QUALITY

The purpose of this task is to summarize the water quality regulations and reporting requirements, evaluate water quality against the regulations, summarize any water quality violations, and recommend improvements if necessary to meet anticipated or future water quality regulations. This task will develop Chapter 7 - Water Quality of the Plan. The water quality work efforts will be presented as part of Meeting No. 4 - Water Demand Forecast, Water Use Efficiency, and Conservation.

TASK 700 ACTIVITIES

Subtask 701 - Data Request

Prepare a data request for the required information. The request is expected to consist of updates since the 2019 WSP for the following:

- Water Quality Monitoring Plan.
- Summary of water quality test results, including data from well water, treated water, and the distribution system.
- Testing Waivers.

Subtask 702 - Water Quality Summary

Summarize the City's water quality programs and activities. Identify key requirements of applicable water quality regulations.

Subtask 703 - Water Quality Analysis

Review draft Chapter 6 and provide comments. Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final WSP.

Subtask 704 - Draft and Final Chapter 7 - Water Quality

Prepare draft Chapter 7 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final WSP.

Task 700 Assumptions

1. This task does not include review or update of the City's Water Quality Monitoring Plan and other water quality programs and plans.
2. This task does not include a blending study between surface water and groundwater.

Task 700 City Input

1. Requested Data from Task 701.
2. Comments on draft Chapter 7 - Water Quality.

Task 700 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft Chapter 7 - Water Quality.
3. Final Chapter 7 - Water Quality.

Task 700 Meetings

1. None.

TASK 800 - WATER RESOURCES

The purpose of this task is to review and update the current and future water resources to identify potential deficiencies and proposed improvements. Evaluations will consider current water rights, Water Resources Inventory Areas (WRIA), and coordinated regional water system plans. This task will develop Chapter 8 - Water Resources of the Plan.

TASK 800 ACTIVITIES

Subtask 801 - Data Request

Prepare a data request for the required information. The request is expected to consist of the following if updated since the 2019 WSP:

- Existing water rights certificates/permits and pending water rights applications.
- Existing well pump tests, surface water diversion capacity, and other evaluations and/or characterizations of supply capacity.
- Known limitations in supply transmission or treatment capacity.
- Electronic information for the City's existing monitoring wells and sampling protocol.
- Information required by Mott MacDonald for updating the Wellhead Protection Report.
- Source Water Protection Plan.

Subtask 802 - Water Supply Summary

Review and summarize the existing sources of supply for the City's RWSA, including all surface water, groundwater, and interties. The "ability to pump" of each source will include an evaluation of capacity, water rights, treatment capacity, auxiliary power, and other limitations. Identify the criticality of each source.

Subtask 803 - Water Rights Assessment

Review and summarize water right permits, claims, certificates, and pending water right applications and change applications from 2019 WSP. Update DOH Water Rights Self-Assessment Tables 1, 2, and 3 for the existing, 5-year, 10-year, and 20-year planning years, respectively.

Subtask 804 - Water Supply Analysis

Review and summarize the City's ability to provide water supply in accordance with the City's confirmed reliability and supply criteria for the 10-, 20-year, and build-out projected demands within the whole system. Additional supplies or improvements will be identified and summarized, as needed. Summarize the City's water supply strategy plan and recommend program modifications, if needed, to meet all system demands for the planning period.

Subtask 805 - Wellhead Protection Program Update

Review and update City's Wellhead Protection Plan from 2019 WSP to maintain compliance with all requirements of the State of Washington's wellhead protection rules. Work will be performed by Mott MacDonald and will include the following:

- Wellhead Protection Capture Zone Delineations. Mott MacDonald previously modeled the City's wellhead capture zones at full build-out conditions (i.e., total water rights) for the lower Washougal well field area and do not anticipate the need for any updates to the delineations in the 2015 WSP, and therefore were not included in the budget.
- Assess Environmental Threats and Risk Reduction Strategies. Inventory and map potential and confirmed contaminant sources within the delineated capture zone areas using current data contained within Ecology Environmental Information Management (EIM) database system. Evaluate and rank potential risks to the City's supply sources and assess management strategies that can be employed to minimize risk.

- Prepare Contingency Supply Plans. Prepare a contingency supply plan that considers the potential loss of the City's largest supply source due to groundwater contamination including options to use interties from the Cities of Vancouver and Washougal and use of the Camas surface water diversions on Boulder and Jones creeks.
- Prepare Notification Letters. Prepare notification letters that will need to be sent to hazardous waste handlers, first responders, and regulatory agencies as required by WAC 246-290-135. The letters will include maps showing the locations of the wellhead protection capture zones, transportation corridors where spills might be of concern, and waste storage and handling sites. It is assumed that the City will transmit the letters using their letterhead. Electronic versions of the documents and mailing lists will be provided to the City for their transmittal. Copies of the letters will be provided for inclusion in the WSP.
- Provide Assistance with Steigerwald Wellfield Supply Options and Analysis. Mott MacDonald will assist with integrating information from the Steigerwald water supply work that we have completed to date as needed for the 2015 WSP. Up to 2 days of staff time have been included in the budget.
- Prepare Wellhead Protection Plan Summary Report. Prepare a letter report which summarizes the findings of Subtasks 1 through 5. The document will serve as an appendix to the City's WSP document which will be submitted to DOH.
- Mott MacDonald Project Management. Conduct internal communication and management of personnel in accomplishing the project tasks. Mott MacDonald will communicate regularly with City staff and other project team members to keep them informed on project status and will solicit input, as needed. Mott MacDonald will prepare and submit invoices on a monthly basis.

Subtask 806 - Draft and Final Chapter 8 - Water Resources

Prepare draft Chapter 8 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final WSP.

Task 800 Assumptions

1. The City will provide assumptions on future sources and quantities of supply.
2. City staff will field-verify hazard sites.
3. No sensitivity analyses have been budgeted.

Task 800 City Input

1. Requested Data from Task 801.
2. Comments on draft Chapter 8 - Water Resources.

Task 800 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Wellhead Protection Plan Report Update.
3. Draft Chapter 8 - Water Resources.
4. Final Chapter 8 - Water Resources.

Task 800 Meetings

1. None.

TASK 900 - WATER SYSTEM ANALYSIS

The purpose of this task is to convert the City's model to InfoWater Pro and recalibrate it to current conditions. The model will then be used to evaluate the distribution system. Improvements will be developed for identified deficiencies. Improvements identified in other tasks will be incorporated into the model, as appropriate, to determine the effect of comprehensive improvements. Identified improvements will be reviewed as part of Meeting No. 9 - Capital Improvements.

TASK 900 ACTIVITIES

Subtask 901 - Data Request

- Prepare a data request for the required information. The request is expected to consist of the following:
  - Potential future supplies or interties, including locations.
  - Potential location for future storage facilities.
  - Supervisory control and data acquisition (SCADA) data for diurnal curve development and calibration.
  - As-builts or list of new projects to be added to the hydraulic model.

Subtask 902 - Updated Hydraulic Profile

Update the previous hydraulic profile according to data provided in the hydraulic model. Prepare a hydraulic profile figure for review by City.

Subtask 903 - Storage Analysis

Identify the storage volume required for each pressure zone based on the established storage criteria for equalizing, fire flow, operational and standby volumes. The storage analysis will be performed for the 6-, 10-, and 20-year projected demands. If storage deficiencies are identified, additional storage volume requirements will be identified by pressure zone and capacity. Potential storage size and location specifically identified by the City will be utilized if future storage needs are identified.

Subtask 904 - Pump Station Analysis

Identify the pumping capacity requirements per City specified criteria. Compare requirements to current pump station capacity to identify any deficiencies for the 10- and 20-year projected demand scenarios. Required upgrades, modifications, or operational changes will be recommended, as necessary.

Subtask 905 - Perform Hydrant Flow Tests

Consultant will provide up to 10 pressure loggers to be used for hydrant flow testing at up to 10 locations. Consultant will identify hydrants to be tested and develop a calibration plan to summarize activities. City staff will install pressure loggers at predetermined locations. Consultant will accompany City staff during flow testing and will read and record flow hydrant flows and pressures. All residual hydrant pressure results will be measured by pressure loggers in addition to manual pressure readings by City staff and recorded by Consultant staff. City will provide hydrant pitot tubes and diffusers. Flow testing will be documented in a Hydrant Flow Testing TM.

Subtask 906 - Update Hydraulic Model

Convert the City's Hydraulic model from InfoWater to InfoWater Pro. Apply demand distribution to the model based on meter locations and demand factors for each customer class. Projected demands for the

largest customers will be applied directly to each customer location. The demands will include the current year for model calibration, as well as the 5-year, 10-year, and 20-year ADD and MDD for planning. Custom diurnal patterns will be developed by service area utilizing historical representative SCADA data.

Subtask 907 - Calibrate Hydraulic Model

Calibrate the model using hydrant flow test data provided by Consultant. Up to 10 hydrant tests will be used for calibration. Consultant will work with the City to determine the appropriate hydrant sites; it is assumed no more than 10 sites will be considered. Verify appropriate model settings and parameters (such as tank levels, pump curves, etc.) using data provided by City, including SCADA information. Calibrate the hydraulic model according to M32 guidelines. Calibrate the model for a 24-hour extended period simulation scenario and 10 steady state conditions. SCADA data will be provided by the City and will be used for calibration.

Subtask 908 - Meeting No.4 - Water Management Plan and Hydraulic Model Development

Review and summarize the existing sources of supply for the City's RWSA, including all surface water, groundwater, and interties. The "ability to pump" of each source will include an evaluation of capacity, water rights, treatment capacity, auxiliary power, and other limitations. Identify the criticality of each source. This meeting will also present the results of the model development and calibration efforts.

Subtask 909 - Draft and Final TM 1 - Hydraulic Model Development and Calibration TM

Prepare draft TM 1 - Hydraulic Model Development and Calibration for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final WSP.

Subtask 910 - Fire and System Pressure Analysis

Using the hydraulic model, perform steady state analysis of the system evaluating fire flow and system pressures per DOH regulations and guidelines based on the City's water system criteria. Identify improvements to address deficiencies under the MDD plus fire flow simulations and the peak hour simulations for the 5-year, 10-year, and 20-year scenarios. The model will also be used to identify minimum system pressures and velocities during peak hour demands. Operational changes will be recommended in addition to physical improvements. The system analysis will focus on distribution capacity deficiencies for pressure, velocity, and flow. The analysis will be conducted for both supply scenarios.

Subtask 911 - Meeting No. 5 - Preliminary System Deficiencies

Facilitate a meeting to review the results from the pumping, storage, and fire and pressure analyses. Discuss potential improvement projects.

Subtask 912 - Meeting No. 6 - Recommendations Workshop

Facilitate a meeting to review the recommendations for inclusion in the City's CIP.

Subtask 913 - Draft and Final Chapter 9 - System Analysis

Prepare draft Chapter 9 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final WSP.

Task 900 Assumptions

1. The City and Consultant will conduct hydrant flow testing to support model calibrations. Field testing is anticipated to last up to 6 days (an average of five hydrant tests per day).
2. Consultant will provide up to 10 pressure loggers. City will provide the rest of the equipment, including pitot tubes, diffusers for hydrants and any needed equipment to operate hydrants.
3. Hydrant flow testing will be performed in the summer of 2024.
4. The City will provide SCADA data for extended period simulations (EPS) calibration.

Task 900 City Input

1. Requested Data from Task 901.
2. Comments on draft TM 1 - Hydraulic Model Development and Calibration.
3. Comments on draft Chapter 9 - System Analysis.

Task 900 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft TM 1 - Hydraulic Model Development and Calibration.
3. Final TM 1 - Hydraulic Model Development and Calibration.
4. Draft Chapter 9 - System Analysis.
5. Final Chapter 9 - System Analysis.
6. Hydrant Flow Testing TM.

Task 900 Meetings

1. Meeting No.4 - Water Management Plan and Hydraulic Model Development.
2. Meeting No.5 - Preliminary System Deficiencies.
3. Meeting No.6 - Recommendations Workshop.

TASK 1000 - CAPITAL IMPROVEMENTS

This Task will review and update the recommended improvements for the sources of supply, storage, distribution and transmission, and pressure zones outlined in the 2019 WSP. Total project costs will be developed for each recommended improvement and ranked by priority. This task will develop Chapter 10 - Capital Improvement for the Plan.

TASK 1000 ACTIVITIES

Subtask 1001 - Cost Estimates

Update project cost for pipe replacement, pump station, reservoir, treatment, and other improvement projects from 2019 WSP. Summarize the recommended system improvements for the 5-year, 10-year, and 20-year terms. Costs will be presented in current dollars and represents an American Association of Cost Engineering (AACE) Class V estimate.

Subtask 1002 - Project Prioritization

Review project prioritization criteria from 2019 WSP. Prioritize all projects into 5-year, 10-year, and 20-year schedules based on evaluation during the WSP. Projects not identified in the WSP will be identified by the City and included for prioritization during this task.

Subtask 1003 - Meeting No. 7 - Capital Improvements

Prepare a data request for the required information. The request is expected to consist of the following.

Subtask 1004 - Electronic CIP

Review CIP projects and develop project prioritization. Review and confirm all CIP project costs.

Subtask 1005 - Draft and Final Chapter 10 - Capital Improvement Plan

Prepare draft Chapter 10 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final WSP.

Task 1000 Assumptions

1. City provides bid costs of recent projects, if available.

Task 1000 City Input

1. Requested Data from Task 1001.
2. Comments on draft Chapter 10 - Capital Improvement Plan.

Task 1000 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft Chapter 10 - Capital Improvement Plan.
3. Final Chapter 10 - Capital Improvement Plan.
4. Electronic CIP.

Task 1000 Meetings

1. Meeting No.7 - Capital Improvements

TASK 1100 - FINANCIAL

The purpose of this task is to review and update Chapter 11 - Financial Plan, which will be conducted by FCS. Chapter 11 will identify the total cost of providing water service, assure that the utility improvement schedule will be implemented, and assist in establishing adequate fees for service. The financial program will be coordinated with the CIP.

TASK 1100 ACTIVITIES

Subtask 1101 - Data Collection and Validation

Prepare an initial data request identifying financial and operational documents pertinent to the performance of the study. The Consultant will provide the CIP and relevant draft WSP chapters. Review, analyze, and validate data as necessary for use in formulating the technical analysis. Follow up with requests for any additional items or explanations, as necessary.

Subtask 1102 - Historical Financial Performance Review

Review and document the financial operations (revenue and expenses) and financial condition (assets and liabilities) of the water utility for the previous 6-year period. Summarize noteworthy financial trends.

Subtask 1103 - Fiscal Policy Review

Review the City's current fiscal policies for operating and capital reserves, system reinvestment funding, debt management, and debt service coverage.

Subtask 1104 - Capital Financing Plan

Evaluate capital funding options and develop a capital financing plan for the 6-, 10-, and 20-year CIPs. The analysis will include a forecast of capital funding needs, borrowing requirements, and associated cash flows and cash balances over the study period. Evaluate and recommend an appropriate balance of funding from cash, system development charges (SDC), bonds, low interest loans and/or other available funding sources. Depending upon preliminary results, FCS will work closely with the Consultant and the City to perform sensitivity analyses for alternative scheduling of capital projects in order to smooth customer rate impacts. The budget provides for up to three scenarios.

Subtask 1105 - Operating Forecast

The City's current water operating budgets will be used as the baseline for forecasting ongoing O&M costs, debt service, and other financial obligations of the water utility over the 6-year and 20-year study periods. Incorporate engineering planning growth forecasts and establish economic factors for cost escalation. Integrate additional O&M expenses, if any, resulting from the CIP and any other known changes in operational requirements.

Subtask 1106 - Revenue Needs Assessment

Integrate fiscal policies, capital financing impacts and the operating forecast, and develop an operating cash flow projection for the 6-year and 20-year study periods. Compare forecasted financial requirements against forecasted revenue under existing rates to determine annual and cumulative revenue adjustments needed to ensure financial sustainability over time.

Subtask 1107 - Rate Forecast and Affordability Test

Develop a rate forecast for the 6-year period. Apply annual rate adjustments to the City's existing water rate structures "across-the-board" to each rate class and rate charge (fixed and variable). Note: this scope does not include changes to the City's existing water rate structure. The Financial Chapter will include a narrative discussion of potential rate structure enhancements, if necessary. Perform an affordability test as an indication of a residential customer's ability to pay the existing and forecasted rates. This includes an analysis and comparison of the water system's existing and forecasted average residential bills to 2.5 percent of the median household income. This test will be conducted for the 6-year and 20-year study periods.

Subtask 1108 - Meeting No. 8 - Financial Review

Review results over four remote meetings before finalizing the Financial Chapter. Meeting will be attended by FCS and Carollo.

Subtask 1109 - Draft and Final Chapter 11 - Financial Plan

Prepare draft Chapter 11 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final WSP.

Task 1100 Assumptions

1. City can provide elements listed under Task 1101.
2. This scope does not include changes to the City's existing water rate structure.

Task 1100 City Input

1. Requested Data from Task 1101.
2. Comments on draft Chapter 11 - Financial Plan.

Task 1100 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft Chapter 11 - Financial Plan.
3. Final Chapter 11 - Financial Plan.

Task 1100 Meetings

1. Meeting No. 8a, 8b, 8c, 8d - Financial Review.

TASK 1200 - PLAN DEVELOPMENT

The purpose of this task is to integrate comments on the WSP into a clear and comprehensive Water System Plan document. The City Draft Plan will be prepared, including an Executive Summary. This task also includes incorporating comments and developing the Agency Review Draft Plan and Final Plan.

TASK 1200 ACTIVITIES

Subtask 1201 - Executive Summary

Prepare an executive summary, summarizing each element of the Water System Plan.

Subtask 1202 - City Draft Plan

Prepare Cover Sheet, Table of Contents, and Executive Summary. Compile Chapters and develop Appendices. Prepare one PDF of City draft document for City staff review the City's water quality programs and activities. Identify key requirements of applicable water quality regulations.

Subtask 1203 - Meeting No. 9 - City Review Comments

Meet with City to discuss comments on draft document. Incorporate comments to be included into Agency Draft Plan.

Subtask 1204 - Agency Draft Plan

Incorporate City comments into an Agency Draft plan to be submitted for agency review. An electronic PDF will be developed for City reproduction and distribution of plan to agencies and adjacent purveyors.

Subtask 1205 - Meeting No. 10 - Agency Review Comments

Meet with Agency to discuss comments on draft document. Incorporate comments to be included into Final Plan.

Subtask 1206 - Final Plan

Consultant will review agency review letters for incorporation into the Final Plan. Delivery of the Final Plan will include one electronic PDF.

Task 1200 Assumptions

1. The City provides required documents for appendices, including acceptance ordinances.
2. It is anticipated that City will distribute the WSP to DOH, county agencies, and adjacent purveyors review for approval. The City will collect public and agency review comments and deliver to Consultant. City will develop written responses received during agency review process.
3. Plans will be delivered via electronic PDF.

Task 1200 City Input

1. City comments.
2. Public and Agency review comments.

Task 1200 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Executive Summary.
3. City Draft Plan - PDF.
4. Agency Draft Plan - PDF.
5. Final Plan - PDF

Task 1200 Meetings

1. Meeting No. 9 - City Review Comments.
2. Meeting No. 10 - Agency Review Comments.

CITY OF Camas
Water System Plan
LEVEL OF EFFORT

40% 60

1-Aug-24

TASK / DESCRIPTION	Jude Grounds	Matt Huang	Jill Kjellson	Ali Leeds	Aurelie Nabonnand	Max Mozer	Connor Mancosky	Madeleine LaPorte	Kevin Christensen/ Varies	Varies	Total Hours	Carollo Labor Cost	FCS	Mott McDonald	Total Subconsultant Cost	Total Subconsultant Markup	Total Subconsultant Cost with Markup	Total Direct Charges	PECE	TOTAL COST
	PIC	PM	APM	Principal Professional - Water Quality	QA/QC	Professional - Modeler	Project Professional - Water Quality	Staff Engineer	GIS/Graphics	DP						5%			15.80	
	$ 310	$ 275	$ 237	$ 275	$ 237	$ 201	$ 214	$ 165	$ 152	$ 117										
Task 100 – Project Management	**9**	**29**	**45**	**0**	**4**	**27**	**0**	**0**	**0**	**22**	**136**	**$ 30,379**	**$ -**	**$ 15,628**	**$ 15,628**	**$ 782**	**$ 16,410**	**$ -**	**$ 2,149**	**$ 48,938**
101 Monthly Progress Report and Invoice		3	18							18	39	$ 7,197		$ 5,255	$ 5,255	$ 263	$ 5,518	$ -	$ 616	$ 13,331
102 Project Management Plan			1							4	5	$ 705			$ -	$ -	$ -	$ -	$ 79	$ 784
103 Pre-Plan DOH Meeting		4	4			1					9	$ 2,249			$ -	$ -	$ -	$ -	$ 142	$ 2,391
104 Meeting No.1 - Kick-off Meeting		4	4			8					16	$ 3,656		$ 3,533	$ 3,533	$ 177	$ 3,710	$ -	$ 253	$ 7,619
105 Client and Team Coordination	9	18	18		4	18					67	$ 16,572		$ 6,840	$ 6,840	$ 342	$ 7,182	$ -	$ 1,059	$ 24,813
Task 200 – Planning Considerations	**0**	**2**	**4**	**0**	**3**	**13**	**0**	**14**	**5**	**12**	**53**	**$ 9,296**			**$ -**	**$ -**	**$ -**	**$ -**	**$ 837**	**$ 10,133**
201 Data Request			1			1		2			4	$ 768			$ -	$ -	$ -		$ 63	$ 831
202 Summarize Related Documents			1			2		4			7	$ 1,299			$ -	$ -	$ -		$ 111	$ 1,410
203 Draft and Final Chapter 1 - Introduction		1	1		1	4		4	1	4	16	$ 2,833			$ -	$ -	$ -		$ 253	$ 3,086
204 Draft and Final Chapter 2 - Planning Considerations		1	1		2	6		4	4	8	26	$ 4,396			$ -	$ -	$ -	$ -	$ 411	$ 4,807
Task 300 - Existing System	**0**	**2**	**4**	**0**	**3**	**15**	**0**	**12**	**6**	**8**	**50**	**$ 9,052**		**$ 4,925**	**$ 4,925**	**$ 247**	**$ 5,172**	**$ -**	**$ 790**	**$ 15,014**
301 Data Request						1		2			3	$ 531			$ -	$ -	$ -	$ -	$ 47	$ 578
302 Review and Update Existing System						4		2	4		10	$ 1,742		$ 1,930	$ 1,930	$ 97	$ 2,027	$ -	$ 158	$ 3,927
303 Meeting No.2 - Policies and Criteria, Existing System, and Service Area		1	2		1	8					12	$ 2,594		$ 780	$ 780	$ 39	$ 819	$ -	$ 190	$ 3,603
304 Draft and Final Chapter 3 - Existing System		1	2		2	2		8	2	8	25	$ 4,185		$ 2,215	$ 2,215	$ 111	$ 2,326	$ -	$ 395	$ 6,906
Task 400 - Operations and Maintenance	**0**	**1**	**3**	**0**	**2**	**13**	**0**	**14**	**0**	**8**	**41**	**$ 7,319**			**$ -**	**$ -**	**$ -**	**$ -**	**$ 648**	**$ 7,967**
401 Data Request						1		2			3	$ 531			$ -	$ -	$ -	$ -	$ 47	$ 578
402 Review O&M Analysis			1			6		6			13	$ 2,433			$ -	$ -	$ -	$ -	$ 205	$ 2,638
403 Draft and Final Chapter 4 - Operations and Maintenance		1	2		2	6		6		8	25	$ 4,355			$ -	$ -	$ -	$ -	$ 395	$ 4,750
Task 500 - Water Requirements	**0**	**7**	**6**	**0**	**5**	**29**	**0**	**54**	**12**	**9**	**122**	**$ 22,148**			**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,928**	**$ 24,076**
501 Data Request						1		2			3	$ 531			$ -	$ -	$ -	$ -	$ 47	$ 578
502 Demographic Projections Review and Update		1				4		12	4		21	$ 3,667			$ -	$ -	$ -	$ -	$ 332	$ 3,999
503 Demand Projections Review and Update		1	8		2	8		24	4		39	$ 6,925			$ -	$ -	$ -	$ -	$ 616	$ 7,541
504 Meeting No. 3 - Water Demand Forecast, Water Use Efficiency, and Conservation.		4	4		1	8		8		1	26	$ 5,330						$ -	$ 411	$ 5,741
505 Draft and Final Chapter 5 - Water Requirements		1	2		2	8		8	4	8	33	$ 5,695			$ -	$ -	$ -	$ -	$ 521	$ 6,216
Task 600 - Water Use Efficiency	**0**	**3**	**8**	**0**	**2**	**3**	**0**	**18**	**0**	**6**	**40**	**$ 7,470**			**$ -**	**$ -**	**$ -**	**$ -**	**$ 632**	**$ 8,102**
601 Data Request						1		2			3	$ 531			$ -	$ -	$ -		$ 47	$ 578
602 Review Future Conservation Water Demand		2	4			2		8			16	$ 3,220			$ -	$ -	$ -		$ 253	$ 3,473
602 Final Chapter 6 - Water Use Efficiency		1	4		2			8		6	21	$ 3,719			$ -	$ -	$ -	$ -	$ 332	$ 4,051
Task 700 - Water Quality	**0**	**1**	**1**	**9**	**2**	**0**	**64**	**0**	**0**	**8**	**85**	**$ 18,093**			**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,343**	**$ 19,436**
701 Data Request				1			4				5	$ 1,131			$ -	$ -	$ -		$ 79	$ 1,210
702 Water Quality Summary				2			24				26	$ 5,686			$ -	$ -	$ -		$ 411	$ 6,097
703 Water Quality Analysis				2			24				26	$ 5,686			$ -	$ -	$ -		$ 411	$ 6,097
704 Draft and Final Chapter 7 - Water Quality		1	1	4	2		12			8	28	$ 5,590			$ -	$ -	$ -		$ 442	$ 6,032
Task 800 - Water Resources	**0**	**7**	**7**	**4**	**2**	**13**	**0**	**22**	**2**	**8**	**65**	**$ 12,641**		**$ 26,160**	**$ 26,160**	**$ 1,308**	**$ 27,468**	**$ -**	**$ 1,027**	**$ 41,136**
801 Data Request						1		2			3	$ 531		$ 2,260	$ 2,260	$ 113	$ 2,373	$ -	$ 47	$ 2,951
802 Water Supply Summary			2					4			6	$ 1,134		$ 1,705	$ 1,705	$ 85	$ 1,790	$ -	$ 95	$ 3,019
803 Water Rights Assessment			2			2					4	$ 876		$ 2,515	$ 2,515	$ 126	$ 2,641	$ -	$ 63	$ 3,580
804 Water Supply Analysis		2	2			4		8			16	$ 3,148		$ -	$ -	$ -	$ -	$ -	$ 253	$ 3,401
805 Wellhead Protection Program Update		1	1			2					4	$ 914		$ 12,920	$ 12,920	$ 646	$ 13,566	$ -	$ 63	$ 14,543
806 Draft and Final Chapter 8 - Water Resources		4		4	2	4		8	2	8	32	$ 6,038		$ 6,760	$ 6,760	$ 338	$ 7,098	$ -	$ 506	$ 13,642
Task 900 - Water System Analysis	**1**	**31**	**35**	**0**	**13**	**143**	**0**	**164**	**48**	**29**	**464**	**$ 86,703**			**$ -**	**$ -**	**$ -**	**$ 3,200**	**$ 7,331**	**$ 97,234**
901 Data Request						1		2			3	$ 531			$ -	$ -	$ -		$ 47	$ 578
902 Updated Hydraulic Profile			1			4		4		8	17	$ 2,637			$ -	$ -	$ -		$ 269	$ 2,906
903 Storage Analysis		2	1			6		4	2		15	$ 2,957			$ -	$ -	$ -		$ 237	$ 3,194
904 Pump Station Analysis		2	1			6		4	2		15	$ 2,957			$ -	$ -	$ -		$ 237	$ 3,194
905 Perform Hydrant Flow Tests		1	4			36		60	12		113	$ 20,183			$ -	$ -	$ -	$ 2,000	$ 1,785	$ 23,968
906 Update Hydraulic Model		4	2		2	12		16	8		44	$ 8,316			$ -	$ -	$ -		$ 695	$ 9,011
907 Calibrate Hydraulic Model		6	2		1	24		36	2		71	$ 13,429			$ -	$ -	$ -		$ 1,122	$ 14,551
908 Meeting No.4 - Water Management Plan & Hydraulic Model Development	1	2	6		2	8			2	1	22	$ 4,785			$ -	$ -	$ -		$ 348	$ 5,133
909 Draft and Final TM 1 - Hydraulic Model Development and Calibration TM		2	4		2	6		6	4	8	32	$ 5,712			$ -	$ -	$ -		$ 506	$ 6,218
910 Fire and System Pressure Analysis		2	2			12		16	8		40	$ 7,292			$ -	$ -	$ -		$ 632	$ 7,924
911 Meeting No.5 - Preliminary System Deficiencies		4	6		2	12			2	2	28	$ 5,946			$ -	$ -	$ -	$ 1,200	$ 442	$ 7,588
912 Meeting No.6 - Recommendations Workshop		2	4		2	8		8	2	2	28	$ 5,438			$ -	$ -	$ -		$ 442	$ 5,880
913 Draft and Final Chapter 9 - System Analysis		4	2		2	8		8	4	8	36	$ 6,520			$ -	$ -	$ -		$ 569	$ 7,089
Task 1000 - Capital Improvements	**0**	**13**	**12**	**0**	**5**	**28**	**0**	**50**	**20**	**9**	**137**	**$ 25,575**			**$ -**	**$ -**	**$ -**	**$ 1,200**	**$ 2,165**	**$ 28,940**
1001 Cost Estimates		1	1			2		8			12	$ 2,234			$ -	$ -	$ -	$ -	$ 190	$ 2,424
1002 Project Prioritization		2	1			4		8			15	$ 2,911			$ -	$ -	$ -	$ -	$ 237	$ 3,148
1003 Meeting No.7 - Capital Improvements		6	6		1	8		8	2	1	32	$ 6,658			$ -	$ -	$ -	$ 1,200	$ 506	$ 8,364
1004 Electronic CIP		2	2		2	8		24	16		54	$ 9,498			$ -	$ -	$ -	$ -	$ 853	$ 10,351
1005 Draft and Final Chapter 10 - Capital Improvement Plan		2	2		2	6		2	2	8	24	$ 4,274			$ -	$ -	$ -	$ -	$ 379	$ 4,653
Task 1100 - Financial	**0**	**6**	**12**	**0**	**2**	**18**	**0**	**12**	**4**	**8**	**62**	**$ 12,110**	**$ 23,535**		**$ 23,535**	**$ 1,633**	**$ 25,168**	**$ -**	**$ 980**	**$ 38,258**
1101 Data Collection and Validation						2		4			6	$ 1,062	$ 1,720		$ 1,720	$ 316	$ 2,036		$ 95	$ 3,193
1102 Historical Financial Performance Review											0	$ -	$ 2,805		$ 2,805	$ 140	$ 2,945		$ -	$ 2,945
1103 Fiscal Policy Review											0	$ -	$ 725		$ 725	$ 36	$ 761		$ -	$ 761
1104 Capital Financing Plan											0	$ -	$ 2,805		$ 2,805	$ 140	$ 2,945		$ -	$ 2,945
1105 Operating Forecast											0	$ -	$ 2,805		$ 2,805	$ 367	$ 3,172		$ -	$ 3,172
1106 Revenue Needs Assessment											0	$ -	$ 3,465		$ 3,465	$ 173	$ 3,638		$ -	$ 3,638
1107 Rate Forecast and Affordability Test											0	$ -	$ 1,170		$ 1,170	$ 59	$ 1,229		$ -	$ 1,229
1108 Meeting No.8 -Financial Review		4	8			8					20	$ 4,604	$ 2,700		$ 2,700	$ 135	$ 2,835		$ 316	$ 7,755
1109 Draft and Final Chapter 11 - Financial Plan		2	4		2	8		8	4	8	36	$ 6,444	$ 5,340		$ 5,340	$ 267	$ 5,607		$ 569	$ 12,620
Task 1200 - Plan Development	**12**	**12**	**13**	**0**	**2**	**62**	**0**	**0**	**12**	**70**	**183**	**$ 33,051**	**$ -**	**$ 5,630**	**$ 5,630**	**$ 283**	**$ 5,913**	**$ 1,200**	**$ 2,891**	**$ 43,055**
1201 Executive Summary			1			2			2	2	7	$ 1,177		$ -	$ -	$ -	$ -		$ 111	$ 1,288
1202 City Draft Plan	1	2	2		2	24			2	24	57	$ 9,744		$ 2,495	$ 2,495	$ 125	$ 2,620		$ 901	$ 13,265
1203 Meeting No. 9 - City Review Comments		2	2			4			2	2	12	$ 2,366		$ 390	$ 390	$ 20	$ 410		$ 190	$ 2,966
1204 Agency Draft Plan	1	2	2			16			2	24	47	$ 7,662		$ 1,050	$ 1,050	$ 53	$ 1,103		$ 743	$ 9,508
1205 Meeting No. 10 - Agency Review Comments		2	2			4			2	2	12	$ 2,366		$ 390	$ 390	$ 20	$ 410		$ 190	$ 2,966
1206 Final Plan	10	4	4			12			2	16	48	$ 9,736		$ 1,305	$ 1,305	$ 65	$ 1,370	$ 1,200	$ 758	$ 13,064
Total	**22**	**114**	**150**	**13**	**45**	**364**	**64**	**360**	**109**	**197**	**1,438**	**$ 273,837**	**$ 23,535**	**$ 52,343**	**$ 75,878**	**$ 5,203**	**$ 80,131**	**$ 5,600**	**$ 22,720**	**$ 382,288**

CONSULTANT BILLING RATES

CITY OF CAMAS

2025 WATER SYSTEM PLAN AND GENERAL SEWER PLAN

Carollo Engineers, Inc. billing rates and other direct expenses are defined in the tables below. These rates are for calendar years 2024 and projected through 2026. If the contract is extended beyond December 31, 2026, Carollo Engineers, Inc., reserves the right to modify the rates on an annual basis.

Project Role	Hourly Rate		
	2024	**2025**	**2026**
Senior Advisor/SME	$295.00	$310.00	$325.00
Project Manager	$262.00	$275.00	$289.00
Principal Professional	$262.00	$275.00	$289.00
Senior Professional	$226.00	$237.00	$249.00
Project Professional	$204.00	$214.00	$225.00
Professional	$191.00	$201.00	$211.00
Staff Professional	$157.00	$165.00	$173.00
Senior Technician	$159.00	$167.00	$175.00
Assistant Professional	$149.00	$156.00	$164.00
Technician	$145.00	$152.00	$160.00
Document Processing	$111.00	$117.00	$123.00

Expense			
Project Equipment Computer Expense (PECE)	$15.00/hr	$15.80/hr	$16.60/hr
Travel and Subsistence	At cost		
Mileage at IRS Reimbursement Rate	$0.67 per mile effective January 1, 2024		
Subconsultant	Cost + 10%		
Other Direct Cost	Cost + 10%		

EXHIBIT A

CITY OF CAMAS
SCOPE OF SERVICES

GENERAL SEWER PLAN UPDATE

The following Scope of Services has been developed to assist the City of Camas (City) with the update of its General Sewer Plan (GSP). The following tasks under this Scope of Services have been prepared based on Carollo Engineers, Inc.'s (Consultant) and its subconsultant's current understanding of the proposed project, and through discussions with City staff.

PROJECT BACKGROUND

The City initiated this GSP to coincide with the update of the City's Our Camas 2045 Comprehensive Plan. The City recognizes the importance of planning, developing, and maintaining wastewater system facilities that provide reliable and efficient service for existing customers and to serve anticipated growth defined by the Comprehensive Plan. The GSP is designed to meet state, county, and local requirements. The project represents an update of the City's existing GSP (Carollo, 2024) to align with recent Comprehensive Plan updates, which extend the land use planning period through 2045. This project will consider system needs in the context of providing sewer service to meet updated population and economic development projections presented in the updated Comprehensive Plan.

Effort will involve evaluating sewer collection system needs in portions of the City's service area not considered in the existing GSP. Updated flow and load projections will be developed based on new information presented in the Comprehensive Plan update. An updated evaluation of the capacity of wastewater treatment plant (WWTP) capacity utilizing those updated flows and loads, as well as an update/confirmation of condition driven needs to those facilities are included.

PROJECT ASSUMPTIONS

- Carollo Engineers, Inc. will be referred to as "Consultant" in this document.
- City of Camas and its staff will be referred to as "City" in this document.
- State of Washington Department of Ecology and its staff will be referred to as "Ecology" in this document.
- All meetings will be held on Microsoft Teams, unless otherwise specified.
- All deliverables will be provided in electronic copy (PDF and/or Microsoft Word) transmitted via email or secure file transfer. The City will print and produce all documents as necessary for its use. Consultant will not provide any deliverables in a paper format.
- City comments on draft chapters will be documented in the Project Comment Response Log by the Consultant. The Consultant will prepare responses to address the comments in the Comment Response Log for the City's review and acceptance. Resulting changes will be incorporated in the Draft Agency Review Plan, rather than reissuing a draft chapter at the time. However, revised draft chapters can be produced upon City request.
- Electronic Flow Projection Tool will be provided in .xlsx format.

- The Consultant will prepare an agenda, presentation materials, and document discussions, including action items and decisions, and meeting minutes for Consultant-led meetings. Meeting notes and related materials will be transmitted electronically in MS Word and/or PDF formats via email.
- In providing opinions of cost, financial analyses, economic feasibility projections, schedules, and quantity and/or quality estimates for potential projects, the Consultant has no control over cost or price of labor and material; unknown or latent conditions of existing equipment or structures that may affect operation and maintenance costs; competitive bidding procedures and market conditions; time or quality of performance of third parties; quality, type, management, or direction of operating personnel. Therefore, the Consultant makes no warranty that the City's actual project costs, financial aspects, economic feasibility, schedules, and/or quantities or quality realized will not vary from the Consultant's opinions, analyses, projections, or estimates.
- The Consultant shall not be responsible for acts and decisions of third parties, including governmental agencies, other than the Consultant's subconsultants, that impact project completion and/or success other than noted elsewhere in this scope of work.
- The City will furnish the Consultant with available studies, reports, and other data pertinent to the Consultant's services; obtain or authorize the Consultant to obtain or provide additional reports and data as required; furnish to the Consultant services of others required for the performance of the Consultant's services hereunder; and the Consultant shall be entitled to use and reasonably rely upon all such information and services provided by the City or others in performing the Consultant's services hereunder.
- The GSP update will follow this organization of chapters and meetings as listed in Table 1.

Table 1 Summary of Chapters and Appendices

Chapter/Appendix		Lead
Executive Summary		Consultant
Chapter 1	Introduction	Consultant
Chapter 2	Regulations, Policies, and Criteria	Consultant
Chapter 3	Basis of Planning	Consultant
Chapter 4	Existing System	Consultant
Chapter 5	I/I Program	Consultant
Chapter 6	Collection System	Consultant
Chapter 7	Wastewater Treatment Facility	Consultant
Chapter 8	Operations and Maintenance	Consultant
Chapter 9	Capital Improvement Plan	Consultant
Chapter 10	Financial Plan	Consultant with FCS
Appendix A	Approvals	
Appendix B	Agency Comment Letters and Responses	
Appendix C	Demographic Projections	
Appendix D	Flow Monitoring Report	
Appendix E	Hydraulic Model Update and Calibration TM	
Appendix F	I/I Program Reports	

Chapter/Appendix		Lead
Appendix G	Local Limits Program Reports	
Appendix H	Wastewater Treatment Plant Permits	
Appendix I	Wastewater Treatment Engineering Report	
Appendix J	Spill Response Plan	
Appendix K	CIP Project Sheet	
Appendix L	Financial Backup	
Appendix M	O&M APE Examples	

Notes:
CIP - capital improvement program; I/I - infiltration and inflow; O&M - operations and maintenance; TM - technical memorandum

Table 2 Summary of Meetings

Meetings	Title	Type
Meeting No. 1	Kickoff Meeting	Virtual
Meeting No. 2	Policies and Criteria, and Regulatory Considerations and Strategy	Virtual
Meeting No. 3	Flow Monitoring Results & Flow Projections	Virtual
Meeting No. 4	WWTP Flows and Loadings	Virtual
Meeting No. 5	Hydraulic Model Development & Capacity Evaluation	Virtual
Meeting No. 6	Capacity Improvements	Hybrid
Meeting No. 7	Influent and select process characterization sampling and analysis effort	Virtual
Meeting No. 8	Review and confirm capacity analysis findings	Virtual
Meeting No. 9	Alternative development workshop with City and plant operations staff to develop and select liquids and solids process area improvements for evaluation	Hybrid
Meeting No. 10	Alternative evaluation workshop to review technical performance, costs, and non-cost considerations associated for each alternative	Hybrid
Meeting No. 11	CIP Review	Hybrid
Meeting No. 12a, 12b, 12c, 12d	Financial Review	Virtual
Meeting No. 13	City Review Draft	Virtual
Meeting No. 14	Agency Review Meeting	Virtual
	Up to 2 council meetings	Virtual
Project Management	36 Coordination Calls	Virtual

TASKS

To meet the objectives of this Scope of Services, the Consultant shall complete the tasks as summarized in Table 3 and discussed in detail in the text that follows.

Table 3 Task Summary

Task Number	Task Name
Task 100	Project Management
Task 200	Introduction
Task 300	Regulations, Policies, and Criteria
Task 400	Basis of Planning
Task 500	Existing System
Task 600	I/I Program
Task 700	Collection System
Task 800	Wastewater Treatment Facility
Task 900	Operation and Maintenance
Task 1000	Capital Improvement Plan
Task 1100	Financial Plan
Task 1200	Plan Development

TASK 100 - PROJECT MANAGEMENT

The purpose of this task is to direct activities within the GSP as assigned by the City and maintain the project within the contracted scope, schedule, and budget. This consists of project administration, monthly invoicing, client and team coordination and quality assurance/quality control review necessary to successfully complete the GSP to the City's expectations. Additionally, the Consultant will develop a Project Management Plan (PMP) and lead the initial team kickoff meeting. This task consists of the following activities:

TASK 100 ACTIVITIES

Subtask 101 - Monthly Progress Reports and Invoices

This subtask consists of production and implementation of the project plan, schedule, and budget. Assist the project team members in the implementation of the task items, reviewing the work-in-progress reports. Prepare and submit monthly activity reports showing current project status and identifying key issues or elements of the project that will need to be addressed in the proceeding weeks. An electronic version of the monthly progress reports will be sent to the City for review and approval. This task assumes that no hard copy of the monthly progress reports will be distributed.

Subtask 102 - Project Management Plan

Prepare a Project Management Plan (PMP) that describes deliverables, plan outline, anticipated meetings, project roles and responsibilities, lists contact information for the project team, describes communications

protocols, quality management, and includes the scope of services, schedule, and budget. Quality Management includes, but is not limited to, the following elements:

- Project Manager overview of all primary documents to verify technical consistency and compliance with contract requirements.
- Organization of the work into logical deliverables with qualified staff for each task assigned to the work.
- Resolution of all review comments summarizing key comments and the manner in which each was addressed in the work.

Subtask 103 - Meeting No. 1- Kickoff Meeting

- Facilitate a meeting to kick off the GSP update, review project management plan and initial data requests.

Subtask 104 - Project Management & Client Coordination

- Manage the consultant project team to track time and budget, work elements accomplished, work items planned for the next period, manpower, scope changes, time and budget needed to complete the project.
- Create and maintain a working project schedule based on the schedule in the PMP.
- Review project status, including scope, budget, and schedule.
- Bi-Monthly Virtual Status Meeting. Facilitate virtual PM meetings two times per month to review status of project.

Task 100 Assumptions

1. The PMP will be updated with full incorporation of review comments after the City review of the draft PMP.
2. The total length of the project is 18 months.
3. City provides required documents for appendices.
4. Thirty-six bi-monthly status meetings will be held over Microsoft Teams. Meetings to be held in conjunction with the Water System Plan Update.

Task 100 City Input

1. Team member contact information.
2. Receive, review, and process Consultant invoices in a timely manner.

Task 100 Consultant Deliverables

1. Draft GSP outline.
2. Eighteen monthly progress reports and invoices.

Task 100 Meetings

1. Meeting No. 1 - Kickoff Meeting.
2. PM Virtual Meetings.

TASK 200 - INTRODUCTION

The purpose of this task is to provide an introduction to the GSP documenting the purpose, review and approvals, and direction to pertinent information. The task effort will be documented in Chapter 1 - Introduction.

TASK 200 ACTIVITIES

Subtask 201 - Regulatory Information Reference

Prepare a table that provides reference in the GSP to each regulatory required information in the GSP. The intent of this reference is to aid the agency reviewers in conducting an efficient and thorough review of the GSP.

Subtask 202 - Draft and Final Chapter 1 - Introduction

Prepare draft Chapter 1 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final plan.

Task 200 Assumptions

1. None.

Task 200 City Input

1. Comments on draft Chapter 1 - Introduction.

Task 200 Consultant Deliverables

1. Draft Chapter 1 - Introduction.
2. Record of Comment (ROC) for Chapter 1 - Introduction.

Task 200 Meetings

1. None.

TASK 300 - REGULATIONS, POLICIES, AND CRITERIA

The purpose of this task is to update the applicable regulations, policies impacting long-term sewer planning, and define planning criteria from the 2024 GSP. The task effort will be documented in Chapter 2 - Regulations, Policies and Criteria.

TASK 300 ACTIVITIES

Subtask 301 - Applicable Regulations, Considerations and Strategy.

Review and update regulatory requirements presented in Chapter 2 of the 2024 GSP. Include a summary of requirements from the City's Wastewater Treatment Plant National Pollutant Discharge Elimination System (NPDES) Permit WA002049. This will include summarizing requirements of the City's updated NPDES Permit (under development for renewal by Ecology at time of drafting this scope of work) if renewed prior to GSP Update commencing.

In the course of Ecology review and approval of the existing GSP, the need for a Tier II evaluation in accordance with Washington Administrative Code (WAC) 173-201A-320 and Publication No. 11-10-073 was identified. It is expected this Tier II evaluation will be submitted by the City during the next cycle of NPDES permit renewal or at the point in time the City determines additional discharge capacity must be permitted.

Prepare an effluent and receiving water desktop analysis to assess the potential for exceedances of water quality objectives under projected future conditions. This analysis will rely on influent, effluent, and receiving water data requested in Task 400 and be conducted in conjunction with WWTP process evaluations described in Task 800. The results/findings of the desktop analysis will be summarized in Chapter 2. A summary addressing the implications of these findings in the context of potential future implications on WWTP unit processes and facilities will be included in Chapter 7.

Subtask 302 - Policies and Criteria

Obtain existing level of service policies, financial policies, planning criteria, and design standards from the City. Review policies and criteria and make recommendations for additional or revised criteria and service area goals that best fit the needs of the City. Confirm the design storm used for the capacity evaluation. Review current and potential future design standards for the sewer system, including design depth to pipe diameter (d/D) standards. Criteria will include allowable pipeline d/D values during peak flows, minimum velocities, minimum/maximum slope, and pumping requirements.

Subtask 303 - Meeting No.2 - Policies and Criteria & Regulatory Considerations and Strategy

Facilitate a meeting to review City policies and criteria. This will include discussion of possible future implications for WWTP processes and facilities and outline alternatives which will be considered in Task 800

Subtask 304 - Draft and Final Chapter 2 - Policies and Criteria

Prepare draft Chapter 2 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final GSP.

Task 300 Assumptions

1. City will provide pertinent information for missing or updated facility data.
2. Desktop analysis of reasonable potential will be conducted utilizing publicly available (Ecology) tools.

Task 300 City Input

1. Comments on draft Chapter 2 - Policies and Criteria.

Task 300 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft Chapter 2 - Policies and Criteria.
3. ROC for Chapter 2 - Policies and Criteria.

Task 300 Meetings

1. Meeting No. 2 - Policies and Criteria and Regulatory Considerations and Strategy.

TASK 400 - BASIS OF PLANNING

The purpose of this task is to update the planning criteria and all planning assumptions for use in evaluation of the wastewater collection system, from the 2024 GSP. The planning area assumed for this GSP includes the current utility services boundary and the North Shore expansion area. The task efforts will be documented in Chapter 3 - Basis of Planning.

TASK 400 ACTIVITIES

Subtask 401 - Data Request

Prepare a data request for the required information. The request is expected to consist of the following:

- ADS flow monitoring data and historical pump run time data at Pump Stations.
- Updates to population and employment projections since the last GSP.
- Lift station flow data (if available).
- Major industrial discharges.
- WWTP influent and effluent flow monitoring data for the preceding 5 years. (See also Task 800, which includes an influent wastewater characterization sampling effort and focused process sampling internal to the plant to provide additional data).
- Most recent WWTP receiving water data (assumed to be data used to inform the required reasonable potential analysis for the City's recent NPDES permit renewal application).
- Results and report summarizing the findings of the City's most recent WWTP outfall evaluation as required by the existing NPDES permit.
- Available data characterizing industrial wastewater discharged to the WWTP (see also Subtask 404).
- Pertinent WWTP record drawings and basis of design reports.
- Spreadsheets utilized for the most recent NPDES permit renewal to assess reasonable potential.
- Additional information includes level of service policies, planning criteria, design standards, and financial data from the City.

A summary will be prepared identifying any informational gaps. Consultant will coordinate with City's project manager to resolve.

Subtask 402 - Service Area Boundaries

Update the City's service area boundaries to be considered in the GSP for the existing system service area ("Existing"), the 20-year timeframe ("20-Year"), and the ultimate ("Build-out") planning periods. City to review and confirm the service area boundaries.

Subtask 403 - Demographic Analysis

Update the service area and land use maps from the 2024 GSP, using geographic information system (GIS) data. Review current population, land use, and zoning to establish the historical demographics and to develop future demographics for the service area. Establish land use data per basin for the existing system service area ("Existing"), the 20-year timeframe ("20-Year"), and the ultimate ("Build-out") planning periods. Demographics within the 20-Year timeframe will be based on the Water System Plan Update.

Subtask 404 - Industrial Flows and Loads

The City's largest connections, potential large scale industrial flows and loads and future wholesale water customers will be evaluated and projected separately and added to other projected system flows and loads. The industrial flow and load projections will be updated from the 2024 GSP and be consistent with the WSP industrial demand projections.

Subtask 405 - Review Flow Monitoring Report

The City will contract directly with ADS to conduct flow monitoring for the STEP system and the North Shore of the gravity collection system. Flow monitoring basins and statistics will be provided in an email to ADS. ADS will provide raw data and a full report on flow and I/I analysis for each metered basin. This data will be verified by the Consultant and used for flow development and model calibration. The flow monitoring program will take place in the winter of 2024/2025 and is anticipated to capture dry and wet weather flows, including storm events required to meet calibration standards. Four or fewer flow meters will be used. Flow monitoring will be performed at one location on the STEP system, one location in the North Shore, and the two gravity pipes upstream of the treatment plant.

Subtask 406 - Flow Projections

Flow projections are based on demographic assumptions and the data obtained from flow monitoring. The flow projections from the 2024 GSP will be updated as a part of this subtask, as follows:

- Flow Data Review. Compare base sanitary flows estimated from existing land use to dry weather flow calculated through the flow monitoring for each basin. Existing land use and currently served areas will be used to estimate flow factors in gallons per acre per land use category. The flow factors will be customized to match the observed existing average dry weather flow (ADWF) and will be used to develop flow projections. Pump Station runtime data and City pump-down curves will be used to proportion ADWF throughout basins, where available.
- Base Flow Projections. Develop base sanitary flows for three planning periods: existing conditions, 20-year, and build-out scenarios.
- Infiltration and Inflow Projections. Estimate I/I flow rates for each sewer basin based on current and future land use and area specific I/I factors. Developed I/I flow rates will be compared to I/I flow rate estimates per monitored basin. Develop I/I flow rates for new areas to be added to the system.
- Flow Projections. Future flows, including base flows, I/I, and industrial point flows, will be projected based on service area growth. Future flows will be assessed for each sewer and pump station basin for the selected planning periods.

Subtask 407 - WWTP Wastewater Flows and Loadings

Consultant shall review historic ammonia, pH, fecal coliform, biochemical oxygen demand (BOD) and total suspended solids (TSS) wastewater load contributing to the wastewater treatment plant. Unit loading factors will be developed using existing flow and population data provided by the City to provide a basis for projected future loading within the service area. The unit loading factors will be established on an equivalent residential units (ERU) basis for both residential and employment units. It is anticipated different loading factors will be developed for STEP and gravity customers. Based on population projections provided by the City, project flows and loads for the planning period that will require treatment at the facility. Load projections will be summarized by basin and at the facility. Resulting flow and load projections will be used in Task 800 to evaluate WWTP capacity implications.

Subtask 408 - Meeting No. 3 - Flow Monitoring Results and Flow Projections

Facilitate a meeting to review the flow monitoring results and flow projections with the City. Confirm flow projections are consistent with City understanding of the current and future system. Flows will be summarized by basin and at the facility.

Subtask 409 - Meeting No. 4 - WWTP Flows and Loadings

Facilitate a meeting to review the WWTP flow and loading analysis findings with the City. Confirm flows and loadings are consistent with City understanding for the current facility and discuss implications of projections for future conditions.

Subtask 410 - Draft and Final Chapter 3 - Basis of Planning

Prepare draft Chapter 3 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final GSP.

Task 400 Assumptions

1. Flow monitoring will be performed at two locations on STEP system, one location in the North Shore, and the two gravity pipes upstream of the treatment plant.
2. Previously identified loading factors previously identified for large industries will be used and not reexamined.

Task 400 City Input

1. Requested Data from Task 401.
2. Comments on draft Chapter 3 - Basis of Planning.

Task 400 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft Chapter 3 - Basis of Planning.
3. ROC for Chapter 3 - Basis of Planning.

Task 400 Meetings

1. Meeting No. 3 - Flow Monitoring Results and Flow Projections.
2. Meeting No. 4 - WWTP Flows and Loadings.

TASK 500 - EXISTING SYSTEM

The purpose of this task is to update the Existing System Chapter from the 2024 GSP.

TASK 500 ACTIVITIES

Subtask 501 - Data Request

Prepare a data request for the required information. The request is expected to consist of the following if updated since last GSP:

- As-builts of STEP system.
- As-builts of North Shore Area.

Subtask 502 - Study Area

Update and incorporate study area information in Chapter 4 - Existing System.

Subtask 503 - Existing System

Review the components of major sewer collectors and pump stations using data from the City's GIS, available pipe database, discussions with staff, and previous studies. Incorporate information from the City's 2024 GSP. Subtasks include the following:

- Update chapter text, tables, and figures summarizing the City's collection and conveyance system. Summarize the boundaries of sewer service basins and pump station basins (if different). Provide descriptions for each of the City's sewage pump stations, and force mains. Provide total length of pipe based on diameter and material, if available.
- Summarize improvements to the City's wastewater collection system that have been completed since the 2024 GSP, based on discussions with City Staff.
- Develop figures for the GSP of the existing system infrastructure using the City's GIS data.

Subtask 504 - Draft and Final Chapter 4 - Existing System

Prepare draft Chapter 4 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final GSP.

Task 500 Assumptions

1. None.

Task 500 City Input

1. Requested Data from Task 501.
2. Comments on draft Chapter 4 - Existing System.

Task 500 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft Chapter 4 - Existing System.
3. ROC for Chapter 4 - Existing System.

Task 500 Meetings

1. None.

TASK 600 - I/I PROGRAM

The purpose of this task is to update the City's I/I Program. Future I/I rates with and without the I/I Program will be estimated for use in the Collection System evaluation.

Subtask 601 - Summarize Existing I/I Program

Summarize the existing I/I Program from City provided annual reports. Tabulate City I/I projects by year and I/I reduction. Create a map of historical I/I projects, if data is available. Identify future activities to be conducted by the I/I Program. Draft Chapter 5 - I/I Program.

Subtask 602 - Draft and Final Chapter 5 - I/I Program

Prepare draft Chapter 5 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final GSP.

Task 600 Assumptions

1. None.

Task 600 City Input

1. Requested Data from Task 601.
2. Comments on draft Chapter 5 - I/I Program.

Task 600 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft Chapter 5 - I/I Program.
3. ROC for Chapter 5 - I/I Program.

Task 600 Meetings

1. None.

TASK 700 - COLLECTION SYSTEM

The purpose of this task is to update the existing and future capacity evaluation, update system deficiencies, and revise recommendations to resolve deficiencies. Recommended projects will be included in the CIP.

Subtask 701 - Hydraulic Model Update and Calibration

The City's gravity collection system model will be combined with the STEP system model and converted from DHI's Mike Urban to DHI's 2024 MIKE+. Piping and pumping will be reviewed and updated on the model with a focus on expanding the extents to the North Shore and the STEP system. Model extents will include:

- STEP System: Major STEP force mains and pump stations. The flows will be added to the model geographically by mini-basin for the existing, projected 20-year and build-out conditions.
- Gravity System: The model will include all pipes greater than 6 inches. The flows will be added to the model geographically by mini-basin for the existing projected 20-year and build-out conditions.
- North Shore: Constructed and planned North Shore Sewer infrastructure based on prior City effort.
- The flows will be added to the model geographically by mini-basin for the existing, projected 20-year and build-out conditions.

Model calibration will entail the following:

- Calibration will focus on a quantitative approach based on the recommendations for hydraulic model verification contained in the "Code of Practice for the Hydraulic Modeling of Sewer Systems," version 3.001, published by the Wastewater Planning Group, a section of the Chartered Institution of

Water and Environmental Management and the Consultant's expertise. These recommended calibration criteria include, but are not limited to, the following:

  - The comparison period between observed and modeled events should last until flow has substantially returned to winter dry weather flow.
  - Observed and modeled hydrographs should meet the criteria for at least two out of three events.
  - The peak flow should be in the range +25 percent to -10 percent.
  - The volume of flow should be in the range of +20 percent to -10 percent.

- The existing dry and wet weather flows as described in a previous task will be calibrated based upon the flow monitoring data, and rainfall data provided by the flow monitoring program as well as additional data available from the City's supervisory control and data acquisition (SCADA) system for up to 3 meter locations in the collection system. Existing flow depths and velocities will also be checked and calibrated.
- Calibrate the model to dry weather flow conditions. Flow monitoring data will provide custom hourly diurnal curves that establish the daily flow patterns for each metering basin. Model parameters will be adjusted, as needed, to best match the flow monitoring and SCADA data. It is assumed that the City will provide SCADA data in electronic format.
- Calibrate the model for wet weather conditions. Rainfall information will aid in developing the required rainfall-derived infiltration/inflow (RDI/I) estimations that enter the collection system during a storm event. It is recommended that the use of a single calibration period incorporating a number of independent rainfall events should be considered whenever possible. Model results will be reviewed and adjusted, as needed, to best match the flow monitoring, rainfall, and SCADA data.
- The flows from any unmetered basins will be assumed to be unchanged since the previous model calibration.

Subtask 702 - Capacity Evaluation

Perform a hydraulic capacity analysis under the design storm for each basin using the calibrated model, and projected peak flow rates and system expansion developed in Task 200. The analysis will be performed for existing, 20 year, and build-out scenarios only, and will assist in identifying any system deficiencies and improvements required to resolve deficiencies. Subtasks include the following:

- Review related reports and studies for related capacity analyses and recommendations.
- Estimate the available capacity of each basin given existing infrastructure while meeting all performance criteria.
- Develop a future hydraulic modeling scenario that evaluates the impact of wastewater flows associated with future growth, as well as redevelopment projects on the collection system. Maps will be developed showing current and future deficiencies.
- Review and document resulting capacity deficiencies for 20-year and build-out conditions. Use the hydraulic model to confirm the sizing of the backbone facilities to serve the North Shore.
- Evaluate the capacities of the pump stations in the hydraulic model for their ability to convey peak flows under firm capacity for existing and 20-year and build-out conditions. Pump stations not in the hydraulic model are assumed to have sufficient capacity.
- Update capacity deficiencies based on City field investigations or additional information, as needed.

Subtask 703 - Meeting No. 5 - Hydraulic Model Development & Capacity Evaluation

Facilitate a meeting to review the hydraulic model development and resolve outstanding questions. City staff will confirm known deficiencies and identify any areas for additional City lead investigation (field visit, reference as-builts, etc.).

Subtask 704 - Draft and Final TM 1 - Hydraulic Model Update and Calibration

Prepare draft TM 1 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final GSP.

Subtask 705 - Capacity Improvements

Develop infrastructure recommendations to resolve deficiencies. Improvements will be sized for meeting build-out conditions and City criteria.

Subtask 706 - Meeting No. 6 - Capacity Improvements

Facilitate a workshop to review capacity related collection system improvements. Highlight recommended improvements on system maps for discussion with City staff.

Subtask 707 - Draft and Final Chapter 6 - Collection System

Prepare draft Chapter 5 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final GSP.

Task 700 Assumptions

1. No remaining useful life (RUL) analysis will be performed.
2. Model calibration will focus on the STEP system and North Shore. The remainder of the system is considered calibrated from the 2024 GSP.
3. All portions of the collection system: gravity, STEP, and North Shore will be included in the hydraulic model.

Task 700 City Input

1. Requested Data from Task 701.
2. Comments on draft TM 1 - Hydraulic Model Update and Calibration.
3. Comments on draft Chapter 6 - Collection System.

Task 700 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft TM 1 - Hydraulic Model Update and Calibration.
3. ROC for TM 1 - Hydraulic Model Update and Calibration.
4. Draft Chapter 6 - Collection System.
5. ROC for Chapter 6 - Collection System.

Task 700 Meetings

1. Meeting No. 5 - Hydraulic Model Development & Capacity Evaluation.
2. Meeting No. 6 - Capacity Improvements.

TASK 800 - WASTEWATER TREATMENT FACILITY

The purpose of this task is to define the condition and capacities of the WWTP's unit processes and facilities which directly impact the ability of the City to treat wastewater generated within their existing and expected future service area boundaries thereby managing the quality of effluent discharged to the Columbia River.

To inform the unit process analysis, additional information is required regarding the characteristics of existing wastewater influent received at the WWTP. This will be addressed through development and execution of a sampling and analysis plan in collaboration with City staff. This plan is also expected to include sampling at critical locations within the facility to provide additional detail regarding specific unit process performance. City staff will execute the plan with guidance from the Consultant. In addition, the Consultant will conduct a desktop reasonable potential analysis using the most recent effluent and receiving water information available (assumed to be data supporting the recent NPDES permit renewal application submitted to Ecology). The desktop reasonable potential analysis (RPA) will suggest potential limitations on future discharges from the WWTP that could impact plant capacity and composition of unit processes. A summary addressing the implications of these findings in the context of potential future implications on WWTP unit processes and facilities will be included in Chapter 7.

To address identified capacity and condition deficiencies, an alternatives analysis of the most viable improvement options will be conducted. Recommended projects and/or studies will be included in the CIP.

Subtask 801 - WWTP Historical Operations

Summarize WWTP historical operations based on a review of data provided by the City in Task 400, input provided to the Consultant by City staff and information contained in the 2024 GSP.

Subtask 802 - Influent and Select Process Characterization Testing Plan

Consultant will develop a wastewater characterization test plan to facilitate characterization of plant influent. This plan will incorporate limited sampling and analysis of selection locations within the liquid process as determined in collaboration with City staff. The City will execute this plan and provide data to the Consultant. Data will be used to calibrate the model developed in Subtask 804.

Subtask 803 - Meeting No. 7

Facilitate a workshop to review influent and selection process characterization sampling and analysis efforts.

Subtask 804 - WWTP Capacity Analysis

The objective of this Subtask is to determine the capacity of the existing treatment plant assuming: 1) current NPDES permit requirements, 2) current flow and loading conditions, and 3) projected future flow and loading conditions. A unit process analysis will be completed to identify shortfalls in plant capacity that will prevent the City from reliably treating and disposing of projected flow and loads at the end of the planning period (2045). A hydraulic analysis of the plant and river outfall utilizing Hydraulix® software will also be conducted. Activities associated with this task include:

- Evaluate process, design, and operational data for the facility liquids and solids treatment trains.

- Plan for and conduct tours of the facility to discuss operational protocols and data with City and operations staff. While on site, interview operations staff to identify operational issues and document any additional condition or capacity concerns not documented in the recent GSP (2024).
- Develop a calibrated a steady state biological wastewater treatment process model (e.g., Biowin) and use it to characterize the current performance of the City's WWTP during dry and wet weather seasons.
- Utilizing record documentation (drawings and basis of design reports, to the extent available) and data provided by the City, characterize performance of solids handling and treatment processes and equipment, as well as other mechanical elements of the WWTP liquid stream not included in Biowin model.
- Develop solids mass balance for facility.
- Evaluate hydraulic capacity of treatment plant elements and effluent outfall utilizing Hydraulix®.
- Develop one-page schematic of each process area that illustrates key equipment and overall unit process capacity.

Subtask 805 - Meeting No. 8

Facilitate a workshop to review and confirm capacity analysis findings.

Subtask 806 - WWTP Condition

Consultant will rely on information contained in the 2024 GSP summarizing the condition assessment completed as part of that effort and any additional information provided by City staff to identify WWTP condition related deficiencies. This information will be updated and used to inform the alternatives analysis to be conducted in Subtask 808.

Subtask 807 - Desktop Reasonable Potential Analysis

Utilizing data on effluent receiving water provided by the City in Task 401, the Consultant will perform a desktop analysis of reasonable potential for the future condition defined as 2045 (or the year identified as the endpoint for the planning period of this GSP study). Desktop analysis will be completed consistent with requirements for Tier II evaluation in accordance with WAC 173-201A-320 and Publication No. 11-10-073. This scope assumes the analysis will be limited to identification of potential capacity or process implications of reasonable potential suggested in results of the analysis. Analysis will be completed using Ecology tools that agency makes publicly available.

Subtask 808 - Alternative Analysis

The objective of this task is to identify, develop, and evaluate alternatives by process area that will maximize the use of existing assets at the WWTP and provide flexibility to meet potential future regulatory requirements. Activities associated with this task include:

- Based on basis of planning information developed in previous chapters, identify at conceptual level potential liquid and solids treatment process area alternative options for further evaluation. These will be organized and presented by process area based on deficiencies identified in Subtask 804.
- Document workshop results, decisions, and action items in meeting minutes.
- For up to two alternatives for each process area, perform the following activities:
  - Consider process area layout requirements.

- Compare hydraulic requirements to existing hydraulic profile and where necessary, perform hydraulic modeling between process units to identify required hydraulic improvements.
- Define resulting dry and wet weather flow and loading capacities.
- Review anticipated performance of the improvements.
- Develop planning-level capital and life cycle costs.
- Develop preliminary review of non-cost factors. (e.g., process reliability, permitting, flexibility and water quality considerations).

Subtask 809 – Meeting No. 9

Alternative development workshop with City and plant operations staff to develop and select liquids and solids process area improvements for evaluation.

Subtask 810 – Meeting No. 10

Alternative evaluation workshop to review technical performance, costs, and non-cost considerations associated for each alternative.

Subtask 811 - Draft and Final Chapter 7 - Wastewater Treatment Facility

Prepare draft Chapter 7 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final GSP.

Task 800 Assumptions

1. City provides bid costs of recent projects, if available, as one source for development of planning level costs for use in alternatives analysis.
2. City conducts influent characterization and select process sampling and analysis.
3. The City's most recent GSP (2024, Carollo) includes a summary of an assessment of unit process and facility condition conducted in 2019. That summary identifies certain condition related deficiencies for significant unit process/operation facilities. This GSP update will rely on the findings of that condition assessment.
4. Capacity evaluation will be based on criteria contained in the 2023 version of the Orange Book (Ecology).
5. For desktop analysis described in Subtask 807, future effluent concentrations for constituents not currently regulated in the City's NPDES permit (no existing effluent limitations or prohibitions) will be assumed to increase proportional to flow based on projections thereof developed in Task 400.
6. Approaches to process improvements to address findings of the desktop analysis (Task 805) involving constituents currently without limits or prohibitions in the City's NPDES permit.

Task 800 City Input

1. Requested Data from Task 401.
2. Comments on draft Chapter 7 - Wastewater Treatment Facility.

Task 800 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft Chapter 7 - Wastewater Treatment Facility.
3. Final Chapter 7 - Wastewater Treatment Facility.

Task 800 Meetings

4. Meeting No. 7 - Facilitate a meeting to discuss scope of and responsibilities for an influent wastewater and select process characterization sampling and analysis effort.
5. Meeting No. 8 - Facilitate a meeting to review and confirm capacity analysis findings.
6. Meeting No. 9 - Prepare for and conduct an alternative development workshop with City and plant operations staff to develop and select liquids and solids process area improvements for evaluation. These could include:
    a. Operational and/or process modifications to maximize existing secondary capacity.
    b. Process improvements/additions to meet projected flow and load conditions.
    c. Process improvements/additions to meet potential future regulatory requirements.
7. Meeting No. 10 - Prepare for and conduct alternative evaluation workshop to review technical performance, costs, and non-cost considerations associated for each alternative. As part of the meeting, select preferred improvement alternatives and discuss spreadsheet tool to be developed in Task 1000.

TASK 900 - OPERATIONS AND MAINTENANCE

The purpose of this task is to document the City's I/I Program. Future I/I rates with and without the I/I Program will be estimated for use in the Collection System evaluation.

Subtask 901 - Data Request

Data required to summarize and evaluate the City's current O&M program will be requested. Data may include:

- Organization structure.
- Staffing levels and positions.
- Summary of ongoing maintenance activities and operational tasks.
- Current O&M funding.
- Planned or future O&M programs.
- Record keeping procedures.
- Sewer main age and material.

Subtask 902 - Summarize and Evaluate O&M Programs and Problem Areas

Update the City's O&M program, including both preventative and corrective maintenance. This includes the planned and scheduled activities, such as treatment plant preventative maintenance, biosolids management, lift station inspection and maintenance, manhole inspection and maintenance, video inspection, root cutting, grease removal, and hydraulic line cleaning. Summarize O&M problem areas based on City provided data, such accumulation of solids or access issues. Maps will be prepared to aid in the review of O&M problem areas. Summarize customer-oriented programs, such as fats, oils, and grease (FOG), and the City's procedure to address suggestions/complaints. This task assumes the City will provide written materials for use in summarizing the existing O&M Program. The task assumes the Consultant will not prepare new summaries or documentation.

Conceptually evaluate the ability of existing O&M programs to address problem areas within the short-term and long-term planning horizons with City staff in a workshop. Propose updated or new programs, if necessary, to address problem areas within the planning period. The purpose of this task is to aid the City in establishing the quantity of work needed and subsequent cost of the ongoing O&M programs. A detailed evaluation of individual programs is not envisioned in this task.

Subtask 903 - Draft and Final Chapter 8 - Operations and Maintenance

Prepare draft Chapter 8 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final GSP.

Task 900 Assumptions

1. None.

Task 900 City Input

1. Requested Data from Task 901.
2. Comments on draft Chapter 8 - Operations and Maintenance.

Task 900 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft Chapter 8 - Operations and Maintenance.
3. Final Chapter 8 - Operations and Maintenance.

Task 900 Meetings

1. None.

TASK 1000 - CAPITAL IMPROVEMENTS

This Task will summarize the recommended improvements for the collection system, outlined in the previous tasks. Total project costs will be developed for each recommended improvement and ranked by priority. This task will develop Chapter 9 - Capital Improvement for the GSP.

TASK 1000 ACTIVITIES

Subtask 1001 - Cost Estimates

Prepare a data request for the required information. The request is expected to consist of the following:

Subtask 1002 - Project Prioritization

Schedule identified projects for the three planning periods: existing, 20-year, and Build-out conditions. A summary table will present all CIP projects, year for construction, and estimated costs, and will be organized according to a recommended phasing plan. Maps will also be developed showing recommended future system pipes and facilities. Maps will include recommended projects color-coded by CIP phase and annotated with project identification numbers.

Subtask 1003 - Meeting No. 11 - Capital Improvements

Facilitate a meeting to review the CIP.

Subtask 1004 - Electronic CIP

Develop an electronic CIP spreadsheet tool to include a full sheet on each project and a summary CIP for all projects. Project costs and timing will be linked such that City staff may revise costs and timing and the CIP will automatically be updated.

Subtask 1005 - Draft and Final Chapter 9 - Capital Improvement Plan

Prepare draft Chapter 9 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final GSP.

Task 1000 Assumptions

1. City provides bid costs of recent projects, if available.

Task 1000 City Input

1. Requested Data from Task 1001.
2. Comments on draft Chapter 9 - Capital Improvement Plan.

Task 1000 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft Chapter 9 - Capital Improvement Plan.
3. Final Chapter 9 - Capital Improvement Plan.
4. Electronic CIP.

Task 1000 Meetings

1. Meeting No.11 - Capital Improvements.

TASK 1100 - FINANCIAL

The purpose of this task is to review and update Chapter 11 - Financial Plan, which will be conducted by FCS. Chapter 11 will identify the total cost of providing sewer service, assure that the utility improvement schedule will be implemented, and assist in establishing adequate fees for service. The financial program will be coordinated with the CIP.

TASK 1100 ACTIVITIES

Subtask 1101 - Data Collection and Validation

Prepare an initial data request identifying financial and operational documents pertinent to the performance of the study. The Consultant will provide the CIP and relevant draft GSP chapters. Review, analyze, and validate data as necessary for use in formulating the technical analysis. Follow up with requests for any additional items or explanations as necessary.

Subtask 1102 - Historical Financial Performance Review

Review and document the financial operations (revenue and expenses) and financial condition (assets and liabilities) of the sewer utility for the previous 6-year period. Summarize noteworthy financial trends.

Subtask 1103 - Fiscal Policy Review

Review the City's current fiscal policies for operating and capital reserves, system reinvestment funding, debt management, and debt service coverage.

Subtask 1104 - Capital Financing Plan

Evaluate capital funding options and develop a capital financing plan for the 6-, 10-, and 20-year CIPs. The analysis will include a forecast of capital funding needs, borrowing requirements, and associated cash flows and cash balances over the study period. Evaluate and recommend an appropriate balance of funding from cash, system development charges (SDC), bonds, low interest loans and/or other available funding sources. Depending upon preliminary results, FCS will work closely with the Consultant and the City to perform sensitivity analyses for alternative scheduling of capital projects in order to smooth customer rate impacts. The budget provides for up to three scenarios.

Subtask 1105 - Operating Forecast

The City's current sewer operating budgets will be used as the baseline for forecasting ongoing O&M costs, debt service, and other financial obligations of the sewer utility over the 6-year and 20-year study periods. Incorporate engineering planning growth forecasts and establish economic factors for cost escalation. Integrate additional O&M expenses, if any, resulting from the CIP and any other known changes in operational requirements.

Subtask 1106 - Revenue Needs Assessment

Integrate fiscal policies, capital financing impacts and the operating forecast, and develop an operating cash flow projection for the 6-year and 20-year study periods. Compare forecasted financial requirements against forecasted revenue under existing rates to determine annual and cumulative revenue adjustments needed to ensure financial sustainability over time.

Subtask 1107 - Rate Forecast and Affordability Test

Develop a rate forecast for the 6-year period. Apply annual rate adjustments to the City's existing sewer rate structures "across-the-board" to each rate class and rate charge (fixed and variable). Note: this scope does not include changes to the City's existing sewer rate structure. The Financial Chapter will include a narrative discussion of potential rate structure enhancements, if necessary. Perform an affordability test as an indication of a residential customer's ability to pay the existing and forecasted rates. This includes an analysis and comparison of the sewer system's existing and forecasted average residential bills to 2.5 percent of the median household income. This test will be conducted for the 6-year and 20-year study periods.

Subtask 1108 - Meeting No. 12 - Financial Review

Review results over four remote meetings before finalizing the Financial Chapter. Meeting will be attended by FCS and Carollo.

Subtask 1109 - Draft and Final Chapter 10 - Financial Plan

Prepare draft Chapter 11 for City's review and approval. City comments and Consultant responses will be tracked in the Comment Response Log. Comments on this chapter will be incorporated into the final GSP.

Task 1100 Assumptions

1. City can provide elements listed under Task 1101.
2. This scope does not include changes to the City's existing sewer rate structure or SDC.

Task 1100 City Input

1. Requested Data from Task 1101.
2. Comments on draft Chapter 11 - Financial Plan.

Task 1100 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Draft Chapter 11 - Financial Plan.
3. Final Chapter 11 - Financial Plan.

Task 1100 Meetings

1. Meeting No.12a, 12b, 12c, 12d - Financial Review.

TASK 1200 - GSP DEVELOPMENT

The purpose of this task is to integrate comments on the GSP into a clear and comprehensive General Sewer Plan document. The City Draft Plan will be prepared, including an Executive Summary. This task includes assisting the City to coordinate plan review from Ecology. Under this task, the Consultant will assist the City with a public commenting period. Comments received from the public review meetings, adjacent sewer providers, Clark County, and Ecology will be incorporated into the updated plan for City Council's approval and adoption.

TASK 1200 ACTIVITIES

Subtask 1201 - Executive Summary

Prepare an executive summary, summarizing each element of the General Sewer Plan.

Subtask 1202 - City Draft Plan

The plan will be developed as a City review draft and reviewed by City staff. Under this task, the plan will be prepared incorporating the previous chapters according to the summary table above.

Subtask 1203 - Meeting No. 13 - City Review Comments

Meet with City to discuss comments of draft document. Incorporate comments to be included into Agency Draft Plan.

Subtask 1204 - Agency Draft Plan

Incorporate City comments into an Agency Draft plan to be submitted for agency review. The City will submit Agency Review Draft to adjacent sewer providers, Clark County, and Ecology. Eight notebook binders, one camera-ready set, and one PDF will be developed for City reproduction and distribution of plan to agencies and adjacent purveyors.

Subtask 1205 - Meeting No. 14 - Agency Review Comments

Meet with Agency to discuss comments on draft document. Incorporate comments to be included into Final Plan.

Subtask 1206 - Final Plan

Consultant will review agency review letters for incorporation into the Final Plan. Delivery of the Final Plan will include one professional engineer (PE)-stamped original notebook binder, one PE-stamped original camera-ready set, seven PE-stamped reproduction notebook binders, one PDF, and all electronic files.

Task 1200 Assumptions

1. The City provides required documents for appendices, including acceptance ordinances.
2. City will collect public and agency review comments and deliver to Consultant. City will develop written responses received during Agency Review process.

Task 1200 City Input

1. City comments.
2. Public and Agency review comments.

Task 1200 Consultant Deliverables

1. Meeting Agendas, Materials, and Minutes.
2. Executive Summary.
3. City Draft Plan - One PDF.
4. Agency Draft Plan - Eight notebook binder, one camera-ready, and one PDF.
5. Final Plan - Eight notebook binder, one camera-ready, and one PDF

Task 1200 Meetings

1. Meeting No. 13 - City Review Comments.
2. Meeting No. 14 - Agency Review Comments.

CITY OF Camas
General Sewer Plan
LEVEL OF EFFORT

2-Aug-24

TASK / DESCRIPTION	Jude Grounds	Jill Kjellson	Sudhan Parangipe	Rod Reardon	Matt Huang	Cameron Clark	Matt Sokolowski	Jason Rozgony	James Doering	Tyler Troup	Victoria Boschmans	Max Mozer	Theresa Passe	Kevin Christensen / Maggie Flynn	Varies	Total Hours	Carollo Labor Cost	SUBCONSULTANTS					Total Direct Charges	PECE	TOTAL COST
																		ADS	FCS	Total Subconsultant Cost	Total Subconsultant Markup	Total Subconsultant Cost with Markup			
	PIC	PM / Collections Lead	DPM / Treatment Lead	Process/ Operations Specialist	QA/QC	Solids	Hydraulics	Cost Estimating	Structural Engineer	Electrical Engineer	Project Professional	Professional	Staff Professional	GIS / Graphics	DP						5%				
	$ 310	$ 237	$ 275	$ 310	$ 275	$ 275	$ 237	$ 275	$ 310	$ 237	$ 237	$ 201	$ 165	$ 152	$ 117									$ 16	
Task 100 – Project Management	**11**	**35**	**29**	**0**	**9**	**1**	**0**	**0**	**0**	**0**	**11**	**38**	**1**	**2**	**19**	**156**	**$ 35,367**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 2,465**	**$ 37,832**
101 Monthly Progress Reports and Invoices		36	9												18	27	$ 4,581			$ -	$ -	$ -	$ -	$ 427	$ 5,008
102 Project Management Plan	1	2										4				7	$ 1,588			$ -	$ -	$ -	$ -	$ 111	$ 1,699
103 Meeting No.1 - Kick-off Meeting	1	3	2		1	1					1	4	1	2	1	17	$ 3,748			$ -	$ -	$ -	$ -	$ 269	$ 4,017
104 Project Management & Client Coordination	9	30	18		8						10	30				105	$ 25,450			$ -	$ -	$ -	$ -	$ 1,659	$ 27,109
Task 200 – Introduction	**0**	**3**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**6**	**6**	**2**	**2**	**24**	**$ 4,744**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 379**	**$ 5,123**
201 Regulatory Information Reference		1	1		1						2	2	2			9	$ 1,993			$ -	$ -	$ -		$ 142	$ 2,135
202 Draft and Final Chapter 1 - Introduction		2			1							4	4	2	2	15	$ 2,751			$ -	$ -	$ -		$ 237	$ 2,988
Task 300 - Regulations, Policies, and Criteria	**1**	**14**	**7**	**1**	**1**	**2**	**0**	**0**	**0**	**0**	**14**	**20**	**16**	**4**	**6**	**86**	**$ 17,976**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,359**	**$ 19,335**
301 Applicable Regulations, Considerations and Strategy		4	2								4	6	6			22	$ 4,642			$ -	$ -	$ -	$ -	$ 348	$ 4,990
302 Policies and Criteria		2	1									6	4			13	$ 2,615			$ -	$ -	$ -	$ -	$ 205	$ 2,820
303 Meeting No. 2 - Policies and Criteria & Regulatory Considerations and Strategy	1	4	2			2					4	4		2	2	21	$ 4,648			$ -	$ -	$ -	$ -	$ 332	$ 4,980
304 Draft and Final Chapter 2 - Policies and Criteria		4	2	1	1						6	4	6	2	4	30	$ 6,071			$ -	$ -	$ -	$ -	$ 474	$ 6,545
Task 400 - Basis of Planning	**2**	**23**	**40**	**4**	**2**	**2**	**0**	**0**	**0**	**0**	**46**	**34**	**126**	**18**	**6**	**303**	**$ 61,375**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 4,787**	**$ 66,162**
401 Data Request		2	2								4	2	4			14	$ 3,034	$ -		$ -	$ -	$ -	$ -	$ 221	$ 3,255
402 Service Area Boundaries		1	1									1	4	4		11	$ 1,981			$ -	$ -	$ -	$ -	$ 174	$ 2,155
403 Demographic Analysis		2										2	18	2		24	$ 4,150			$ -	$ -	$ -		$ 379	$ 4,529
404 Industrial Flows and Loads		1	1								4	1	10			17	$ 3,311			$ -	$ -	$ -		$ 269	$ 3,580
405 Review Flow Monitoring Report		1									2	4	2			9	$ 1,845			$ -	$ -	$ -		$ 142	$ 1,987
406 Flow Projections		2	2									8	24	2		38	$ 6,896			$ -	$ -	$ -		$ 600	$ 7,496
407 WWTP Wastewater Flows and Loadings		4	24	2		2					24		40	2		98	$ 21,310			$ -	$ -	$ -		$ 1,548	$ 22,858
408 Meeting No. 3 - Flow Monitoring and Flow Projections	1	2	2									8	4	2	1	20	$ 4,023			$ -	$ -	$ -		$ 316	$ 4,339
409 Meeting No. 4 - WWTP Flows and Loadings	1	2	2								4		6	2	1	18	$ 3,693							$ 284	$ 3,977
410 Draft and Final Chapter 3 - Basis of Planning		6	6	2	2						8	8	14	4	4	54	$ 11,132			$ -	$ -	$ -	$ -	$ 853	$ 11,985
Task 500 - Existing System	**0**	**12**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**16**	**12**	**4**	**54**	**$ 10,008**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 853**	**$ 10,861**
501 Data Request		2										1	2			5	$ 1,005			$ -	$ -	$ -	$ -	$ 79	$ 1,084
502 Study Area		4										1	2	4		11	$ 2,087			$ -	$ -	$ -	$ -	$ 174	$ 2,261
503 Existing System	0	2			1							1	6	4		14	$ 2,548			$ -	$ -	$ -	$ -	$ 221	$ 2,769
504 Draft and Final Chapter 4 - Existing System		4			2							4	6	4	4	24	$ 4,368							$ 379	$ 4,747
Task 600 - Infiltration and Inflow Program	**0**	**8**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**22**	**10**	**4**	**4**	**50**	**$ 9,594**	**$ 64,437**	**$ -**	**$ 64,437**	**$ 3,222**	**$ 67,659**	**$ -**	**$ 790**	**$ 78,043**
601 Summarize Existing I/I Program		4										16	8			28	$ 5,484	$ 64,437		$ 64,437	$ 3,222	$ 67,659		$ 442	$ 73,585
602 Draft and Final Chapter 5 - I/I Program		4			2							6	2	4	4	22	$ 4,110			$ -	$ -	$ -		$ 348	$ 4,458
Task 700 - Collection System	**1**	**32**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**172**	**0**	**22**	**10**	**241**	**$ 48,080**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,200**	**$ 3,808**	**$ 53,088**
701 Hydraulic Model Update and Calibration		4										72		8		84	$ 16,636	$ -		$ -	$ -	$ -		$ 1,327	$ 17,963
702 Capacity Evaluation		6										32		4		42	$ 8,462	$ -		$ -	$ -	$ -		$ 664	$ 9,126
703 Meeting No. 5 - Hydraulic Model Development & Capacity Evaluation		4										12		2	1	19	$ 3,781	$ -		$ -	$ -	$ -		$ 300	$ 4,081
704 Draft and Final TM 1 - Hydraulic Model Update and Calibration		4			2							12		2	4	24	$ 4,682	$ -		$ -	$ -	$ -		$ 379	$ 5,061
705 Capacity Improvements		6										24				30	$ 6,246	$ -		$ -	$ -	$ -		$ 474	$ 6,720
706 Meeting No. 6 - Capacity Improvements	1	4										8		2	1	16	$ 3,287	$ -		$ -	$ -	$ -	$ 1,200	$ 253	$ 4,740
707 Draft and Final Chapter 6 - Collection System		4			2							12		4	4	26	$ 4,986	$ -		$ -	$ -	$ -		$ 411	$ 5,397
Task 800 - Wastewater Treatment Facility	**0**	**10**	**114**	**37**	**0**	**72**	**54**	**0**	**14**	**16**	**140**	**0**	**166**	**18**	**11**	**652**	**$ 150,513**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 2,000**	**$ 10,302**	**$ 162,815**
801 WWTP Historical Operations			2								6		8			16	$ 3,292			$ -	$ -	$ -	$ -	$ 253	$ 3,545
802 Influent and Select Process Characterization Testing Plan			6	1							6		8			21	$ 4,702			$ -	$ -	$ -	$ -	$ 332	$ 5,034
803 Meeting No. 7- Influent and Select Process Testing Plan			2								4		2			8	$ 1,828							$ 126	$ 1,954
804 WWTP Capacity Analysis (includes site visit)		2	32	4		28	24				40		40	4		174	$ 40,590			$ -	$ -	$ -	$ 1,200	$ 2,749	$ 44,539
805 Meeting No. 8 - Capacity Analysis Findings		2	4	2							4		6	2	1	21	$ 4,553							$ 332	$ 4,885
806 WWTP Condition			2	2		4			6	6	4		8			32	$ 7,820			$ -	$ -	$ -	$ -	$ 506	$ 8,326
807 Desktop Reasonable Potential Analysis			6	6							12		12			36	$ 8,334			$ -	$ -	$ -	$ -	$ 569	$ 8,903
808 Alternative Analysis			40	12		32	24		8	10	32		50	4		212	$ 50,500			$ -	$ -	$ -	$ -	$ 3,350	$ 53,850
809 Meeting No. 9 - Alternatives Identification/Development		2	6	2							6		6	2	1	25	$ 5,577						$ 400	$ 395	$ 6,372
810 Meeting No. 10 - Alternatives Analysis Results		2	6	2							6		6	2	1	25	$ 5,577						$ 400	$ 395	$ 6,372
811 Draft and Final Chapter 7 - Wastewater Treatment Facility		2	8	6		8	6				20		20	4	8	82	$ 17,740			$ -	$ -	$ -	$ -	$ 1,296	$ 19,036
Task 900 - Operations and Maintenance	**0**	**9**	**5**	**4**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**18**	**1**	**8**	**53**	**$ 10,562**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 837**	**$ 11,399**
901 Data Request		1	1									2	4			8	$ 1,574			$ -	$ -	$ -	$ -	$ 126	$ 1,700
902 Summarize and Evaluate O&M Programs and Problem Areas		6	2	2								2	6			18	$ 3,984			$ -	$ -	$ -	$ -	$ 284	$ 4,268
903 Draft and Final Chapter 8 - Operations and Maintenance		2	2	2	2							2	8	1	8	27	$ 5,004			$ -	$ -	$ -	$ -	$ 427	$ 5,431
Task 1000 - Capital Improvements	**6**	**22**	**18**	**2**	**3**	**0**	**0**	**16**	**8**	**8**	**20**	**32**	**60**	**22**	**13**	**230**	**$ 48,182**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,200**	**$ 3,634**	**$ 53,016**
1001 Cost Estimates		4	4	1	1			16	8	8	8	12	16			78	$ 18,357			$ -	$ -	$ -	$ -	$ 1,232	$ 19,589
1002 Project Prioritization		6	4	1	1							2	8			22	$ 4,829			$ -	$ -	$ -	$ -	$ 348	$ 5,177
1003 Meeting No. 11 - Capital Improvements	6	4	4									2	4	2	1	23	$ 5,391			$ -	$ -	$ -	$ 1,200	$ 363	$ 6,954
1004 Electronic CIP		4	4		1						8	8	24	16	4	69	$ 12,687			$ -	$ -	$ -	$ -	$ 1,090	$ 13,777
1005 Draft and Final Chapter 9 - Capital Improvements		4	2								4	8	8	4	8	38	$ 6,918			$ -	$ -	$ -	$ -	$ 600	$ 7,518
Task 1100 - Financial	**0**	**24**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**4**	**33**	**$ 7,235**	**$ -**	**$ 23,535**	**$ 23,535**	**$ 1,176**	**$ 24,711**	**$ -**	**$ 521**	**$ 32,467**
1101 Data Collection and Validation																0	$ -	$ -	$ 1,720	$ 1,720	$ 86	$ 1,806		$ -	$ 1,806
1102 Historical Financial Performance Review																0	$ -		$ 2,805	$ 2,805	$ 140	$ 2,945		$ -	$ 2,945
1103 Fiscal Policy Review																0	$ -		$ 725	$ 725	$ 36	$ 761		$ -	$ 761
1104 Capital Financing Plan		4														4	$ 948		$ 2,805	$ 2,805	$ 140	$ 2,945		$ 63	$ 3,956
1105 Operating Forecast		4														4	$ 948	$ -	$ 2,805	$ 2,805	$ 140	$ 2,945		$ 63	$ 3,956
1106 Revenue Needs Assessment		4														4	$ 948		$ 3,465	$ 3,465	$ 173	$ 3,638		$ 63	$ 4,649
1107 Rate Forecast and Affordability Test		4														4	$ 948		$ 1,170	$ 1,170	$ 59	$ 1,229		$ 63	$ 2,240
1108 Meeting No.12 -Financial Review		4										4				8	$ 1,752		$ 2,700	$ 2,700	$ 135	$ 2,835		$ 126	$ 4,713
1109 Draft and Final Chapter 10 - Financial Plan		4			1										4	9	$ 1,691		$ 5,340	$ 5,340	$ 267	$ 5,607		$ 142	$ 7,440
Task 1200 - GSP Development	**10**	**14**	**9**	**2**	**4**	**0**	**0**	**0**	**0**	**0**	**30**	**72**	**44**	**12**	**66**	**263**	**$ 49,001**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 4,155**	**$ 53,156**
1201 Executive Summary		2	1								4	4	6	2		19	$ 3,795			$ -	$ -	$ -		$ 300	$ 4,095
1202 City Draft Plan	2	2	2	2	2						12	32	12	2	24	92	$ 17,182			$ -	$ -	$ -		$ 1,454	$ 18,636
1203 Meeting No. 13 - City Review Comments	2	2	1										6	2	1	14	$ 2,780			$ -	$ -	$ -		$ 221	$ 3,001
1204 Agency Draft Plan	2	2	2		1						8	24	8	2	24	73	$ 13,071			$ -	$ -	$ -		$ 1,153	$ 14,224
1205 Meeting No. 14 - Agency Review Comments	2	2	1										6	2	1	14	$ 2,780			$ -	$ -	$ -		$ 221	$ 3,001
1206 Final Plan	2	4	2		1						6	12	6	2	16	51	$ 9,393			$ -	$ -	$ -		$ 806	$ 10,199
Total	**31**	**206**	**223**	**50**	**33**	**77**	**54**	**16**	**22**	**24**	**263**	**413**	**463**	**117**	**153**	**2,145**	**$ 452,637**	**$ 64,437**	**$ 23,535**	**$ 87,972**	**$ 4,398**	**$ 92,370**	**$ 4,400**	**$ 33,891**	**$ 583,298**

CONSULTANT BILLING RATES

CITY OF CAMAS

2025 WATER SYSTEM PLAN AND GENERAL SEWER PLAN

Carollo Engineers, Inc. billing rates and other direct expenses are defined in the tables below. These rates are for calendar years 2024 and projected through 2026. If the contract is extended beyond December 31, 2026, Carollo Engineers, Inc., reserves the right to modify the rates on an annual basis.

Project Role	Hourly Rate		
	2024	**2025**	**2026**
Senior Advisor/SME	$295.00	$310.00	$325.00
Project Manager	$262.00	$275.00	$289.00
Principal Professional	$262.00	$275.00	$289.00
Senior Professional	$226.00	$237.00	$249.00
Project Professional	$204.00	$214.00	$225.00
Professional	$191.00	$201.00	$211.00
Staff Professional	$157.00	$165.00	$173.00
Senior Technician	$159.00	$167.00	$175.00
Assistant Professional	$149.00	$156.00	$164.00
Technician	$145.00	$152.00	$160.00
Document Processing	$111.00	$117.00	$123.00

Expense			
Project Equipment Computer Expense (PECE)	$15.00/hr	$15.80/hr	$16.60/hr
Travel and Subsistence	At cost		
Mileage at IRS Reimbursement Rate	$0.67 per mile effective January 1, 2024		
Subconsultant	Cost + 10%		
Other Direct Cost	Cost + 10%		

Staff Report

October 7, 2024 Council Workshop Meeting

PSA's for Water System and Sewer System Plan Updates
Presenter: Rob Charles, Utilities Manager
Time Estimate: 10 minutes

Phone	Email
360.817.7003	rcharles@cityofcamas.us

BACKGROUND: As part of the 2045 Comprehensive Plan Update, Washington State requires that cities review their infrastructure related to water and sewer to assure cities have the ability to serve existing and projected industrial, commercial and residential growth. The growth includes those areas within the existing urban growth boundary in addition to any growth within urban proposed growth expansions within the planning time frame.

SUMMARY: Carollo Engineering will perform modeling of the water system to verify if water sources, distribution lines and storage requirements are sized or have capacity to serve the community over 20 years. A similar model will look at sewer lines and lift station capacities as well as capacity at the wastewater treatment plant. A Facility Plan for the treatment plant will be part of the work within the Sewer Master Plan Update since the plant was projected to be out of capacity by 2035 during the previous sewer plan.

BENEFITS TO THE COMMUNITY: The updates for each plan allow the city to plan and develop infrastructure to meet the needs of growth as it occurs in the city over the next 20 year planning period.

BUDGET IMPACT: The cost for the Water System Plan Update is $382,288. The cost for the Sewer System Plan Update is $583,298. There are sufficient funds in water and sewer to cover these expenses.

RECOMMENDATION: Staff would recommend this item be placed on the October 21, City Council Regular Meeting for Council's consideration.

Cost Proposal and Agreem
Professional Services Provi
Ecological Land Services, Inc. (ELS)
1157 3rd Ave., Suite 220A • Longview, WA 98632
Office: (360) 578-1371 Fax: (360) 414-9305

August 28, 2024

Services Requested By:

City of Camas
Rob Charles, Utilities Manager
616 NE 4th Avenue
Camas, Washington 98607

Phone: 360.817.7003
E-mail: rcharles@cityofcamas.us

Billing E-mail: _____

Please provide billing information, if different:

Client: _____
Address: _____
City, State Zip: _____

Phone: _____
Fax: _____
Cell Phone: _____
Email: _____
Billing Email: _____

Boulder Creek Dam Repair — If you would like to choose a different project name, please indicate here: _____

- I understand the **Project Assumptions, Exhibit A**.
- I understand the **Terms of Agreement, Exhibit B**.
- ELS will bill on a time and materials basis. Rate schedule is provided in **Exhibit C**.
- This proposal is valid for *30 days* from the date of this letter.
- My correct contact and billing information have been provided above. Invoices will be emailed unless otherwise requested.
- Do Prevailing wages apply to this project? ☐ **YES** ☐ **NO**

Acceptance and Agreement
I hereby authorize Ecological Land Services, Inc. to perform work as described in the Description of Services and Estimated Costs, with a Not-To-Exceed total of **$16,500-25,500**. I accept the terms as stated in this Cost Proposal and Agreement and Exhibits, dated this _____day of _____, _____.

_____
Signature
City of Camas

Lynn Simpson
Lynn Simpson
Ecological Land Services, Inc.

_____
Printed Name, Title
City of Camas

Brief Project Description:

Apply for and obtain environmental permits for repairing the Boulder Creek Dam at parcel number 1366450000 in Clark County (NE ¼ and NW ¼ of Section 4, Township 2 North, Range 4 East of the Willamette Meridian).

Description of Services and Estimated Costs:

Task 1: Coordinate with Project Team, Site Visit, and Permitting Agencies

- Attend a project team meeting with the City of Camas, Shell Engineering and Consulting, and permitting agencies on a video conference call.
- Provide suggestions for impact avoidance, minimization, and BMPs in project design and construction.

Estimate: $2,500*

Task 2: Obtain Environmental Permits

- Fill out a JARPA form for the U.S. Army Corps of Engineers (Corps).
- Write a biological assessment to obtain Corps nationwide permits (NWPs) as stated in their letter dated July 25, 2024: NWP 13 (bank stabilization) and NWP 18 (minor discharges). This assumes a formal ESA consultation with the National Marine Fisheries Service that may include up to 15 hours to review the biological opinion and to negotiate terms and conditions.
- Apply for a hydraulic project approval using the Washington Department of Fish and Wildlife's online application system.
- Apply for an individual 401 water-quality certification from the Washington Department of Ecology.
- If mitigation is necessary, provide alternatives for a mitigation project and write a plan that meets federal and state requirements. A site visit may be necessary.

Total Not-To-Exceed Estimate: $14,000-$23,000*

Task 1:	**$ 2,500**
Task 2:	**$ 14,000-23,000**
Total Not-To-Exceed Estimate:	**$ 16,500-25,500**

***** The above task estimates are informational and for client budgeting purposes. ELS will invoice according to the NTE total, not the individual task amounts.

Important: The estimated cost proposal is based upon ELS's understanding of the scope of the project at the time of this estimate. If the work required to complete the project expands beyond the current project scope and assumptions, due to unforeseen difficulties which are outside of ELS's control, or any changes requested by the client, billing will be adjusted in accordance with the additional work required. The estimated fees for such expanded work will be billed to the client, and when practical, ELS will make the best effort to consult with the client in advance and receive written correspondence to clarify and confirm changes in the scope of work and any additional estimated fees. For any such expansion of work, ELS shall bill on a time and materials basis, unless other conditions are established. Materials or outside services needed to complete such expanded work (see hourly rates, Exhibit C) will be billed at cost with a handling fee (Item #4, Terms of Agreement, Exhibit B).

Not included in Estimate: application fees and costs, meetings and site visits beyond those specified w the estimate including those required by any regulatory agency, revisions requested by the client or regulatory agencies, post-application revisions or additions outside of the work quoted on the estimate, additional time and revisions related to changes required by regulatory agencies, additional time and reports related to opposition to the project and other time and expenses not specified within the estimate.

Approximate Start Date: <u>September 3, 2024</u>
(If we receive a signed contract prior to this date, it is possible that project work can begin sooner.)

Exhibit A

Project Assumptions

This Cost Proposal offered by ELS, Inc. is based upon the following standard assumptions. Should one or more of these assumptions be incorrect, change or otherwise be altered costs and time for completion of the project may be impacted.

Universal Project Assumptions:

1. No violations exist for the subject property.
2. Unless stated elsewhere within the proposal, no more than one field visit will be required by ELS, Inc. or its agents.
3. Site conditions on the project site will not differ significantly from the conditions ELS, Inc. observed or assumed when creating this proposal. These observations or assumptions are based upon one or more of the following: a pre-proposal site visit, correspondence with the client, or information derived from aerial photography or site photographs.
4. If a potential mitigation site requires a site visit, site conditions on a potential mitigation site will not differ significantly from the conditions ELS, Inc. observed or assumed when creating this proposal. These observations or assumptions are based upon one or more of the following: a pre-proposal site visit, correspondence with the client, or information derived from aerial photography.
5. The client has the right to access the subject property or a potential mitigation site and will grant ELS, Inc. and its agents right of entry as needed to perform any and all tasks requested or listed within the Cost Proposal and Agreement.
6. All portions of the subject property are easily accessible with minimal clearing required to access and navigate the site. No hazardous conditions such as livestock will be present on the subject property at the time of any site visit.

Project Specific Assumptions:

7. Clark County determines that because this is a repair project that they will not require a SEPA checklist.
8. The project will not impact riparian habitat so that the county will not require the City to submit a habitat assessment or receive a critical areas permit.
9. There is no federal funding for this project, which could require a separate NEPA review.
10. If a mitigation project is necessary, this contract only includes writing the mitigation plan. A separate contract can be proposed for any other mitigation work involving onsite installation, as-built mapping, monitoring, maintenance, etc.

Exhibit B

Terms of Agreement for Professional Services Provided by ELS

1. The client orders the professional services of ELS. Said professional services may include jurisdictional wetland delineation, environmental report preparation, environmental permit applications, and other environmental related and consulting services.
2. ELS agrees to furnish and perform the professional services described herein in accordance with accepted professional standards. ELS agrees to perform said work in a timely manner, provided that ELS shall not be responsible for delays in completing said work that cannot reasonably be foreseen on date hereof, for delays which are caused by factors beyond their control, delays resulting from the action or inaction of any government agency or subcontractor not hired by ELS, or for delays resulting from the action or inaction of the client.
3. ELS makes no warranty, expressed or implied, as to their findings, recommendations, plans and specifications, or professional advice except that they were made or prepared in accordance with generally accepted practices. It is agreed that the professional services described herein shall be performed for the client's account. All past due accounts will be charged 1.5% per month or 18% per annum.
4. In the event that a subcontractor is needed for a project and the client wishes to have the subcontractor bill ELS directly, a 10% handling fee will be added to client invoice for this. In the event that permit costs are needed for a portion of a project and the client wishes to have ELS pay costs at time of request, a 10% handling fee will be added to client invoice for this service. Other project expenses paid in advance by ELS, a 10% handling fee will be added to client invoice for such costs. These costs can include, but not limited to aerial photos, specialty maps, government documentation, color copies, oversized copies, film development and some field related supplies.
5. Sales tax will be applied to any project that includes planting/installation and/or maintenance. The sales tax rate will be based on the site location of project. Sales tax will be applied to in-house copies, statement to be provided by ELS, when applicable.
6. The client and ELS each bind themselves, their partners, successors, executors, and assignees to the other party of this agreement and to the partners, successors, executors, and assigns of such other party in respect to this agreement.
7. By mutual agreement of the parties hereto, the client hereby agrees to indemnify, defend and hold harmless ELS from damages or liability of any character, including in part, personal injury, property damage, costs, expenses and attorney fees arising out of any negligent act, error or omission of the client, or any person or organization for whom client may be responsible.
8. The client shall be responsible for payment of all costs and expenses incurred by ELS for client's account; including any such moneys that ELS may advance for the client's account for any reasonable project related purpose.
9. Both the client and ELS have the right to terminate this agreement at any time by giving the other party three (3) days written notice thereof. In such case, ELS shall be paid in full for all services performed to the date of termination. Said charges shall be based on the percentage of project completion as of the termination date unless other arrangements have been made.
10. ELS reserves the right to withdraw this proposal if not accepted within 30 days.
11. If the client fails to pay as agreed and collection or other remedies are necessary, ELS shall be entitled to collect all costs of collection, including reasonable attorney's fees, costs and pre-judgment interest as allowed by contract.
12. In executing the Cost Proposal and Agreement, an electronic, facsimile, or other authorized reproduced or stamped signature may be used to sign and execute the agreement and shall have the same force and effect as a written signature.
13. All project-related written materials are created using best available science and professional judgment. Any content-related changes to project documentation that are requested by the client may result in additional fees billed on a time and materials basis. Any such changes are made at the client's own risk. Changes made by ELS at the request of the client may not stand up to agency scrutiny or review, may be rejected by regulatory agencies and may result in additional costs or delays.
14. This Agreement shall be governed by and construed in accordance with the laws of the borough, county, or province of the State of Washington in which the project is located. Any dispute which arises from this agreement shall be litigated within the borough, county, or province of the State of Washington in which the project is located.
15. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provisions of this Agreement, which shall remain in full force and effect.

Exhibit C

Standard Billing Rates 2024

The cost estimates presented in this proposal are based on the following standard ELS billing rates:

Expert Witness Testimony/Litigation Support	Double the Hourly Rate
President	$ 250.00 / Hour
Professional Biologist	$ 220.00 / Hour
Biologist V	$ 187.00 / Hour
Biologist IV	$ 170.00 / Hour
Biologist III	$ 142.00 / Hour
Biologist II	$ 130.00 / Hour
Biologist I	$ 113.00 / Hour
Biologist Entry Level	$ 102.00 / Hour
Field Director	$ 83.00 / Hour
Field Technician IV	$ 78.00 / Hour
Field Technician III	$ 71.00 / Hour
Field Technician II	$ 67.00 / Hour
Field Technician I	$ 63.00 / Hour
Graphics Manager	$ 155.00 / Hour
Graphics Professional	$ 150.00 / Hour
Graphics Technician V	$ 142.00 / Hour
Graphics Technician IV	$ 140.00 / Hour
Graphics Technician III	$ 124.00 / Hour
Graphics Technician II	$ 110.00 / Hour
Graphics Technician I	$ 99.00 / Hour
Project Coordinator III	$ 116.00 / Hour
Project Coordinator II	$ 85.00 / Hour
Project Coordinator I	$ 71.00 / Hour
Standard Mileage	$ 1.00 / Mile
Company Truck Mileage	$ 1.00 / Mile
Government Mileage Rate	$ 0.65 / Mile *(or current rates)*

ELS rates are subject to change upon approval of the Board of Directors.

Staff Report

October 7, 2024 Council Workshop Meeting

PSA for Environmental Permitting Boulder Creek Dam/Intake
Presenter: Rob Charles, Utilities Manager
Time Estimate: 5 minutes

Phone	Email
360.817.7003	rcharles@cityofcamas.us

BACKGROUND: Last year council approved two contracts with Shell Engineering to design improvements to the area around the Boulder Creek Intake and aid in erosion on the bank that has been occurring around the dam for several years. The intent of the project was to maintain the capacity of the intake, which has decreased over time due to build up of debris around the intake. The original project assumed that an abbreviated permitting process would be required due to fish not being able to swim upstream of fish barriers downstream of the dam.

During the permitting process, Washington Department of Fish and Wildlife (WDFW) provided updated fish surveys showing that steelhead make their way to the dam, triggering a permit with the Army Corps of Engineers (ACOE). This permitting process will primarily deal with mitigation measures in any area where a contractor is working below the Ordinary High Water Mark (OHWM) of the creek. The timeline with for the ACOE permit typically takes between 18 months to 2 years to complete.

SUMMARY: Ecological Land Services is proposing to aid the city in permitting with the ACOE, WDFW, and the Department of Ecology for the proposed work.

Figure 1: Photo of existing dam and intake structure from downstream of dam looking upstream

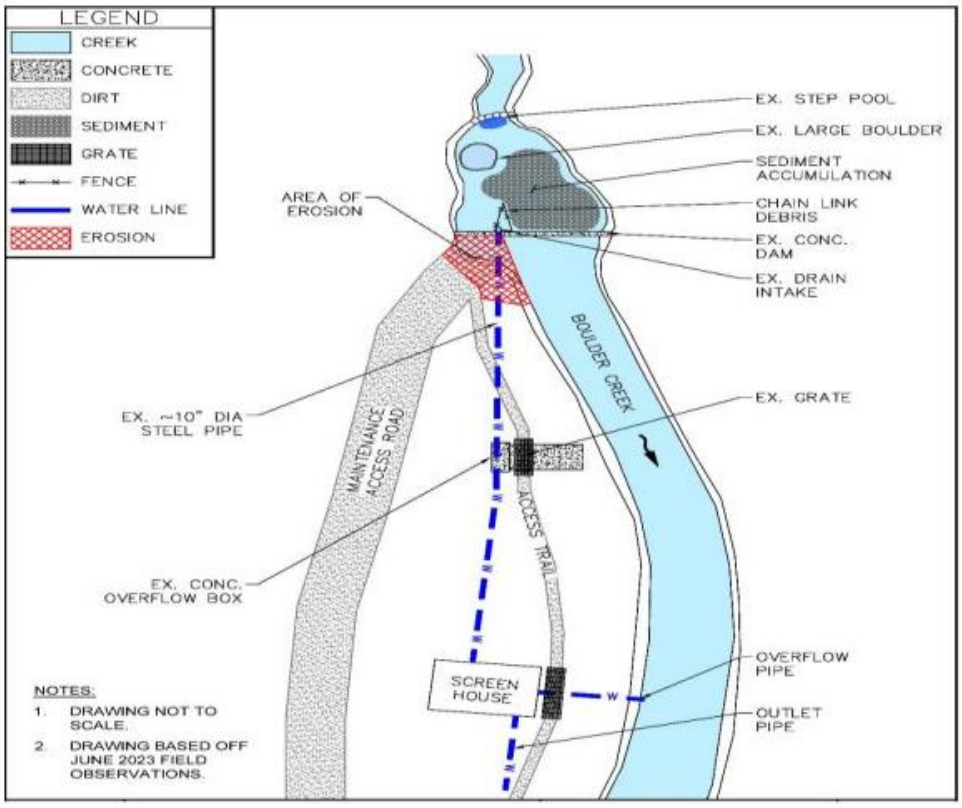


Figure 2: Vicinity map of Boulder Creek water intake structure

BENEFITS TO THE COMMUNITY: Ability to fully utilize the water rights granted along Boulder Creek for the City's Water Treatment Plant serving water to city customers.

BUDGET IMPACT: The cost for the services is $25,500 and there are sufficient funds in water to cover this expense.

RECOMMENDATION: Staff recommends that this item be placed on the October 21st Council Regular Agenda for Council's consideration.

Staff Report

October 7, 2024 Council Workshop Meeting

NW Lake Road and Sierra Street Intersection Improvements Professional Services Agreement Amendment
Presenter: James Carothers, Engineering Manager
Time Estimate: Five minutes

Phone	Email
360.817.7230	jcarothers@cityofcamas.us

BACKGROUND: The NW Lake Road and NW Sierra Street intersection serves as a critical link between upper Prune Hill and Southern Lake Shore area of the City. The intersection currently does not meet Level of Service Standards and poses safety risks for vehicles attempting to enter Lake Road from Sierra Street.

In July 2023 staff entered into a professional service agreement (PSA) with MacKay Sposito and completed alternatives analysis to analyze improvement options. In March 2024 the original PSA was amended to include public engagement to assist in selecting preferred alternative. In July 2024 a preferred alternative (round-a-bout) was selected by Council.

SUMMARY: Staff has negotiated PSA Amendment #2 in the amount of $499,775.48 with MacKay Sposito. Scope of work includes design engineering and preliminary right of way services for the round-a-bout option. Work performed generally consists of final design plans, specifications, and estimate (PS&E) for future public bidding, geotechnical engineering, environmental engineering and permitting, utility coordination, and preliminary right of way services.

It is important to note a future amendment will be needed to complete final right of way tasks. Final right of way tasks will consist of appraisals services, acquisition services, and transactions with individual property owners to secure property and easements. This additional work will be needed before public bidding of project.

BENEFITS TO THE COMMUNITY: The aim of this project is to reduce congestion, improve safety, and meet level of service standards into future.

POTENTIAL CHALLENGES: Intersection geometry and footprint present challenges for design. The intersection has development restricting footprint to the South and is restricted by a slope to the North.

BUDGET IMPACT: Currently this project has $430,000 remaining in Transportation Impact Fees (TIF) from current biennial budget. Below is a table showing approximately $61K of additional funds will be needed to complete the proposed PSA Amendment #2 services.

Task		Funding Source(s)
Civil Design Roadway	$458,092	TIF
Preliminary Right of Way	$19,583	TIF
Public Engagement	$12,559	TIF
PSA Amendment #2 Total Roadway TIF Eligible	**$490,234**	Total from TIF
Water/Sewer Design	**$9,542**	Utility Fund
Total PSA Amendment #2	**$499,776**	TIF/Utility Fund
TIF Budget Remaining 2023-2024	$430,000	TIF Funds Allocated
Funding Needed to Complete Amendment #2	(-$60,776)	Future Budget Allocation

Additional funding will be needed to complete right of way appraisals, acquisitions, and construction of the improvements.

RECOMMENDATION: Staff recommends this item be placed on the October 17, 2024 consent agenda for councils consideration.

CITY OF CAMAS
PROFESSIONAL SERVICES AGREEMENT
Amendment No. 2

616 NE 4th Avenue
Camas, WA 98607

Project No. STR23011

NW Lake Road and Sierra Street Intersection Improvements

THIS AMENDMENT ("Amendment") to Professional Services Agreement is made as of the _____ day of _____, 202___, by and between the **City of Camas**, a municipal corporation, hereinafter referred to as "the City", and **MacKay Sposito** hereinafter referred to as the "Consultant", in consideration of the mutual benefits, terms, and conditions hereinafter specified. The City and Consultant may hereinafter be referred to collectively as the "Parties."

The Parties entered into an Original Agreement dated **July 7, 2023,** by which Consultant provides professional services in support of the Project identified above. Except as amended herein, the Original Agreement shall remain in full force and effect.

1. Scope of Services. Consultant agrees to perform additional services as identified on **Exhibit "A"** (Amended Scope of Services) attached hereto, including the provision of all labor, materials, equipment, supplies and expenses, for an amount not-to-exceed $499,775.48.
    a. ☐ Unchanged from Original/Previous Contract
2. Time for Performance. Consultant shall perform all services and provide all work product required pursuant to this Amendment by:
    a. ☐ Extended to _____
    b. ☒ Unchanged from Original/Previous Contract date of December 30, 2025

    Unless an additional extension of such time is granted in writing by the City, or the Agreement is terminated by the City in accordance with Section 18 of the Original Agreement.
3. Payment. Based on the Scope of Services and assumptions noted in **Exhibit "A"**, Consultant proposes to be compensated on a time and material basis per **Exhibit "B"** (Costs for Scope of Services) with a total estimated not to exceed fee of:
    a. Previous not to exceed fee: $94,345.55
    b. Amendment No. 1 $62,183.52
    c. Amendment No. 2 $499,775.48
    d. Total: $656,304.55
    e. Consultant billing rates:
        ☒ Modification to Consultant Billing Rates per **Exhibit "C"** attached herein
        ☐ Unchanged from Original/Previous Contract

4. Counterparts. Each individual executing this Agreement on behalf of the City and Consultant represents and warrants that such individual is duly authorized to execute and deliver this Agreement. This Agreement may be executed in any number of counter-parts, which counterparts shall collectively constitute the entire Agreement.

DATED this _____ day of _____, 20___.

CITY OF CAMAS:

By:_____

Print Name:_____

Title:_____

CONSULTANT:
Authorized Representative

By:_____

Print Name:_____

Title:_____

Date: _____

EXHIBIT "A"
AMENDED SCOPE OF SERVICES

MacKay Sposito

Vancouver Office

18405 SE Mill Plain Boulevard, Suite 100, Vancouver, WA 98683
360-695-3411 | www.mackaysposito.com

September 30, 2024

Curleigh Carothers
City of Camas
616 NE 4th Avenue
Camas, WA 98607

Re: Amendment 02 - Design and Right-of-Way Services for the NW Lake Road and NW Sierra Street Intersection Improvements

Dear Curleigh,

Thank you for your support on this project through the alternatives analysis and public outreach work completed to date. We are excited to support the City of Camas in providing design engineering and right-of-way services for a new roundabout to improve operations and safety at the intersection.

Enclosed you will find our proposed scope and fee for amendment 2 for City review and comment.

Please contact me with any questions.

Sincerely,

Jason Irving, PE
Senior Engineer/Principal
MacKay Sposito

TABLE OF CONTENTS

INTRODUCTION

Thank you for selecting the MacKay Sposito team to partner with the City of Camas on the NW Lake Road and NW Sierra Street Intersection Improvements. An alternative analysis, including a topographic survey, was completed in early 2024, and public engagement was completed in July 2024. Through this work, a new roundabout was determined by the City Council and the project team to be the preferred alternative to serve the near and long-term operations and safety needs at the intersection. The following scope of work outlines design engineering and right-of-way services for the new roundabout. The project team includes:

- **MacKay Sposito** - Project Management / Land Surveying / Civil Roadway & Drainage Design / Environmental / Public Outreach Support
- **AINW** - Cultural Resources
- **Rhino One** - Geotechnical
- **JLA -** Public Outreach
- **DKS** - Traffic Engineering / Lighting Design / Roundabout Concept Development
- **Consor -** Structural Engineering
- **UFS** - Right of Way

GENERAL PROJECT DESCRIPTION/BACKGROUND
NW Lake Road and NW Sierra Street is currently a 3-legged non-signalized intersection with a stop sign on NW Sierra Street. The surrounding area includes several private residential properties. This intersection connects two roads that are critical links between the south lake shore and Prune Hill areas of the City. The average daily traffic entering the intersection is approaching 12,000. The City has budgeted pre-construction funds to complete the design, permitting, and to secure the necessary property rights for improvements to the intersection.

The project will convert the existing stop-controlled intersection to a single-lane roundabout to improve intersection operations and safety. Additionally, a dedicated eastbound right turn lane will be added, bicycle facilities will be extended to and through the intersection, and new street lighting will be added. Utility relocations and stormwater management will also be needed as part of this project.

The work performed by the consultant generally consists of services as follows:

- Prepare engineering plans, specifications, and estimates (PS&E), 60% through final design.
- Geotechnical field investigations and recommendations for new retaining walls and pavement recommendations.
- Environmental permitting, including a cultural resources report and SEPA.
- Utility conflict determination and utility relocation coordination.
- Right of way and easement acquisition.

General Assumptions

1. See tasks for specific task-related assumptions and exclusions.
2. 10-month total design and right-of-way duration.
3. All funding will be local, with no federal or state funding
4. City of Camas design requirements and standards apply.
5. All submittals will be made electronically with no paper copies.
6. A stakeholder/advisory committee will not be created or engaged with as part of the project.

Exclusions

1. Bidding and construction phase services
2. Downstream stormwater analysis
3. Private utility design
4. Arborist services
5. Landscaping and irrigation design

SCOPE OF WORK

(Exhibit "A")
City of Camas -Engineering Design and Right of Way NW Lake Road/ NW Sierra St Intersection

1.0 PROJECT MANAGEMENT

1.1 PROJECT ADMINISTRATION

- Prepare monthly invoices and progress reports to accompany invoicing. Reports will include a budget summary, tasks completed within the invoicing period, and the schedule status of critical tasks.

1.2 PROJECT SCHEDULING

- Prepare and submit an activities list and schedule to the City. The schedule will show milestones, including intermediate and final submittal dates for design documents and key decision points.
- Provide up to (2) updates to the schedule to reflect project milestones and timeline changes.

1.3 PROJECT TEAM MEETINGS

- Schedule, prepare agendas and minutes, and lead bi-weekly project team meetings with the City. This task includes bi-weekly progress meetings, and review meetings at each submittal phase.
- Organize and hold project coordination meetings with key project team members and representatives from the City of Vancouver and other agencies as needed. These meetings shall have specific agendas addressing and resolving project issues as they are encountered.

Meeting Schedule				
Type	Format	Frequency	Participants	# Mtgs
Site Visit	In-Person	Once	PIC/PM/PE	1
Consultant Team Meetings	Hybrid	Bi-Weekly	PM/PE/DE	15
Progress Meetings w/City	Virtual	Bi-Weekly	PIC/PM/PE	15
Design Submittal Meetings	Virtual	Following Design Submittals	Select Team Leads	4
Council Meeting	In-Person	Once	PIC/PM	1

1.4 SUBCONSULTANT COORDINATION

- General coordination and management of the subconsultant team including contracting, invoicing, schedule, and deliverables.

DELIVERABLES

- *Monthly Invoices and Progress Reports*
- *Baseline Project Schedule and Updates*
- *Meeting Agendas, Minutes, and Task Log Updates*

PROJECT MANAGEMENT ASSUMPTIONS

- Ten-month project management duration
- Approximately bi-weekly consultant team coordination meetings
- The public outreach task includes providing information and exhibits, attending public meetings, open houses, and other outreach tasks.

2.0 QUALITY ASSURANCE AND QUALITY CONTROL

Establish a quality management program and designate responsibility for reviewing technical work and other deliverable products to staff with appropriate experience and expertise.

2.1 QA/QC

The following is the summary of the QA/QC stages that will be followed for each project component and the 60%, 90%, and 100% plan, specifications, and estimate phases.

- **QA/QC Process**

  1) Originate: When a product (e.g., 60% plans) is ready for review, the Project Manager will originate the QC process by directing the CAD Technician to produce a review plan set. The CAD technician performs the first level of review. Once this first pass is completed, a new plan set is plotted to PDF, and the Project Manager is informed that the deliverable is ready for review.

  2) Check: The Project Manager is the QC lead. The QC includes a review of the design, presentation, accuracy of keynotes, detail references, checks for utility conflicts, and a myriad of other items. QC checklists are used to assist in the review. BlueBeam, a PDF-based document review platform, is used to make and log comments. Bluebeam provides a single digital location for QC reviews and QA backchecks.

  3) Backcheck: Following the PM review, the assigned back checker initiates a QA review. BlueBeam tracks and logs any additional comments. Standard checklists are utilized for reviews.

  4) Correct: After the QC and QA review, the marked-up deliverable is sent back to the CAD Technician or the document author. The CAD technician/author addresses the comments or adds comments to the BlueBeam session clarifying why a comment could not be addressed or to seek additional clarification. At this point, the CAD Technician/author will replot the deliverable.

  5) Verify: The Project Manager then reviews the revised document against the marked-up document and verifies that each of the comments has been addressed and works closely with the CAD technician/author to address comments that were not addressed through the first round of corrections. A revised and corrected plan set/report/specification is plotted, and the Project Manager performs one final review prior to submission to the agency.

2.2 SUBCONSULTANT DELIVERABLE REVIEW

- Review, provide comments, and manage schedules for subconsultant team deliverables.
- This review will follow the same process as the internal review of deliverables.

3.0 LAND SURVEYING

3.1 BOUNDARY SURVEY

- MacKay Sposito will perform a boundary survey to determine the existing right of way of NW Lake Road and NW Sierra Street. This task does not include drafting and recording at Clark County a Record of Survey. Research and calculations will be performed to assist in field locating sufficient monumentation to resolve the right-of-way.

~~*3.2 LEGAL DESCRIPTIONS AND TITLE REPORTS – NOT INCLUDED, TO BE CONTRACT WITH FUTURE AMENDMENT*~~

- ~~MacKay Sposito will prepare up to 9 legal descriptions and accompanying exhibits to assist in right of way and temporary construction easement acquisition covering up to 5 parcels. This task includes plotting any potential existing easements affecting the subject parcels per the Title Reports. Title Report review and ordering to be performed by others. MacKay Sposito will stake the proposed easements and right of way takes up to one time in the field to assist with the acquisition process. This work will be performed in one mobilization.~~

DELIVERABLES

- ~~*Up to 9 signed and stamped legal descriptions and exhibits in PDF format.*~~
- *Boundary survey in AutoCAD format*

4.0 CULTURAL INVESTIGATION (AINW)

Please refer to Appendix A for cultural resources' scope of work.

5.0 GEOTECHNICAL (RHINO ONE)

Please refer to Appendix B for geotechnical scope of work.

6.0 PUBLIC OUTREACH

The City, MacKay Sposito, and JLA previously completed public outreach work to help determine and communicate the preferred intersection improvement alternative, a new roundabout. Please refer to Appendix C for JLA's scope of work, which summarizes public outreach activities.

6.1 PUBLIC OUTREACH SUPPORT (MACKAY SPOSITO)

- Prepare for, attend, and provide meeting minutes for up to five private property owner meetings to review the proposed design.

Deliverables:

- *Private property owner meeting agendas and minutes*

7.0 ENVIRONMENTAL EVALUATION AND PERMITTING

7.1 SEPA

- The Consultant will prepare the Washington State Environmental Policy Act (SEPA) Checklist and any necessary appendices to comply with City and State regulations.

Assumptions:

- A pre-application conference with the City of Camas is recommended and assumed. No additional land use permitting will be required.
- The archaeological documentation will be covered under a separate task.
- A geotechnical assessment for geotechnical hazards will be covered under a separate task.
- No additional reports or studies will be required, including, but not limited to, critical aquifer recharge areas, fish and wildlife habitat conservation areas, and wetlands. Data will be gathered from publicly available sources.
- Shorelines and wetland/waters direct and indirect impact permitting is not included.
- The project will receive a determination of non-significance.
- The City of Camas will pay permit fees.
- Up to two hours of public comment response is included.

7.2 CONSTRUCTION STORMWATER GENERAL PERMIT AND STORMWATER POLLUTION PREVENTION PLAN

- A Notice of Intent (NOI) will be filed with the Washington Department of Ecology, including two public notices in The Columbian, and a Stormwater Pollution Prevention Plan (SWPPP) will be prepared for the project. The NOI and SWPPP will be in place prior to the start of construction.

Assumptions:

- The newspaper public notice fees are included, but the annual permit renewal fees are excluded.
- The erosion and sediment control plan will be prepared for other tasks in this scope of work.

7.3 PERMIT FACILITATION AND TRACKING

- The Consultant shall monitor the progress of the relevant reviewing agencies so that questions or concerns during the review are addressed quickly. This will enable the permit application to be processed in a timely manner.

DELIVERABLES

- *SEPA Checklist*
- *NPDES Permit Application and SWPPP*

8.0 CIVIL ENGINEERING

8.1 DESIGN COORDINATION

- Coordinate with sub-consultants for design collaborations, including the traffic engineer, geotechnical engineer, and structural engineer.
- Provide engineering support for the environmental team, including:

- Erosion sediment control BMP selection and coordination with the environmental team in support of the Storm Water Pollution Prevention Plan (SWPPP) permit
- General SEPA support

8.2 60% CIVIL DESIGN

This task includes preparing the 60% conceptual geometric layout generally based on the Roundabout Alternative prepared by the project team during the Alternatives Analysis phase of this project. The 60% design includes preparing plans and the engineer's estimate of probable cost. Key elements include:

- 60% roundabout geometric design, including edges of travel way, islands, and sidewalks
- "Fastest Path" analysis and exhibits for all critical approaches of the roundabout.
- Vehicle turning analysis and exhibits for critical turning movements of the roundtable for the City-provided design vehicle
- Stopping and intersection sight distance evaluation and exhibits
- 60% roadway and sidewalk grading design
- 60% stormwater calculations and conveyance system design
- 60% horizontal and vertical alignment design for new 24-inch dry sanitary sewer STEP main and 24-inch dry potable water main for future connection
- 60% signing and striping design
- 60% erosion control design
- 60% Engineer's Estimate of Probable Construction Cost
- Specifications outline

60% Design Deliverables:

- *Fastest Path Exhibits*
- *Vehicle Turning Analysis exhibits*
- *Sight Distance exhibits*
- *60% plan set in PDF as listed in Table 1*
- *60% estimate of probable construction cost in Microsoft Excel format*
- *Specification outlines in Microsoft Word format*

8.3 90% CIVIL DESIGN

The 90% design includes the preparation of plans, specifications, and the engineer's estimate of probable construction cost. Key elements include:

- Incorporate review comments from 60% design.
- 90% roadway and roundabout design development
- 90% curb returns and curb ramp detailed grading design.
- 90% stormwater calculations and conveyance system design
- 90% horizontal and vertical alignment design for a new 24-inch dry sanitary sewer STEP main and 24-inch dry potable water main for future connection
- 90% construction staging and traffic control design.
- 90% signing and striping design
- 90% erosion control design
- 90% ROW plan

- 90% Engineer's Estimate of Probable Construction Cost
- 90% Specifications

90% Design Deliverables:

- *90% plan set in PDF as listed in Table 1*
- *90% estimate of probable construction cost in Microsoft Excel format*
- *90% specifications in Microsoft Word format*

8.4 100% CIVIL DESIGN

This task includes incorporating review comments from 90% design and progressing to final plans, specifications, and estimate.

100% Design Deliverables:

- *100% plan set in PDF as listed in Table 1*
- *100% estimate of probable construction cost in Microsoft Excel format*
- *100% specifications in Microsoft Word format*

Table 1- List of Plan Sheets Deliverables at each Design Stage

Plan Sheet Description	Scale	No. of Sheets		60% Plan Sheets	90% Plan Sheets	100% Plan Sheets
Cover Sheet	NA	1		X	X	X
Legend	NA	1		X	X	X
General Notes	NA	1		X	X	X
Typical Roadway Section	TBD	2		X	X	X
Sheet Key	TBD	1		X	X	X
Existing Conditions	20	4		X	X	X
Construction Staging Plan	50	1			X	X
Temporary Traffic Control Plan	20	4			X	X
Temporary Traffic Control Details	TBD	1			X	X
Site Preparation and Demolition Plan	20	4		X	X	X
Erosion Control Plan	20	4		X	X	X
Erosion Control Details	TBD	1		X	X	X
Street, Storm, Sanitary, and Water Plan and Profile	20	5		X	X	X
Roundabout & Curb Ramp Grading Plan	10	1		X	X	X
Street Details	TBD	2		X	X	X
Storm Sewer Details	TBD	2		X	X	X
Sanitary Sewer Details	TBD	1		X	X	X
Water Details	TBD	1		X	X	X

Signing and Striping Plan	20	4		X	X	X
Signing and Striping Details	TBD	3		X	X	X
ROW Plan	20	4			X	X
Totals		**48**		**38**	**48**	**48**

8.5 HYDRAULICS AND HYDROLOGY CALCULATIONS AND REPORT

Hydraulic and Hydrology calculations will be prepared to support the drainage design. The calculations and preparation of the report shall be done per the City of Camas Municipal Code Section 14.02, as well as the Washington State Department of Ecology's 2024 Stormwater Management Manual for Western Washington (SWMMWW). Key elements for this task include:

- Preliminary hydrology report containing 60% design drainage calculations.
- Incorporating review comments from the preliminary hydrology report from the preliminary hydrology report and progressing to final report at 90% design level

Hydraulic and Hydrology Calculations and Report Deliverables:

- *Preliminary Hydrology Report in PDF*
- *Final Hydrology Report in PDF*

CIVIL ENGINEERING ASSUMPTIONS

- The roundabout alternative prepared by the project team during the Alternatives Analysis phase of this project will be the base design for the roundabout geometric design.
- The roundabout will be designed based on the current City of Camas' Design Standards Manual.
- "Fastest Path" and sight distance analyses will be completed in accordance with NCHRP Report 672.
- The City will determine the design vehicle for vehicle turning analysis.
- Sheet setup and design drafting will be based on MacKay Sposito drafting standards. The plan sheets will be set up to full size 24"x36", with the scale as shown in Table 1. The submittals will be in PDF format. CAD drawings are available upon request.
- The curb ramp design will be performed to the maximum extent feasible for six curb ramps.
- Three retaining walls are anticipated, as shown in the roundabout alternative concept design. Structural Engineering design and calculations for the retaining walls is covered under a separate task.
- It is assumed that the proposed roadway grading and design will not require re-design of existing water and sewer utilities.
- Traffic control plans will include signage and detours for pedestrian, bicycle and vehicular movements during construction.
- Construction sequencing and phasing will be included in the final design including Order of Work, Allowed Road Closure Phasing, Typical Traffic Control Scenarios, and Temporary Traffic Control Guidelines/Requirements.
- Right-of-way plans will include the preliminary right of way plans, and temporary construction easements. Services for right-of-way and easement legal descriptions and exhibits are covered under a separate task. Major design changes as the result of negotiation with the property owners are not included.
- Project Special Provisions will be based on the most recent Washington State Department of Transportation Standard Specifications for Road, Bridge, and Municipal Construction.

The City will provide a sample specification for the City's preferred special provisions. The City will be responsible for preparing the Division 1 specifications.

- Estimates of probable construction cost will be prepared at the 60%, 90% and 100% design stages. The cost analysis will be based on unit prices from recent similar projects.
- Stormwater calculation and design approach are based on the following assumptions: the project will trigger all 10 Minimum Requirements per the 2024 SWMMWW. Onsite water quality treatment will be required. Based upon the ADT reported in the Traffic Analysis memo by DKS (September 22, 2023), metals treatment will be required, but Oil Control is not required. The project site is within the Lacamas Lake watershed, so Phosphorus treatment will also be required. Lacamas Lake is a flow control exempt receiving water; it is assumed that the project site discharges directly to Lacamas Lake and that the conveyance system between the project site and Lacamas Lake has sufficient hydraulic capacity to accommodate the proposed improvements.

9.0 PRIVATE UTILITY COORDINATION

Provide coordination with private utilities including Clark Public Utilities, NW Natural Gas, and up to three communications (cable, phone, fiber) providers.

9.1 REVIEW EXISTING PRIVATE UTILITY DOCUMENTATION AND SITE CONDITIONS

- Private Utility Coordination
  - Contact private utilities to provide a general overview of the project scope, limits, and anticipated schedule.
  - Work with private utilities to identify requirements related to their relocation and/or modification.
  - Develop and maintain a private utility coordination tracker to document:
    - Contact information for each utility
    - Correspondence, including phone and email conversations
    - Anticipated relocation schedule and associated risks
  - Send design plans and the project schedule to each utility at the completion of 60%, 90% and 100% design milestones.
  - Coordinate with private utilities to schedule up to three in-person group meetings at MacKay Sposito's office to include all utilities. Prepare agendas and minutes for each meeting.

- Utility Conflict Report
  - Prepare a Utility Conflict Report and plan exhibits for each utility based on the 60% design plans.
  - Update the Utility Conflict Report and plan exhibits for design changes from the 60% to 90% design.
  - Send utility conflict letters at 60% and 90% design to affected utility companies describing conflicts and communicating the required schedule for conflict resolution design and construction work.

DELIVERABLES

- *Coordination Tracker*
- *Conflict Reports and Exhibits*
- *Meeting Agendas and Minutes*

PRIVATE UTILITY COORDINATION ASSUMPTIONS

- All private utility relocation designs will be completed by others (assumed to be completed by private utilities).
- Assumes coordination with Northwest Natural Gas, Clark Public Utilities, and up to two additional private utility providers.
- Utility companies will provide their proposed design in AutoCAD as well as PDF plan sheets.
- The City will coordinate with private utilities regarding relocation costs and agreements.
- No new additional major utility conflicts will occur between 90% and 100% design.

10.0 STRUCTURAL ENGINEERING (CONSOR)

Please refer to Appendix E for the structural engineering scope of work.

11.0 LIGHTING DESIGN (DKS)

Please refer to Appendix D for the lighting design scope of work.

12.0 RIGHT OF WAY (UFS)

Please refer to Appendix F for right of way services scope of work.

13.0 CITY DELIVERABLES TO THE CONSULTANT

13.1 SAMPLE PROJECTS

- The City will provide copies of previously completed similar projects (plans, specifications, and estimates).

13.2 PROJECT COORDINATION

- The City will assist the Consultant in managing relationships with other jurisdictions involved in the Project, adjacent property owners and the public. The City will provide staff to meet and discuss the Project with the Consultant as needed. The City will provide written comments pertaining to the design submittals.

13.3 RIGHT OF ENTRY PERMITS

- The City will obtain the right of access to private properties for all Project developments. The Consultant shall coordinate access.

13.4 PAVEMENT DESIGN

- The City will select the pavement type and structural sections based on the pavement recommendation provided by the Consultant.

13.5 UTILITY LIST

- The City will provide the Consultant with a list of local contacts for utilities within the Project limits. Design and plan preparation for the addition or relocation of utilities within the Project limits will be done by others.

13.6 STREET LIGHT AND TRAFFIC SIGNAL REQUIREMENTS

- The City will provide the illumination type, the minimum illumination levels and uniformity ratios to be used in the Project design.

DELIVERABLES

- *Sample projects*
- *Project coordination*
- *Right of Entry Permits (if needed)*
- *Pavement type & structural sections selection*
- *Utility contact list*
- *Street lighting requirements*

APPENDICES

APPENDIX A: CULTURAL INVESTIGATIONS - (AINW)

APPENDIX B: GEOTECHNICAL - (RHINO ONE)

APPENDIX C: PUBLIC OUTREACH - (JLA)

APPENDIX D: TRAFFIC ENGINEERING DESIGN - (DKS)

APPENDIX E: STRUCTURAL ENGINEERING - (CONSOR)

APPENDIX F: RIGHT OF WAY - (UFS)

APPENDIX G: RATE TABLE

EXHIBIT "B"
AMENDED COSTS FOR SCOPE OF SERVICES

MacKay Sposito

Project Name: NW Lake Rd & NW Sierra St Intersection Improvements
Project Manager: Jason Irving
MSi Job No.: 18190
Client Job No.:
Date: 09/30/2024

MacKay Sposito, Inc.

		ESTIMATED HOURS AND EXPENSES																	SUBCONSULTANTS							Total Budget Amount
		Principal	Project Manager - Design	Project Engineer	Project Accountant	Land Surveyor IV	Survey Party Chief	Survey Instrument Person	Survey Technician IV	Engineering Manager	Design Technician III	Project Manager - Survey	Environmental Manager II	Natural Resource Specialist IV	Natural Resource Specialist III	Natural Resource Specialist I	Design Technician IV	Expenses	Total	AINW	Rhino One	JLA Public Involvement, Inc.	Consor	DKS Associates	USF	Total Subconsultants	
1.0 - Project Management	1.1 - Project Administration		8		10														$3,208.00								$3,208.00
	1.2 - Project Scheduling	2	4	3															$2,034.00								$2,034.00
	1.3 - Project Team Meetings	35	50	30															$26,730.00								$26,730.00
	1.4 - Subconsultant Coordination	18	30	6															$12,768.00								$12,768.00
																			$44,740.00								**$44,740.00**
2.0 - Quality Assurance and Quality Control	2.1 - Engineering QA/QC	10		30						30	35								$21,260.00								$21,260.00
	2.2 - Subconsultant Deliverable Review	4		6						4	6								$4,188.00								$4,188.00
																			$25,448.00								**$25,448.00**
3.0 - Land Surveying	3.0 - Land Surveying Subtotal					24	20	20	16			2						$20.10	$12,312.10								$12,312.10
																			$12,312.10								**$12,312.10**
SUB4 - Cultural Investigation (AINW)	SUB4 - Cultural Investigation (AINW)																			$7,502.42						$7,502.42	$7,502.42
	SUB4 - Cultural Investigation (AINW) 5% Markup																			*$375.12*						*$375.12*	*$375.12*
																										$7,877.54	**$7,877.54**
SUB5 - Geotechnical (Rhino One)	SUB5 - Geotechnical (Rhino One)																				$38,952.00					$38,952.00	$38,952.00
	SUB5 - Geotechnical (Rhino One) 5% Markup																				*$1,947.60*					*$1,947.60*	*$1,947.60*
																										$40,899.60	**$40,899.60**
6.0 - Public Outreach Support	6.1 - Public Outreach (MSI)	8	8																$3,984.00								$3,984.00
																			$3,984.00								**$3,984.00**
SUB6 - Public Outreach (JLA)	SUB6 - Public Outreach (JLA)																					$7,095.51				$7,095.51	$7,095.51
	SUB6 - Public Outreach (JLA) Subtotal 5% Markup																					*$354.78*				*$354.78*	*$354.78*
																			$0.00							**$7,450.29**	**$7,450.29**
7.0 - Environmental Evaluation and Permitting	7.0 - Environmental Evaluation and Permitting												6	39	3	42		$400.00	$12,958.00								$12,958.00
																			$12,958.00								**$12,958.00**
8 - Civil Engineering	8.1 - Design Coordination	6	14	24															$9,564.00								$9,564.00
	8.2 - 60% Civil Design	8	64	258													260		$109,796.00								$109,796.00
	8.3 - 90% Civil Design	6	50	165													144		$68,862.00								$68,862.00
	8.4 - 100% Civil Design	6	16	32													65		$22,012.00								$22,012.00
	8.5 - Hydraulics and Hydrology Calculations and Report		24	72													18		$22,608.00								$22,608.00
																			$232,842.00								**$232,842.00**
9 - Private Utility Coordination	9.0 - Private Utility Coordination	8	17	45														$1,122.25	$16,140.25								$16,140.25
																			$16,140.25								**$16,140.25**
SUB10 - Structural Engineering (Consor)	SUB10 - Structural Engineering (Consor)																						$58,554.00			$58,554.00	$58,554.00
	SUB10 - Structural Engineering (Consor) 5% Markup																						*$2,927.70*			*$2,927.70*	*$2,927.70*
																										$61,481.70	**$61,481.70**
SUB11 - Lighting Design (DKS)	SUB11 - Lighting Design (DKS)																							$26,785.00		$26,785.00	$26,785.00
	SUB11 - Lighting Design (DKS) 5% Markup																							*$1,339.25*		*$1,339.25*	*$1,339.25*
																										$28,124.25	**$28,124.25**
SUB12 - Right of Way (UFS)	SUB12 - Right of Way (UFS)																								$5,255.00	$5,255.00	$5,255.00
	SUB12 - Right of Way (UFS) 5% Markup																								*$262.75*	*$262.75*	*$262.75*
																										$5,517.75	**$5,517.75**
	HOURS	111	285	671	10	24	20	20	16	34	41	2	6	39	3	42	487										
	RATES	$282.00	$216.00	$202.00	$148.00	$178.00	$156.00	$110.00	$144.00	$240.00	$148.00	$198.00	$196.00	$156.00	$142.00	$116.00	160.00										
	TOTAL	**$31,302.00**	**$61,560.00**	**$135,542.00**	**$1,480.00**	**$4,272.00**	**$3,120.00**	**$2,200.00**	**$2,304.00**	**$8,160.00**	**$6,068.00**	**$396.00**	**$1,176.00**	**$6,084.00**	**$426.00**	**$4,872.00**	**$77,920.00**	**$1,542.35**	**$348,424.35**	**$7,877.54**	**$40,899.60**	**$7,450.29**	**$61,481.70**	**$28,124.25**	**$5,517.75**	**$151,351.13**	**$499,775.48**

EXHIBIT "B"

APPENDIX A

Cultural Investigations

AINW

Archaeological Investigations Northwest, Inc.

3510 N.E. 122nd Ave. • Portland, Oregon 97230
Phone (503) 761-6605 • Fax (503) 761-6620

Vancouver Phone (360) 696-7473
E-mail: ainw@ainw.com
Web: www.ainw.com

MEMO

Date: September 12, 2024

To: Jason Irving, Senior Engineer/Principal, Shareholder, MacKay Sposito

From: Meghan Johnson, M.A., R.P.A., Assistant Project Manager/Supervising Archaeologist

Re: Lake Road/Sierra Street Intersection ROW, Camas, Washington
Proposal for Archaeological Predetermination

This proposal is for an archaeological predetermination for the Lake Road/Sierra Street Intersection ROW project. The City of Camas (City) proposes to build a roundabout at the intersection of Lake Road and Sierra Street. The City is funding the project, and it is on City land. Residential developments surround the intersection and large portions of the project area have been paved or otherwise previously disturbed by buried utilities, sidewalks, modern landscaping, and cut and fill associated with modern development.

AINW is very familiar with the area. The project location, southwest of Lacamas Lake, has a high-to-moderate probability of archaeological resources. NW Sierra Street was previously inspected during a cultural resource survey, and no areas of high archaeological risk were identified at the intersection with NW Lake Road. The segment of NW Lake Road where the project is proposed has not yet been surveyed.

The purpose of an archaeological predetermination is to determine if an archaeological site is *likely* within the project area. The study will be conducted to meet the City's municipal code and will be directed by one of AINW's professional archaeologists. The study will include research about the area, a walkover of the project area, and the excavation of up to two shovel tests in the area north of Lake Road where prior impacts from modern development are less likely. *I assume no evidence of an archaeological site will be found*. If evidence of an archaeological site is found, additional services would be needed that are not included in the current scope and fee for services. AINW will email a summary of fieldwork results to MacKay Sposito within 24 hours of completion

AINW will email a summary of the fieldwork results as soon as the fieldwork has been completed and will provide you with a draft copy of the report for your review. We will provide you with an electronic copy of the final report in PDF format for you to submit to the City. *AINW will also email the report to DAHP and several Native American Tribes, which is needed to meet compliance for your development submittal*. You and the City will be included in the email distribution of the report.

AINW's fee for the archaeological predetermination is **$7,502.42.** AINW's payment terms are Net 30 days from issuance of an invoice. Please note that if collection for nonpayment of our invoice is necessary, reasonable collection or legal costs will be charged to you. This letter contains the entire agreement between us and there are no other representations, warranties, or commitments. I can provide you with certificates of our worker's compensation insurance, general and auto liability insurance, and professional liability insurance, upon request.

Archaeological Investigations Northwest, Inc.

CLIENT: Jason Irving - MacKay Sposito

Project Name: Lake/Sierra Intersection

Date: September 11, 2024

Task	Description	PI/PM/Senior Archaeologist	Senior Archaeo.	Senior Architect. Hist	Architect. Historian	Assist.PM/ Supervising Archaeolog	Supervising Archaeo.	Graphics-GIS	Research/ Proj. Assist./ Proj. Admin	Field/Lab Archaeo. Assistant	Hours	Labor	Expenses	Total
1	Archaeological predetermination survey and report	1				16	35	2	4		58	$7,485.00	$17.42	$7,502.42
	Total Labor Hours	1	0	0	0	16	35	2	4	0	58			
	Labor Rates	**$243.00**	**$185.00**	**$185.00**	**$112.22**	**$139.50**	**$120.00**	**$185.00**	**$110.00**	**$82.00**				
	Total Labor	$243.00	$0.00	$0.00	$0.00	$2,232.00	$4,200.00	$370.00	$440.00	$0.00	$7,485.00		$17.42	$7,502.42
	DIRECT EXPENSES	Each	Qty	Total						**GRAND TOTAL**		**$7,485.00**	**$17.42**	**$7,502.42**
	Vehicle Mileage @ 26 miles RT	$0.670	26	$17.42										
		$0.00	0	$0.00										
		$0.00	0	$0.00										
		$0.00	0	$0.00										**$7,502.42**
	TOTAL EXPENSES TASK			$17.42										
	TOTAL EXPENSES			$17.42										

EXHIBIT "B"

APPENDIX B

Geotechnical

Rhino One

RhinoOne GEOTECHNICAL

August 16, 2024

Mackay & Sposito Inc.
18405 SE Mill Plain Blvd Suite 100
Vancouver, WA 98683
Attn: Mr. Jason Irving, PE, Senior Engineer

RE: Proposal for Geotechnical Study
Lake/Sierra Intersection
City of Camas, Washington
Rhino One Proposal Number MSO-2024-003

Submitted Via Email: jirving@mackaysposito.com

Dear Mr. Irving,

Rhino One Geotechnical (ROG) is pleased to submit this proposal to provide geotechnical study for the new roundabout at the intersection of NW Lake Road and NW Sierra Street in Camas. We understand that a large retaining wall is proposed on the north side of the intersection with some smaller retaining walls on the SE and SW corners of the proposed roundabout. Geotechnical work will be required for the design of the retaining wall as well as for pavement design. Our detailed scope of work is discussed below. A cost estimate is provided as an attachment to this proposal.

SCOPE OF SERVICES

This task involves geotechnical investigations and analysis to evaluate subsurface conditions, and provide information for the design of retaining wall, slope stability, embankment and pavement design. This study will be completed to meet the requirements of City of Camas Municipal Code Section 6.59.060 for "Critical Area Report requirements in geologically hazardous areas. In order to evaluate site-specific geotechnical conditions, the consultant will conduct a geotechnical investigation consisting of research, reconnaissance, subsurface explorations, laboratory testing, engineering analyses, and consultation, as outlined below.

1. Research and Reconnaissance - This task involves the following:

- Review readily available geologic maps and water well logs that cover the site vicinity, and other reports provided by the City, for general information regarding subsurface soil, rock, and groundwater conditions, and geologic hazards.
-
- Review City of Camas Municipal Code Section 6.59.060 for "Critical Area Report requirements in geologically hazardous areas" and develop geotechnical exploration program to meet it's requirements.

- Prepare traffic control plans for the drilling operations, submit plans to the City for review, and implement approved traffic control plan during field work.

Deliverables
- Traffic Control plans for the drilling operations.

2. Subsurface Exploration - This task involves the following:

- Mark proposed exploration locations in the field and complete public utility locates.

- Advance two borings in the proposed wall area by a specialty rig mounted on a track hoe reaching over the road shoulder to the wall location on south side of the road. These borings will be 25 to 40 feet deep and will be used to characterize subsurface soil and groundwater conditions along the retaining wall locations. Advance four pavement cores to a maximum depth of 5 feet along with Dynamic Cone penetration testing (DCPT) to assist in pavement design. Also advance two boring to a depth of 10 to 15 feet in the wall area on the north side of the road.

- Maintaining a log of the soils encountered in the borings and collecting soil samples for laboratory testing.

- Backfilling the exploration holes in accordance with Ecology regulations and patching the surface with asphalt or gravel.

Assumptions

- The City will provide right-of-access to the property.
- Disposal of contaminated soil and decontamination of drilling equipment are not included in this scope of work. If contaminated materials are encountered, then additional costs will be incurred.
- Prevailing wages will not apply to subcontractors (e.g. driller and traffic control).
- Field explorations and testing will be completed in 3 workdays.
- Project survey staff will survey the borehole and hand ager locations and add them to the site base map

Deliverables

- Preliminary copies of the boring logs.

3. Lab Testing and Engineering Analysis - This task involves the following:

- Conduct a series of geotechnical laboratory tests on selected soil samples obtained from the explorations to evaluate the engineering and index properties of the site soils. The specific tests conducted will depend upon actual conditions encountered, but we anticipate our testing will include up to 30 moisture content, 5 moisture/density, 4 Atterberg limits, 6 sieve analyses, and 10 P200 washes. Additionally, one suite of tests to evaluate soil corrosion potential may be performed.

- Conduct engineering analysis to evaluate seismic hazards, and slope stability.

- Provide recommendations for signal poles and light poles as needed. Develop L-pile parameters for foundation design as appropriate.

- Provide recommendations for retaining wall foundations as needed. Develop load diagrams for cantilever and tied-back walls as appropriate. Complete global stability analysis of the proposed walls.

- Develop pavement design criteria, design parameters, and new pavement design sections for an acceptable pavement design. This will include asphalt pavement design for both Lake Road and Sierra and concrete section for roundabout. Provide recommendations for pavement overlays based on the existing pavement section and traffic counts. Pavement design should be

completed based on Traffic data provided by the Consultant and AASHTO Pavement Design Methods.

Deliverables
- All laboratory testing results are to be included in the appendices to the geotechnical report.

4. Report and Design Consultation - This task involves the following:

The data collected during the subsurface exploration, literature research, and testing will be analyzed to develop geotechnical recommendations for design and construction of the new retaining wall and light pole foundations. This task also includes attendance at up to four, one-hour project meetings by principal geotechnical engineer. Review of pertinent geotechnical project specifications are also included.

A geotechnical engineering report meeting the requirements of City Camas Municipal Code Section 6.59.060 for "Critical Area Report requirements in geologically hazardous areas will be prepared containing the results of our work, including the following information:

- Field exploration logs and site plan showing approximate exploration locations.
- Laboratory test results.
- Groundwater considerations.
- Liquefaction potential.
- Retaining wall design criteria and global stability analysis. Provide load diagrams for both cantilever and tied-back walls
- Light pole foundation design recommendations:
    - Minimum embedment.
    - Allowable lateral bearing pressure.
    - LPile parameters
- Earthwork and grading, cut, and fill recommendations:
    - Structural fill materials and preparation, and reuse of on-site soils.
    - Wet weather considerations.
    - Utility trench excavation and backfill requirements.
    - Temporary and permanent slope inclinations.
    - Pavement subgrade preparation recommendations.
- Recommendations for pavement and overlay design.

Deliverable:
- Draft and Final Geotechnical Engineering Report in PDF format.
- Review of project specification using track changes in a Microsoft word document

COMPENSATION

See the attached sheet with a detailed breakdown of our budget estimates.

SCHEDULE

We anticipate our services can start immediately upon receipt of a signed copy of this proposal. Please note that the drill rig can take four to six weeks to schedule. Field work will take three day at the site to complete. Our report will be provided within six weeks of completing field work. Data will be provided to the design team as it is developed to keep the project on schedule. An electronic copy of the final stamped report will be provided.

MISCELLANEOUS INFORMATION
Soil samples collected during the investigation will be stored for a minimum of 90 days after the completion of the subsurface exploration; however, storage beyond that date is not guaranteed.

All reasonable efforts will be made not to damage any existing underground utilities, sprinklers, slabs, asphalt, landscaping, etc. However, our office will not be responsible for the costs of repairs associated with any damage to such improvements.

APPROVAL
Please indicate acceptance of this Agreement by returning a signed copy of this proposal to our office. If you issue another form of authorizing document, please incorporate/attach this proposal. RhinoOne appreciates this opportunity to submit our proposal to you and look forward to your favorable consideration. If you have any questions or wish to further discuss the scope of services or compensation, please contact me at 360.852.6367.

Sincerely,

Rajiv Ali, PE, GE
Managing Principal
RhinoOne Geotechnical
rajiv@rhinooneeng.com

ACCEPTED BY:

_____
Signature

_____
Name (Please Print)

_____
Title Date

Attachments:
2024 Fee Estimate

RhinoOne
GEOTECHNICAL

		Rhino One									
	Lake Road and Sierra	Principal Geotechnical Engineer (Rajiv Ali)	Project Geotechnical Engineer (Christina Hemberry)	Engineering Geologist (Peter Hughes)	Geotechnical Engineering Staff (Levi Good)	CAD (Devin Blackshere)		Total Labor Hours	Total Labor Dollars	Subtotal Expenses	TOTAL LABOR & EXPENSES
	ROG 2024 Rates	$210.36	$122.95	$113.09	$100.96	$102.81					
1	**Geotechnical**							-			
1	Research and Reconnaissance		2	8				10	1,151		$1,151
2	Subsurface Explorations		1	22	8			31	3,419	$16,530	$19,949
3	Lab Testing and Engineering Analysis		8	8	24			40	4,311	$2,935	$7,246
4	Report and Design Consultation	16	12	8	40	8		84	10,607		$10,607
								-	0		$0
								-	0		$0
								-			
	TOTAL HOURS	16	23	46	72	8	-	165			
	TOTAL AMOUNT	$3,366	$2,828	$5,202	$7,269	$822	$0		19,487	$19,465	$38,952

	Outside Services and Expenses	Unit Cost	Qnty	Total
2	Subsurface Explorations			
	Traffic Control Plan	$375	2	$750
	Private Utility Locates (4 hours @ $120/hour)	$120	4	$480
	Drill Rig (1 day - Limited Access)	$8,000	1	$8,000
	Pavement Core Rig with DCPT (1 day)	$2,750	1	$2,750
	Traffic Control (2 days)	$2,250	2	$4,500
	City Permit Fees	$50	1	$50
	Sub-Total (Task2)			**$16,530**
3	Laboratory Testing and Engineering Analysis			
	30 Water Contents	$22	30	$660
	Three Atterberg Limits	$175	3	$525
	Three Grain Size	$175	3	$525
	Eight P200 Washes	$75	8	$600
	2 Moisture Density Tests	$125	2	$250
	One set of pH, electrical resistivity, sulphates and chlorides	$375	1	$375
				$0
	Sub-Total (Task 3)			**$2,935**
	Total (Outside Services/Expenses)			$19,465.00

EXHIBIT "B"

APPENDIX C

PUBLIC OUTREACH

JLA

City of Camas
Lake Road/Sierra Street Intersection Improvements – Design Phase
JLA Scope of Work
September, 2024

Purpose and Goals: This project entails developing designs for a roundabout at the intersection of NW Lake Road and NW Sierra Street.

Scope of Work: Public Involvement will be overseen by Adrienne DeDona with assistance from JLA support staff. JLA will work collaboratively with the City and the consultant team to coordinate and deliver outreach and communication tasks.

The following tasks represent work to be completed by JLA.

Task 1: Project Initiation & Management
JLA will participate in periodic project coordination meetings via video/phone conference, with City staff and the consultant team to review and discuss work products, including communications support.

JLA will produce monthly progress reports and invoices.

Deliverables:
- Monthly invoices and progress reports
- Participation in 2 project check in meetings (assumes meetings are virtual and one hour in duration).

Task 2: Community Engagement
JLA will work with the City and the consultant team to reach out to a broad spectrum of residents and community partners to share information and gather input.

- ***Task 2.1: Communications Materials and Content:*** JLA will work with City staff and the consultant team to prepare communications materials, including web content, social media content, a project fact sheet and mailer. Assumes the City will be responsible for production, printing and distribution of all communications materials.

  Deliverables:
  - Web content
  - Up to three social media posts
  - One project fact sheet
  - One project mailer to be printed and distributed by the City

City of Camas Lake Road/Sierra Street Intersection Improvements

Prepared by: JLA Public Involvement
Date: Sept 2024

Task #	Task/Subtasks	Adrienne DeDona, Senior Associate 1 $ 213.85 /hr		PI Spec. 4 (Graphics) $ 144.20 /hr		PI Spec. 3 (Communications and Web) $ 116.22 /hr		PI Spec. 2 (support) $ 108.46 /hr		Admin 4 $ 116.16 /hr		Add new staff here	Totals				Task/ Subtasks
		Hours/Ea	Cost	Hours/Ea	Cost	Hours/Ea	Cost	Hours/Ea	Cost	Hours/Ea	Cost		Hours	Labor	Expenses	Cost	
▼																	
1.0	**Project Initiation and Management**																**1.0 Project Initi**
																	0.0
	Invoices & Progress Reports *Assumes monthly invoices will be included along with progress reports*	3	$642		$0		$0		$0	6	$697		9	$1,339	$0	**$1,339**	0.0 Invoices & Progress Reports
	Project Team Coordination *Assumes participation in up to 4 project team meetings from August through December.*	2	$428		$0		$0		$0		$0		2	$428	$0	**$428**	0.0 Project Team Coordination
▲		**5**	**$1,069.25**	**0**	**$0.00**	**0**	**$0.00**	**0**	**$0.00**	**6**	**$696.96**		**11**	**$1,766.21**	**$0**	**$1,766.21**	
▼																	
2.0	**Community Engagement**																**2.0 Community**
2.2	Communications Materials Content																**2.2 Communica**
	JLA will develop content for communications materials to include social media content, web content, one fact sheet and one mailer to be produced and distributed by the City *Assumes the City will post social media and web content as well as distribute mailers and posters.*	6	$1,283	20	$2,884	10	$1,162		$0		$0		36	$5,329	$0	**$5,329**	0.0 JLA will develop content for communications materials to include social media content, web content, one fact sheet and one mailer to be produced
▲		**6**	**$1,283.10**	**20**	**$2,884.00**	**10**	**$1,162.20**	**0**	**$0.00**	**0**	**$0.00**		**36**	**$5,329.30**	**$0**	**$5,329.30**	
Add new task here													▲	▲	▲	▲	
		11	$2,352.35	20	$2,884.00	10	$1,162.20	0	$0.00	6	$696.96	◀	47	$7,095.51	$0	$7,095.51	◀Check **Totals**
													47	$7,095.51	$0	$7,095.51	◀Check
															Sum of all subtotals:	$7,095.51	◀Check

27
33
34

EXHIBIT "B"

APPENDIX D

Traffic Engineering

DKS

DKS 1050 SW 6TH AVENUE, SUITE 600 • PORTLAND, OR 97204 • 503.243.3500 • DKSASSOCIATES.COM

CAMAS LAKE AND SIERRA – FINAL DESIGN

DATE: September 26, 2024

TO: Jason Irving | MacKay Sposito

FROM: Justin Sheets | DKS Associates

SUBJECT: Camas NW Lake Rd and NW Sierra St Final Design Scope of Services

Project #24032-000

SCOPE OF SERVICES

TASK 1 – PROJECT COORDINATION AND MEETINGS

DKS shall coordinate with the project team and attend the following meetings:

- One open house meeting (in person)
- Six team check-in meetings (virtual)

DKS shall prepare monthly invoices and progress reports in a format acceptable to the City.

TASK 2 – ROUNDABOUT DESIGN SUPPORT

DKS shall support the project team in the final roundabout layout. This includes providing recommendations on the number of traffic lanes and storage lengths and supporting on issues related to operations and safety. DKS will utilize the traffic model and traffic data developed during the traffic analysis phase of the project and evaluate up to one additional design alternative, if needed. No new data will be collected on this task. Any findings or recommendations will be summarized in email format to the project team.

TASK 3 – LIGHTING DESIGN

DKS will prepare plans, specifications, and cost estimate for the installation of new roadway lighting at the intersection of NW Lake Road and NW Sierra Street for the proposed roundabout layout. DKS will use AGI software to determine appropriate light levels for the roadways and intersections per City of Camas standards, WSDOT standards, and ANSI/IES RP-8-22: Recommended Practice: Lighting Roadway and Parking Facilities.

DKS will provide plans and cost estimate for the 60%, 90%, and Final submittals. DKS will provide special provisions for the 90% and Final submittals using the current version of the City of Camas standards.

ASSUMPTIONS

- Lighting level summary will be shown on plan sheets. No separate lighting memo will be provided.
- DKS will perform up to two project site visits during design.

DELIVERABLES

- Illumination plans – 2 sheets
- Illumination details – 1 sheet
- Special Provisions
- Engineer's cost estimate

Camas Lake Road and Sierra Street Final Design
Proposed budget by task - DKS Associates
9/26/2024

	PIC	QA/QC	PM	DE	CAD	Admin	DKS		
	$300	$260	$245	$170	$145	$150	**Labor**	**Expenses***	**Total**
Task 1: Project Coordination and Meetings	1		19	9		3	$6,935	$100	**$7,035**
Task 2: Roundabout Design Support	1	1	8	20			$5,920	$0	**$5,920**
Task 3: Lighting Design	1	2	20	32	16	1	$13,630	$200	**$13,830**
Total	**3**	**3**	**47**	**61**	**16**	**4**	**$26,485**	**$300**	**$26,785**

Legend:
PIC = Principal-in-Charge (Grade 50)
QA/QC = Quality Engineer (Grade 42)
PM = Project Manager (Grade 39)
DE= Design Engineer (Grade 24)
CAD = Drafter (Grade 19)
Admin = Project Administrator (Tech X)

EXHIBIT "B"

Appendix E

Structural Engineering

Consor

SCOPE OF WORK

Based on the information provided by MacKay Sposito and our experience from similar projects, Consor has established the following scope of work and Deliverables for the Lake Sierra Intersection project. See attached 30% Design Exhibit for assumptions on wall lengths and heights.

Task 1.0: PROJECT MANAGEMENT

Consor will provide project management tasks as follows:

Task 1.1: PROJECT MANAGEMENT

Consor's project manager will coordinate between all team members to monitor and ensure progress, adherence to the project schedule, proper resource assignments, and they will communicate regularly. The project manager will review and send monthly invoices to MacKay Sposito with a progress report on that month's work. We have assumed the preliminary design phase for the project will last 10 months.

Task 1.2: PROJECT MEETINGS

Consor will attend 5 phone conference meetings with MacKay Sposito to confirm that the project is on schedule and task. We assume that MacKay Sposito will provide agendas and meeting minutes for the meetings.

Task 1 Deliverables

- Monthly Progress Reports (assume 10)
- Meeting Attendance and Meeting Notes (assume 5 virtual meetings)

Task 2 : PRELIMINARY ENGINEERING

The Consor team will perform the engineering services for the preliminary design of two (2) retaining walls.

TASK 2.1: KICK-OFF MEETING

Consor's project engineer will attend a virtual kick-off meeting with MacKay Sposito's project manager, project engineer, and geotechnical engineer.

TASK 2.2: STRUCTURES DESIGN (60% PS&E)

Consor will be using WSDOT Standard Plans to design the two retaining walls. As shown on the Concept Design Exhibit, reinforced concrete retaining wall and MSE wall with a rail/safety barrier on top will be utilized for walls No.1 and 2, respectively. Consor will evaluate constructability, economic and safety issues, wall/footing drainage, and anticipated design exceptions (if any) and assumes that MacKay Sposito will take the lead on evaluating traffic impacts, ROW impacts, environmental impacts, utility impacts, and surface drainage. Consor has assumed that MacKay Sposito will provide topographic survey, ROW limits, utility, and roadway design base mapping (including grading at the wall locations) to our team in CAD format (AutoCAD Civil 3D).

We anticipate the following sheets for each wall location:

- Retaining Wall General Plan
- General Notes
- Retaining Wall Details
- Rail/Safety Barrier

TASK 2.3: CONSTRUCTION QUANTITIES & ESTIMATE

Consor will prepare a detailed Construction Cost Estimate. The estimate will be comprised of unit prices based on detailed quantity calculations. Construction costs for the estimate will be developed using current bid results from similar projects, WSDOT database information along with prices from WSDOT latest Construction Cost Manual.

TASK 2.4: DRAFT SPECIFICATIONS

For the 60% milestone, Consor will provide a list of anticipated technical special provisions developed based on the 2024 WSDOT General Special Provisions . The list will be based on the bid items listed and the estimate.

TASK 2.5: 60% SUBMITTAL (UNCHECKED DETAILS)

All documents submitted to MacKay Sposito will show the name of the preparer and the date of preparation. Plans will also include a graphical scale. The plan sheets will be prepared in English units and will be consistent with WSDOT's Standard Plans. Plan sheets will be drafted using WSDOT standards with AutoCAD. The 60% plans will clearly identify any required permanent and temporary ROW acquisition or construction easement needs.

TASK 2 Deliverables

- Kick off meeting attendance - virtual

- 60% Plans (PDF)
- 60% Cost Estimate (PDF and Excel)
- List of Technical Special Provisions (MS Word)

TASK 3: FINAL DESIGN

The Consor team will begin the Final Design phase of the project upon approval of the 60% PS&E submittal.

TASK 3.1: 90% PS&E

TASK 3.1.1: DESIGN CHECK

After Consor receives the City and MacKay Sposito comments on the 60% plans, a design check will commence by engineers not yet involved in the project. The designers and checkers will come to an agreement on any discrepancies. Consor will incorporate check comments as well as the City and MacKay Sposito comments and submit responses in writing.

TASK 3.1.2: QUANTITIES CHECK & REVISED ESTIMATE

Quantity calculations will be reviewed and compared to the quantity calculations that were performed for the 60% submittal. Any discrepancies between the two quantity calculations will be resolved prior to revising the estimate.

TASK 3.1.3: DRAFT SPECIFICATIONS

The draft Technical Special Provisions will be developed after the design check is complete. Consor will develop the bid item list, list of required WSDOT Standard plans, and technical special provisions.

TASK 3.2: FINAL PS&E

Any remaining comments from the City and MacKay Sposito will be resolved and the plans, specifications, and estimate will be finalized. All other conflicts will be resolved via telephone as necessary. All plans and project special provisions cover sheet will be signed by the civil engineer (registered in the Washington State) in responsible charge of the design

Task 3 Deliverables

- 90% Plans (PDF)
- 90% Cost Estimate (PDF and Excel)

- 90% Technical Special Provisions (MS Word)
- Check Structural Calculations (PDF)
- Quantity Take and Check Calculations (PDF)
- 100% PS&E, Signed Structural Calculations
- Final Signed PS&E

Lake Road/Sierra Street Roundabout
MacKay Sposito
PROPOSED FEE ESTIMATE

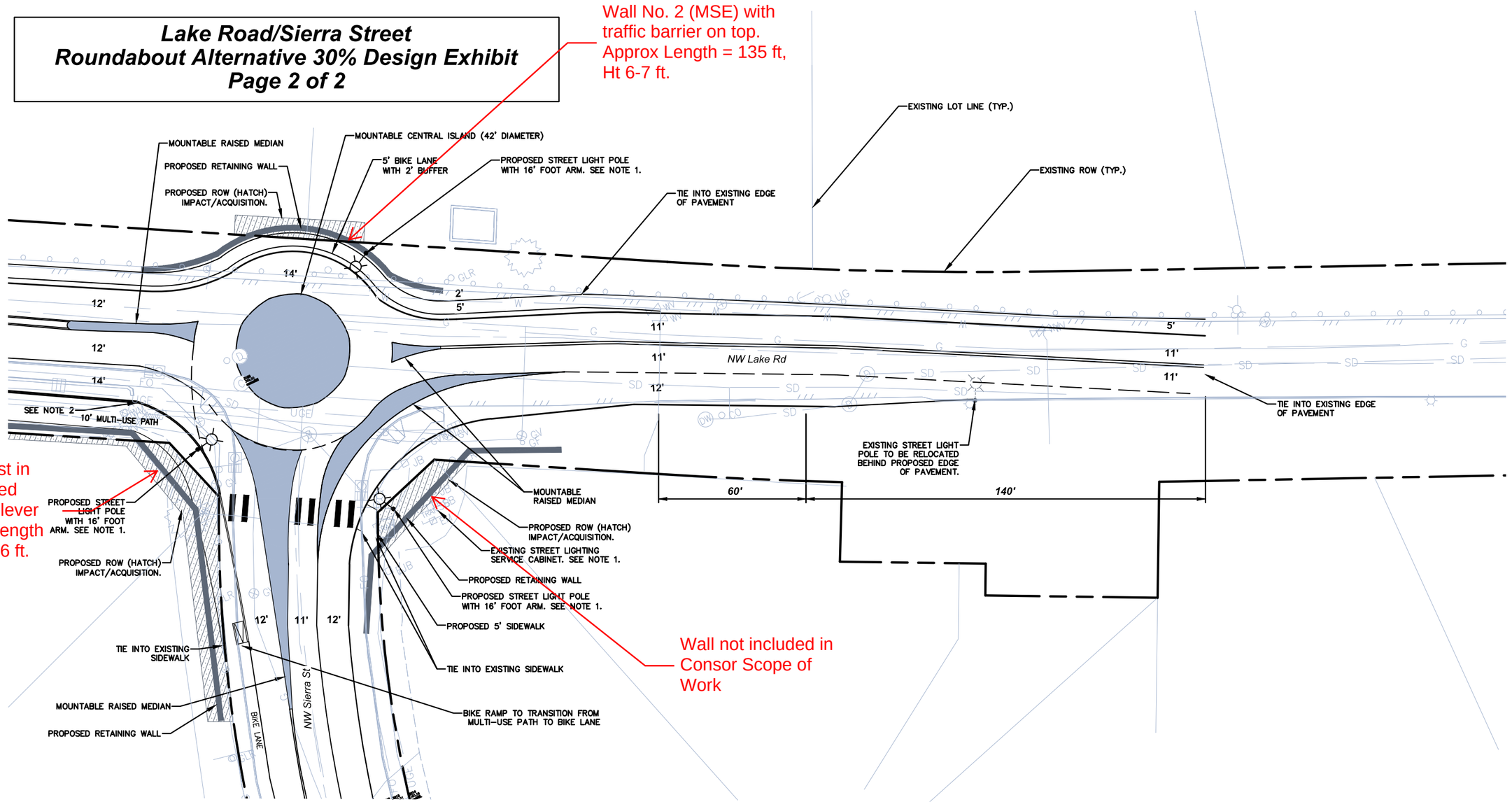
	Principal Engineer III	Technician IV	Professional Engineer VII	Professional Engineer III	Hours	Labor	Expenses	Total
	$293	$185	$227	$186				
Average Billing Rate Estimated per Classification/Staff	$293	$185	$227	$186				
Staff Name	MorganDac	ChernishoffSer	DehkharghanianSam	Yugar AriasSer				
Task 1 - Project Management								
Task 1.1 - Project Management	2		6		8	$ 1,948	$ -	$ 1,948
Task 1.2 - Project Meetings			6		6	$ 1,362	$ -	$ 1,362
Task 1 Subtotal	**2**	**0**	**12**	**0**	**14**	**$ 3,310**	**$ -**	**$ 3,310**
Task 2 - Structures Design (60% PS&E)								
Task 2.1 - Kick off meeting			2	2	4	$ 826	$ -	$ 826
Task 2.2 - Structures Design (60% PS&E)		60	6	24	90	$ 16,926	$ -	$ 16,926
Task 2.3 - Construction Quantities & Estimate			8	8	16	$ 3,304	$ -	$ 3,304
Task 2.4 - Draft Specifications			4	8	12	$ 2,396	$ -	$ 2,396
Task 2.5 - 60% Submittal (Unchecked Details)		8	4	8	20	$ 3,876	$ -	$ 3,876
Task 2 Subtotal	**0**	**68**	**24**	**50**	**142**	**$ 27,328**	**$ -**	**$ 27,328**
Task 3 - Final Design								
Task 3.1 - 90% PS&E		24	8	16	48	$ 9,232	$ -	$ 9,232
Task 4.1.1 - Design Check			16		16	$ 3,632	$ -	$ 3,632
Task 4.1.2 - Quantities Check and Revised Estimate			8	8	16	$ 3,304	$ -	$ 3,304
Task 4.1.3 - Draft Specifications			8	12	20	$ 4,048	$ -	$ 4,048
Task 3.2 - Final PS&E	8	16	4	8	36	$ 7,700	$ -	$ 7,700
Task 3 Subtotal	**8**	**40**	**44**	**44**	**136**	**$ 27,916**	**$ -**	**$ 27,916**
TOTAL - ALL TASKS	***10***	***108***	***80***	***94***	***292***	***$ 58,554***	***$ -***	***$ 58,554***

Lake Road/Sierra Street
Roundabout Alternative 30% Design Exhibit
Page 2 of 2

Wall No. 2 (MSE) with traffic barrier on top. Approx Length = 135 ft, Ht 6-7 ft.

Wall No. 1 (Cast in Place Reinforced Concrete Cantilever wall). Approx Length = 300 ft, Ht 5 - 6 ft.

Wall not included in Consor Scope of Work



NOTES

1. ALL PROPOSED STREETLIGHTS WILL BE POWERED VIA EXISTING STREET LIGHTING SERVICE CABINET. ADDITIONAL INVESTIGATION WILL BE REQUIRED TO DETERMINE IF THIS IS POSSIBLE.
2. END OF 125' TAPER.

0 40 80

SCALE: 1" = 40'

Intersection Light Level Targets (Roundabout Alternative)				
Intersection	Target		Proposed	
	Avg Illuminance (fc)	Uniformity (Avg/Min)	Avg Illuminance (fc)	Uniformity (Avg/Min)
Lake Rd/Sierra St	1.4	3	1.9	2

EXHIBIT "B"

APPENDIX F

Right of Way

UFS

TASK: Right of Way

Consultant shall provide labor, equipment and materials to acquire seven property acquisitions for the City of Camas. The City and MacKay Sposito will provide the property owner list, maps, descriptions and documents needed.

R/W activities shall confirm to the standards contained in the Uniform Act of 1970 and amendments, the laws of the State of Washington and City Policies and Procedures.

Subtask 1 – Preliminary Title Reports

The consultant will obtain preliminary title reports for each property acquisition. The consultant will review each preliminary title report for encumbrances, liens, or defects.

Assumptions
5 property acquisitions

Deliverables
5 preliminary title reports

Subtask 3 – Appraisals and Appraisal Reviews. NOT INCLUDED, TO BE CONTRACTED WITH FUTURE AMENDMENT

The consultant will use Washington Department of Transportation approved appraiser. The consultant shall provide one appraisal waiver for each ownership. The City will sign approval for each appraisal waiver..

Appraiser shall provide written notice to owners of a planned appraisal inspection and shall provide the property owner or designated representative, if any, an invitation to accompany the appraiser on any inspection of the property for appraisal purposes.

Appraisal waivers shall conform to WSDOT LPA guidelines.

No Project Funding estimate is included in this scope of services.

Assumptions
5 Appraisal Waivers

If under $15,000 estimated fee, Administrative Offer Summary's
No appraisal or appraisal review

Deliverables
5 Appraisals Waivers

Subtask 4 – Acquisition **NOT INCLUDED, TO BE CONTRACTED WITH FUTURE AMENDMENT**

The consultant will conduct negotiations on behalf of the City.

Consultant will research the ownership status of the parcel and any existing conditions impacting the parcel. Consultant will provide potential courses of action for obtaining clear title for the City.

Consultant will compile and/or prepare all essential documents to be submitted to owners using City approved documents. These include, but are not limited to project information letters, acquisition and relocation brochures, offer-benefit letters, acquisition summary statements, copy of the valuation, map of acquisition, and instruments of conveyance. Universal shall make all offers in person or by certified mail.

Consultant shall provide all property owners with:

A complete copy of the valuation that just compensation is based upon at the initiation of negotiations.

Consultant will prepare and maintain written diaries of negotiator contacts with property owners and tenants to document:

- efforts to achieve amicable settlements,
- owners' suggestions for changes in plans,
- responses to owners' counterproposals, etc.

Consultant will make every reasonable effort to acquire the ROW expeditiously by negotiation. Property owners must be given reasonable opportunity to consider the offer and present material the owner believes is relevant to determining the value of the property.

Assumptions

- City will pay closing and recording costs

Deliverables

- 5 completed negotiation packets with documents for recording.

Universal Field Services, Inc.
2659 Commercial Street S. Salem, OR
(503) 399-8002

Lake Rd/Sierra Intersection

Estimate prepared for MacKay Sposito

9/30/2024

Preliminary Services

Project Manager	1	Hours	$180.00	5	$900.00	
Sr. Title Specialist	1	Hours	$75.00	5	$375.00	
Preliminary Title Reports	1	Each	$400.00	5	$2,000.00	
ROW Funding Estimate						
Project Manager	7	Hours	$180.00		$1,260.00	
Sr. R/W Agent	8	Hours	$90.00		$720.00	
Total Preliminary ROW						**$5,255.00**

Appraisal Services - NOT INCLUDED TO BE CONTRACTED WITH FUTURE AMENDMENT

~~**Project Manager**~~	~~2~~	~~Hours~~	~~$180.00~~	~~4~~	~~$1,440.00~~	
~~**Appraisal Waivers**~~	~~1~~	~~Each~~	~~$2,000.00~~	~~4~~	~~$8,000.00~~	
~~**Total Appraisal Fee**~~						~~**$9,440.00**~~

Acquisition Services - NOT INCLUDED TO BE CONTRACTED WITH FUTURE AMENDMENT

~~**Project Manager**~~	~~2~~	~~Hours~~	~~$180.00~~	~~5~~	~~$1,800.00~~	
~~**Sr. R/W Agent**~~	~~30~~	~~Hours~~	~~$90.00~~	~~5~~	~~$13,500.00~~	
~~**Right of Way Tech**~~	~~4~~	~~Hours~~	~~$50.00~~	~~5~~	~~$1,000.00~~	
~~**Mileage**~~	~~1,500~~	~~Miles~~	~~$0.675~~		~~$1,012.50~~	
~~**Miscellaneous Expenses**~~					~~$300.00~~	
~~**Total Acquisition Consultant Estimate**~~						~~**$17,612.50**~~

Total Consultant Estimate **$5,255.00**

NOTES:

~~(1) Estimated number of parcels is 5. Changes in number of parcels will have an impact on the final costs. If the number of parcels is increased, the cost will increase.~~

~~(2) Estimate includes a minimum of three visits with the property owner. Universal reserves the right to use the Project Manger to acquire the property. The estimate will not be exceeded without the written permission of the City~~

(3) Mileage to be reimbursed at current IRS rate at time mileage is incurred. .

Valuation Fees would drop from $35,000 to $17780 if we can do the valuations as Appraisal Waivers (formerly AOS) Would not need appraisal reviews.

EXHIBIT "C"
CONSULTANT BILLING RATES

MacKay Sposito

Vancouver Office

18405 SE Mill Plain Boulevard, Suite 100 Vancouver, WA 98683
360.695.3411 www.mackaysposito.com

2024 HOURLY RATE SCHEDULE

Southern Washington

	Regular		Regular
Senior Principal	$346.00	Administrative Assistant	$106.00
Principal	$282.00	Clerical	$94.00
Engineering Manager	$240.00	Survey Manager	$220.00
Project Engineer	$202.00	Project Manager – Survey	$198.00
Engineer IV	$186.00	Land Surveyor IV	$178.00
Engineer III	$168.00	Land Surveyor III	$164.00
Engineer II	$156.00	Land Surveyor II	$156.00
Engineer I	$136.00	Land Surveyor I	$144.00
Project Manager – Design	$216.00	Survey Technician IV	$144.00
Project Controls Manager	$244.00	Survey Technician III	$126.00
Contract Administrator	$182.00	Survey Technician II	$118.00
Project Coordinator II	$144.00	Survey Technician I	$106.00
Project Coordinator I	$132.00	Survey Aid	$84.00
Design Technician IV	$160.00	Survey Party Chief	$156.00
Design Technician III	$148.00	Survey Party Chief – **Out of Town**	$161.00
Design Technician II	$140.00	Survey Instrument Person	$110.00
Design Technician I	$118.00	Survey Instrument Person – **Out of Town**	$115.00
Landscape Manager	$206.00	GIS Mapping Specialist	$156.00
Project Manager – Landscape	$178.00	GIS Mapping Specialist II	$164.00
Landscape Architect II	$160.00	Public Involvement Associate/Mgr.	$164.00
Landscape Architect I	$140.00	Public Involvement Coordinator	$110.00
Landscape Designer III	$132.00	Creative Designer	$106.00
Landscape Designer II	$122.00	Stormwater Analyst	$144.00
Landscape Designer I	$110.00	Environmental Manager II	$196.00
Land Development Manager	$252.00	Environmental Manager I	$174.00
Planning Manager	$228.00	Environmental Principal	$155.00
Project Manager – Planning	$200.00	Environmental Supervisor	$125.00
Senior Planner	$182.00	Environmental Stormwater Vac Operator	$125.00
Planner IV	$176.00	Environmental Stormwater Vac Crew	$115.00
Planner III	$168.00	Environmental Crew Lead	$105.00
Planner II	$146.00	Environmental Maintenance Technician	$95.00
Planner I	$132.00	Environmental Administrative	$100.00
Planning Technician	$126.00	Natural Resource Specialist IV	$156.00
Land Development Assistant	$106.00	Natural Resource Specialist III	$142.00
Accounting Manager	$216.00	Natural Resource Specialist II	$126.00
Project Accountant	$148.00	Natural Resource Specialist I	$116.00
Administrative Manager	$148.00	UAV Pilot	$160.00

The above rates cover salaries, overhead and profit. All other materials and expenses will be billed on an actual cost plus 10% basis. Overtime rates will be 1.5 times unless otherwise negotiated. These rates will be adjusted annually or as necessary to reflect market conditions. Sub-Consultants costs will be on actual cost plus 10% to compensate MacKay Sposito for Business Occupation Tax and administrative costs.

Per diem rates for travel within the continental United States will be billed in accordance with the rates published by the Office of Governmentwide Policy, General Services Administration (GSA) for the applicable fiscal year. Mileage will be billed in accordance with standard mileage rates published by the Internal Revenue Service.

Engineering categories are in accordance with ASCE Classifications. Rates detailed above do not apply to Federal or State contracts with specific Wage Determinations or mandated prevailing wage/fringe benefits minimum.

Staff Report

October 7, 2024 Council Workshop Meeting

343 Zone Reservoir Design Professional Services Agreement
Presenter: James Hodges, Project Manager
Time Estimate: Five minutes

Phone	Email
360.817.234	jhodges@cityofcamas.us

BACKGROUND: The Camas Water System Plan identifies the need to replace the existing Butler Reservoir which serves much of Downtown Camas. The reservoir was constructed in 1923 and has exceeded its predicted useful life. RH2 Engineers completed a siting analysis for the new reservoir in late 2023. The next step is to initiate an alternatives analysis that will confirm the location of the new reservoir and the type of reservoir needed.

SUMMARY: Based on review of competitive Statements of Qualifications, staff selected Gray & Osborne, Inc. (G&O) as the consultant for this project. The attached proposal from G&O in the amount of $157,097 provides for review of the siting analysis conclusions, initial topographical survey, geotechnical and archaeological studies, reservoir alternatives analysis, and other items.

Figure 1: Conceptual Image of new 343 Reservoir (photo from another municipality.)

BENEFITS TO THE COMMUNITY: This project will ultimately result in construction of a new 2.0-million-gallon water reservoir to replace the existing 100-year-old Butler Reservoir as identified in the Camas Water System Plan. The new reservoir will be designed to survive a significant earthquake and will provide reliable water storage for many decades.

POTENTIAL CHALLENGES: None

BUDGET IMPACT: The current biennial budget includes $750,000 from the Water Fund for this project. The subject PSA in the amount of $157,097 is the first step of designing a new reservoir.

RECOMMENDATION: Staff recommends this item be placed on the October 21, 2024 Council Consent Agenda for Council's consideration.

CITY OF CAMAS
PROFESSIONAL SERVICES AGREEMENT

616 NE 4th Avenue
Camas, WA 98607

PROJECT NO. W1010

343 Zone Reservoir Design

THIS AGREEMENT is entered into between the City of Camas, a municipal corporation, hereinafter referred to as "the City", and Gray & Osborne, Inc., hereinafter referred to as the "Consultant", in consideration of the mutual benefits, terms, and conditions hereinafter specified.

1. Project Designation. The Consultant is retained by the City to perform professional services in connection with the project designated as the **343 Zone Reservoir Design**.

2. Scope of Services. Consultant agrees to perform the services, identified on Exhibit "A" attached hereto, including the provision of all labor, materials, equipment, supplies and expenses.

3. Time for Performance. Consultant shall perform all services and provide all work product required pursuant to this agreement by no later than July 31, 2025, unless an extension of such time is granted in writing by the City, or the Agreement is terminated by the City in accordance with Section 18 of this Agreement.

4. Payment. The Consultant shall be paid by the City for completed work and for services rendered for an amount not to exceed $157,097.00 under this agreement as follows:

   a. Payment for the work provided by Consultant shall be made as provided on Exhibit "B" attached hereto, provided that the total amount of payment to Consultant shall not exceed the amounts for each task identified in Exhibit “A” (Scope of Services) inclusive of labor, materials, equipment supplies and expenses. Billing rates as identified in Exhibit “C”.

   b. The Consultant may submit vouchers to the City once per month during the progress of the work for payment for project completed to date. Vouchers submitted shall include the Project Number designated by the City and noted on this agreement. Such vouchers will be checked by the City, and upon approval thereof, payment will be made to the Consultant in the amount approved. Payment to the Consultant of partial estimates, final estimates, and retained percentages shall be subject to controlling laws.

   c. Final payment of any balance due the Consultant of the total contract price earned will be made promptly upon its ascertainment and verification by the City after the completion of the work under this agreement and its acceptance by the City.

   d. Payment as provided in this section shall be full compensation for work performed, services rendered and for all materials, supplies, equipment and incidentals necessary to complete the work.

   e. The Consultant's records and accounts pertaining to this agreement are to be kept available for inspection by representatives of the City and of the State of Washington for a period of three (3) years after final payment. Copies shall be made available upon request.

5. Ownership and Use of Documents. All documents, drawings, specifications, electronic copies and other materials produced by the Consultant hereinafter "Work Product" in connection with the services rendered under this Agreement shall be the property of the City whether the project for which they are made is executed or not. The Consultant shall be permitted to retain copies, including reproducible copies, of drawings and specifications for information, reference and use in connection with Consultant's endeavors. The City agrees, to the fullest extent permitted by law, to indemnify and hold the Consultant harmless from any claim, liability or cost (including reasonable attorney's fees and defense costs) arising or allegedly arising out of any reuse or modification of the Work Product by the City or any person or entity that obtains the Work Product from or through the City.

   All work product which may be produced or modified by the Consultant while performing the Services shall belong to the City, upon full payment of all monies owed to the Consultant under this agreement. Upon written notice by the City during the Term of this Agreement or upon the termination or cancellation of this Agreement, the Consultant shall deliver all copies of any such work product remaining in the possession of the Consultant to the City.

6. Compliance with Laws. Consultant shall, in performing the services contemplated by this agreement, faithfully observe and comply with all federal state and local laws, ordinances, and regulations, applicable to the services to be rendered under this agreement. Compliance shall include, but not limited to, 8 CFR Part 274a – Control of Employment of Aliens, § 274a.2 Verification of identity and employment authorization.

7. Indemnification. Consultant shall defend, indemnify and hold the City of Camas, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or resulting from the negligent acts, errors or omissions of the Consultant in performance of this Agreement, except for injuries and damages caused by the sole negligence of the City.

   However, should a court of competent jurisdiction determine that this Agreement is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Consultant and the City, its officers, officials and employees, the Consultant's liability, hereunder shall be only to the extent of the Consultant's negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the Consultant's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this Agreement.

8. Consultant's Liability Insurance.

   a. Insurance Term. The Consultant shall procure and maintain for the duration of this Agreement, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Consultant, its agents, representatives, or employees.

   b. No Limitation. Consultant's maintenance of insurance as required by the Agreement shall not be construed to limit the liability of the Consultant to the coverage provided by such insurance, or otherwise limit the City's recourse to any remedy available at law or in equity.

   c. Minimum Scope of Insurance. Consultant shall obtain insurance of types and coverage described below:

      1. Automobile Liability insurance with a minimum combined single limit for bodily injury and property damage of $1,000,000.00 per accident. Automobile Liability insurance covering all owned, non-owned, hired, and leased vehicles. Coverage shall be at least as broad as Insurance Services Office (ISO) form CA 00 01.

2. Commercial General Liability insurance shall be written with limits no less than $2,000,000.00 each occurrence, $2,000,000.00 general aggregate. Commercial General Liability insurance shall be at least as broad as ISO occurrence form CG 00 01 and shall cover liability arising from premises, operations, stop-gap independent Consultants and personal injury and advertising injury. The Public Entity shall be named as an additional insured under the Consultant's Commercial General Liability insurance policy with respect to the work performed for the Public Entity using an additional insured endorsement at least as broad as ISO endorsement form CG 20 26.

3. Professional Liability insurance appropriate to the consultant's profession. Professional Liability insurance shall be written with limits no less than $2,000,000.00 per claim and $2,000,000.00 policy aggregate limit.

4. Workers' Compensation coverage as required by Industrial Insurance laws of the State of Washington.

5. Verification. Consultant shall furnish the City with original certificates and a copy of the amendatory endorsements, including but not necessarily limited to the additional insured endorsement, showing the City of Camas as a named additional insured, evidencing the Automobile Liability and Commercial General Liability of the Consultant before commencement of the work.

d. Other Insurance Provision. The Consultant's Automobile Liability and Commercial General Liability insurance policies are to contain or be endorsed to contain that they shall be primary insurance as respect to the City. Any Insurance, self-insurance, or self-insured pool coverage maintained by the City shall be excess of the Consultant's insurance and shall not contribute with it.

e. Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best rating of not less than A: VII.

f. Verification of Coverage. Consultant shall furnish the City with original certificates and a copy of the amendatory endorsements, including but not necessarily limited to the additional insured endorsement, evidencing the insurance requirements of the Agreement before commencement of the work.

g. Notice of Cancellation. The Consultant shall provide the City with written notice of any policy cancellation within two business days of their receipt of such notice.

h. Failure to Maintain Insurance. Failure on the part of the Consultant to maintain the insurance as required shall constitute a material breach of contract, upon which the City may, after giving five business days' notice to the Consultant to correct the breach, immediately terminate the Agreement or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the City on demand, or at the sole discretion of the City, offset against funds due the Consultant from the City.

9. Independent Consultant. The Consultant and the City agree that the Consultant is an independent Consultant with respect to the services provided pursuant to this agreement. Nothing in this Agreement shall be considered to create the relationship of employer and employee between the parties hereto.

Neither Consultant nor any employee of Consultant shall be entitled to any benefits accorded City employees by virtue of the services provided under this Agreement. The City shall not be responsible for withholding or otherwise deducting federal income tax or social security or for contributing to the state industrial insurance program, otherwise assuming the duties of an employer with respect to Consultant, or any employee of Consultant.

10. Covenant Against Contingent Fees. The Consultant warrants that he/she has not employed or retained any company or person, other than a bona fide employee working solely for the Consultant, to solicit or secure this contract, and that he has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the Consultant, any fee, commission, percentage, brokerage fee, gifts, or any other consideration contingent upon or resulting from the award or making of this contract. For breach or violation of this warranty, the City shall have the right to annul this contract without liability or, in its discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

11. Discrimination Prohibited. During the performance of this Agreement, the Consultant, for itself, its assignees, and successors in interest agrees to comply with the following laws and regulations:

- Title VI of the Civil Rights Act of 1964
  (42 USC Chapter 21 Subchapter V Section 2000d through 2000d-4a)
- Federal-aid Highway Act of 1973
  (23 USC Chapter 3 Section 324)
- Rehabilitation Act of 1973
  (29 USC Chapter 16 Subchapter V Section 794)
- Age Discrimination Act of 1975
  (42 USC Chapter 76 Section 6101 et seq.)
- Civil Rights Restoration Act of 1987
  (Public Law 100-259)
- Americans with Disabilities Act of 1990
  (42 USC Chapter 126 Section 12101 et. seq.)
- 49 CFR Part 21
- 23 CFR Part 200
- RCW 49.60.180

In relation to Title VI of the Civil Rights Act of 1964, the Consultant is bound by the provisions of Exhibit "D" attached hereto and by this reference made part of this Agreement, and shall include the attached Exhibit "D" in every sub-contract, including procurement of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto.

12. Confidentiality. The Consultant agrees that all materials containing confidential information received pursuant to this Agreement shall not be disclosed without the City's express written consent. Consultant agrees to provide the City with immediate written notification of any person seeking disclosure of any confidential information obtained for the City. The restrictions on the use and disclosure of the confidential information shall not apply to information which (a) was known to the Consultant before receipt of same from the City; or (b) becomes publicly known other than through the Consultant; or (c) is disclosed pursuant to the requirements of a governmental authority or judicial order, but only to the extent required to comply with the said requirements of the government authority or judicial order.

13. Work Product. All work product, including records, files, documents, plans, computer disks, magnetic media or material which may be produced or modified by the Contractor while performing the Services shall belong to the City, upon full payment of all monies owed to the Contractor under this agreement. Upon written notice by the City during the Term of this Agreement or upon the termination or cancellation of this Agreement, the Contractor shall deliver all copies of any such work product remaining in the possession of the Contractor to the City.

14. Certification Regarding Debarment, Suspension, or Ineligibility and Voluntary Exclusion—Primary and Lower Tier Covered Transactions.

a. The Consultant, defined as the primary participant and its principals, certifies by signing these General Terms and Conditions that to the best of its knowledge and belief that they:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal or State department or agency.
2. Have not within a three-year period preceding this contract, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public or private agreement or transaction, violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiving stolen property, making false claims, or obstruction of justice;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this section; and
4. Have not within a three-year period preceding the signing of this contract had one or more public transactions (federal, state, or local) terminated for cause of default.

b. Where the Consultant is unable to certify to any of the statements in this contract, the Consultant shall attach an explanation to this contract.

c. The Consultant agrees by signing this contract that it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the City.

d. The Consultant further agrees by signing this contract that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," as follows, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions:

Lower Tier Covered Transactions

1. The lower tier Consultant certifies, by signing this contract that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
2. Where the lower tier Consultant is unable to certify to any of the statements in this contract, such Consultant shall attach an explanation to this contract.

e. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, person, primary covered transaction, principal, and voluntarily excluded, as used in this section, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the City for assistance in obtaining a copy of these regulations.

15. Intellectual Property.

a. Warranty of Non-infringement. Consultant represents and warrants that the Consultant is either the author of all deliverables to be provided under this Agreement or has obtained and holds all rights necessary to carry out this Agreement. Consultant further represents and warrants that the Services to be provided under this Agreement do not and will not infringe any copyright, patent, trademark, trade secret or other intellectual property right of any third party.

b. Rights in Data. Unless otherwise provided, data which originates from this Agreement shall be a "work for hire" as defined by the U.S. Copyright Act of 1976 and shall be owned by the City. Data shall include, but not be limited to reports, documents, pamphlets, advertisements, books,

magazines, surveys, studies, films, tapes, and sound reproductions. Ownership includes the right to copyright, patent, register, and the ability to transfer these rights.

16. Assignment. The Consultant shall not sublet or assign any of the services covered by this agreement without the express written consent of the City.

17. Non-Waiver. Waiver by the City of any provision of this agreement or any time limitation provided for in this agreement shall not constitute a waiver of any other provision.

18. Conflict of Interest. It is recognized that Consultant may or will be performing professional services during the Term for other parties; however, such performance of other services shall not conflict with or interfere with Consultant's ability to perform the Services. Consultant agrees to resolve any such conflicts of interest in favor of the City. Consultant confirms that Consultant does not have a business interest or a close family relationship with any City officer or employee who was, is, or will be involved in the Consultant's selection, negotiation, drafting, signing, administration, or evaluating the Consultant's performance.

19. City's Right to Terminate Contract. The City shall have the right at its discretion and determination to terminate the contract following ten (10) calendar days written notice. The consultant shall be entitled to payment for work thus far performed and any associated expenses, but only after the city has received to its satisfaction the work completed in connection with the services to be rendered under this agreement.

20. Notices. Notices to the City of Camas shall be sent to the following address:

Jim Hodges
City of Camas
616 NE 4th Avenue
Camas, WA 98607
PH: 360-817-7234
EMAIL: jhodges@cityofcamas.us

Notices to Consultant shall be sent to the following address:

Russ Porter
Gray & Osborne, Inc.
1130 Rainier Ave. S., Suite 300
Seattle, WA 98144
PH: 206-284-0860
EMAIL: rporter@g-o.com

21. Integrated Agreement. This Agreement together with attachments or addenda, represents the entire and integrated agreement between the City and the Consultant and supersedes all prior negotiations, representations, or agreements written or oral. This agreement may be amended only by written instrument signed by both City and Consultant. Should any language in any Exhibits to this Agreement conflict with any language in this Agreement, the terms of this Agreement shall prevail. Any provision of this Agreement that is declared invalid, inoperative, null and void, or illegal shall in no way affect or invalidate any other provision hereof and such other provisions shall remain in full force and effect.

22. Arbitration Clause. If requested in writing by either the City or the Consultant, the City and the Consultant shall attempt to resolve any dispute between them arising out of or in connection with this Agreement by first entering into structured non-binding negotiations with the assistance of a mediator on a without prejudice basis. The mediator shall be appointed by agreement of the parties. If a dispute cannot be settled within a period of thirty (30) calendar days with the mediator, if mutually agreed, the dispute shall be referred to arbitration in the Portland USA&M office in

accordance with the applicable United States Arbitration and Mediation Rules of Arbitration. The arbitrator's decision shall be final and legally binding and judgement be entered thereon.

Each party shall be responsible for its share of the arbitration fees in accordance with the applicable Rules of Arbitration. In the event a party fails to proceed with arbitration, unsuccessfully challenges the arbitrator's award, or fails to comply with the arbitrator's award, the other party is entitled to costs of suit, including reasonable attorney's fee for having to compel arbitration or defend or enforce award.

23. Governing Law. This Agreement shall be governed by and interpreted in accordance with the laws of the State of Washington.

24. Venue. The venue for any dispute related to this Agreement or for any action to enforce any term of this Agreement shall be Clark County, Washington.

25. Remedies Cumulative. Any remedies provided for under the terms of this Agreement are not intended to be exclusive but shall be cumulative with all other remedies available to the City at law or in equity.

26. Counterparts. Each individual executing this Agreement on behalf of the City and Consultant represents and warrants that such individual is duly authorized to execute and deliver this Agreement. This Agreement may be executed in any number of counterparts, which counterparts shall collectively constitute the entire Agreement.

DATED this _____ day of _____, 20__.

CITY OF CAMAS:	GRAY & OSBORNE, INC.: Authorized Representative
By _____	By _____
Print Name _____	Print Name _____
Title _____	Title _____
	Date _____

EXHIBIT "A"
SCOPE OF SERVICES

EXHIBIT A

SCOPE OF WORK

CITY OF CAMAS
NEW 343 RESERVOIR

BACKGROUND

The City of Camas has asked Gray & Osborne to prepare a Scope of Work for a Predesign Report for a new reservoir near the City Cemetery. Additional storage was recommended in the *2019 Water System Plan* and the City had some preliminary work completed on siting the new reservoir. As part of this predesign effort, the City would like the site location to be finalized, along with the optimal reservoir hydraulic grade and type. Preliminary analysis indicates that the tank could serve the entire 343 Zone, similar to the existing Butler Reservoir, or it could serve the Downtown Zone at a hydraulic grade of approximately 260 feet. As part of the analysis, the effect of the proposed reservoir on existing system components, including flow capacity from the Washougal Wellfield, input flow to the Angelo Booster Station, and flows to and from the Butler Reservoir area, will be analyzed along with options for the existing Butler Reservoir. Gray & Osborne has prepared the following Scope of Work to assist the City in its endeavor.

PROPOSED SCOPE OF WORK

Gray & Osborne proposes to provide the necessary engineering services to complete this project. The Scope of Work to be performed under this Contract includes the following Tasks.

Task 1 – Project Management and Oversight

Provide overall project management and oversight as follows.

A. Ensure sufficient staff resources to dedicate to the project.

B. Manage project budget and schedule.

C. Prepare and provide monthly Progress Reports.

<u>Deliverables</u>

1. Progress Reports.

Task 2 – Review Background Information

This Task includes the following.

A. Review existing City information including the *2019 Water System Plan* and *2024 RH2 Reservoir Siting Report*.

B. Verify required reservoir sizing requirements.

Deliverables

None.

Task 3 – Perform Site and System Analysis

This Task is to perform the following analysis.

A. Using the City's hydraulic model, verify the existing conditions for the transmission main between the Washougal Wellfield and the Butler Reservoir by comparing model results with pressure readings obtained by flowing Washougal Wellfield wells and monitoring pressures along the transmission main alignment.

B. The calibrated model will be used to investigate the following options.

- A new 343 Zone elevated reservoir at the cemetery site.
- A new 260 Zone reservoir at the cemetery site.
- A new 343 Zone reservoir at the Butler site.

C. The analysis in Item B will document the effect of each option on the general flows to the Upper 343 and Downtown 343(260) Zones, the output of the Washougal Wellfield, and flows to the Angelo Booster Station and the Butler Reservoir area. Gray & Osborne will provide this information to Carollo in their design of the Angelo Booster Improvements.

Deliverables

1. A draft technical memorandum describing the reservoir site and zone analysis with a discussion of the effects of each. A recommended option will be included. After City review, Gray & Osborne will prepare a final memorandum.

Task 4 – Reservoir Type Analysis

This Task is to perform the following analysis.

A. The recommended alternative from Task 3 will be used to compare reservoir construction types including welded steel, elevated, and concrete.

B. A 50-year life cycle cost will be determined for each alternative.

C. Gray & Osborne will provide a recommended alternative.

Deliverables

1. A draft technical memorandum describing the reservoir construction type analysis, with a recommended option. After City review, Gray & Osborne will prepare a final memorandum.

Task 5 – Preliminary Design Site Tasks

This Task is to provide the following preliminary Site Tasks.

A. Geotechnical Report (performed by Subconsultant PanGEO, Inc.) – For the purposes of this Proposal, the Geotechnical Report will include geotechnical information for the City's parcel north of the cemetery. The Report will include 10 to 15 test pits and four borings to ensure that representative geotechnical information is obtained for the entire site parcel.

B. Level 1 Assessment (performed by Subconsultant PanGEO, Inc.) – A Level 1 Environmental Assessment will be performed at the site north of the cemetery to ascertain if any of the materials that have been placed at the site preclude the use of the site as a tank location and if any remediation or mitigation is required.

C. Archaeological predetermination (performed by Subconsultant Archaeological Investigations Northwest (AINW)) – An archaeological predetermination will be performed by AINW, using up to five shovel tests in the more undisturbed southern portion of the parcel, as well as observation of the geotech test pits. AINW will prepare a report of their findings to the City and the Department of Archaeological and Historical Preservation (DAHP). If any artifacts are found, a survey will be required that would be conducted under a separate Contract.

D. Survey (performed by Subconsultant KC Development, LLC) – The site will be surveyed to establish topography, property boundaries, and any other relevant features. The survey will include research to determine the ownership of the diagonal parcel that appears to bisect the City's parcel on County GIS.

Task 6 – Prepare Project Report

This Task is to prepare a Project Report documenting the work in Tasks 2 and 4, meeting the requirements of WAC 246-290-110.

These Tasks will include the following.

A. Obtain geotechnical information. Coordinate site geotechnical Subconsultant work with City and review the Final Report. The findings of the report will be summarized in the Project Predesign Report.

B. Reservoir sizing evaluation.

C. Site layout with piping design.

D. Preliminary structural design.

E. Preliminary site stormwater system design and report.

F. Reservoir appurtenances.

G. Electrical and telemetry requirements (coordinated with S&B Stead and Associates).

H. Project schedule.

I. Predesign level cost estimate.

J. Conceptual design including the following.

- Site Plan.
- Site piping, including existing and proposed water main piping and proposed storm drainage.
- Reservoir Plan and Sections.
- Electrical, controls, and telemetry.

- Site improvements, landscaping, and security features.

K. Provide Draft Report for City review.

L. Meet with City staff after a minimum 2-week review period to discuss the Draft Report.

M. Prepare final report incorporating City comments.

Deliverables

1. Draft Report.

2. Final Report.

Task 7 – Quality Assurance/Quality Control

A. Oversee one, in-house, quality assurance/quality control meeting at Gray & Osborne's office prior to submitting the Draft Technical Memoranda and the Report to the City. The meetings will include senior project staff and selected design team members.

Task 8 – Meetings and Site Visits

A. One initial site visit to discuss the project.

B. Virtual meeting to discuss hydraulic testing (hydraulic testing visits included in Task 3).

C. One Draft Report review meeting.

ASSUMPTIONS

1. City staff will be available for onsite inspection and discussions.

2. City staff will be available to allow site access for Subconsultants.

3. City staff will be available to assist in hydrant testing. Two Gray & Osborne personnel will be available with Gray & Osborne testing equipment to perform hydrant testing. For the purposes of this Scope of Work, 2 days of testing are assumed.

ANTICIPATED SCHEDULE

Notice to Proceed.....October 2024
Perform Site Inspection and Hydrant Testing
Perform Survey, Environmental Geotechnical,
and Archaeological.....November/December 2024
Draft Report.....April 2025
Final Report.....July 2025

EXHIBIT “B”
COSTS FOR SCOPE OF SERVICES

EXHIBIT B

ENGINEERING SERVICES
SCOPE AND ESTIMATED COST

City of Camas - New 343 Reservoir

Tasks	Principal Hours	Project Manager Hours	Project Engineer Hours	Civil Engineer Hours	Structural Engineer Hours	Electrical Engineer Hours	Environmental Technician/ Specialist Hours	Engineer-In-Training Hours	AutoCAD/ GIS Technician/ Engineer Intern Hours
1 Provide Project Management		8							
2 Review Background Information		2	4	4				4	
3 Perform Site and System Analysis	2	6	24	80				40	
4 Reservoir Type Analysis		2	16	24				16	
5 Preliminary Design Site Tasks		6	6	6					8
6 Prepare Project Report	4	12	40	80	6	6	12	24	24
7 Complete Quality Assurance/Quality Control	4	4	4	8				4	
8 Conduct Meetings and Site Visits		8	4	4				4	
Hour Estimate:	10	48	98	206	6	6	12	92	32
Fully Burdened Billing Rate Range:*	$165 to $265	$148 to $265	$130 to $200	$115 to $190	$125 to $232	$125 to $232	$100 to $185	$105 to $180	$65 to $180
Estimated Fully Burdened Billing Rate:*	$265	$255	$190	$180	$230	$230	$175	$160	$140
Fully Burdened Labor Cost:	$2,650	$12,240	$18,620	$37,080	$1,380	$1,380	$2,100	$14,720	$4,480

Total Fully Burdened Labor Cost:	$	94,650
Direct Non-Salary Cost:		
Mileage & Expenses (Mileage @ current IRS rate)	$	500
Subconsultant:		
Archaeological Investigations Northwest	$	9,998
Survey	$	6,240
Environmental	$	10,000
PanGEO, Inc.	$	30,077
Subconsultant Overhead (10%)	$	5,632
TOTAL ESTIMATED COST:	**$**	**157,097**

* Actual labor cost will be based on each employee's actual rate. Estimated rates are for determining total estimated cost only. Fully burdened billing rates include direct salary cost, overhead, and profit.

EXHIBIT "C"
BILLING RATES

EXHIBIT "C"

GRAY & OSBORNE, INC.

PROFESSIONAL ENGINEERING SERVICES CONTRACT
FULLY BURDENED BILLING RATES*
THROUGH JUNE 30, 2025**

Employee Classification	Fully Burdened Billing Rates		
AutoCAD/GIS Technician/Engineering Intern	$ 65.00	to	$180.00
Electrical Engineer	$125.00	to	$232.00
Structural Engineer	$125.00	to	$232.00
Environmental Technician/Specialist	$100.00	to	$185.00
Engineer-In-Training	$105.00	to	$180.00
Civil Engineer	$115.00	to	$190.00
Project Engineer	$130.00	to	$200.00
Project Manager	$148.00	to	$265.00
Principal-in-Charge	$165.00	to	$265.00
Resident Engineer	$125.00	to	$200.00
Field Inspector	$115.00	to	$190.00
Field Survey (2 Person)***	$200.00	to	$315.00
Field Survey (3 Person)***	$330.00	to	$425.00
Professional Land Surveyor	$125.00	to	$208.00
Secretary/Word Processor***	N/A		

* Fully Burdened Billing Rates include overhead and profit.

** Updated annually, together with the overhead.

All actual out-of-pocket expenses incurred directly on the project are added to the billing. The billing is based on direct out-of-pocket expenses; meals, lodging, laboratory testing and transportation. The transportation rate is $0.67 per mile or the current maximum IRS rate without receipt IRS Section 162(a).

*** Administration expenses include secretarial and clerical work; GIS, CADD, and computer equipment; owned survey equipment and tools (stakes, hubs, lath, etc. – Note: mileage billed separately at rate noted); miscellaneous administration tasks; facsimiles; telephone; postage; and printing costs, which are less than $150.

EXHIBIT "D"
TITLE VI ASSURANCES

During the performance of this AGREEMENT, the CONSULTANT, for itself, its assignees, and successors in interest agree as follows:

1. Compliance with Regulations: The CONSULTANT shall comply with the Regulations relative to non-discrimination in federally assisted programs of the AGENCY, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the "REGULATIONS"), which are herein incorporated by reference and made a part of this AGREEMENT.

2. Equal Opportunity Employer: The CONSULTANT, In all services, programs, activities, hiring, and employment made possible by or resulting from this Agreement or any subcontract, there shall be no discrimination by Consultant or its selection and retention of sub-consultants, including procurement of materials and leases of equipment, of any level, or any of those entities employees, agents, sub-consultants, or representatives against any person because of sex, age (except minimum age and retirement provisions), race, color, religion, creed, national origin, marital status, or the presence of any disability, including sensory, mental or physical handicaps, unless based upon a bona fide occupational qualification in relationship to hiring and employment. This requirement shall apply, but not be limited to the following: employment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. Consultant shall comply with and shall not violate any of the terms of Chapter 49.60 RCW, Title VI of the Civil Rights Act of 1964, the Americans With Disabilities Act, Section 504 of the Rehabilitation Act of 1973, 49 CFR Part 21, 21.5 and 26, or any other applicable federal, state, or local law or regulation regarding non-discrimination.

3. Solicitations for Sub-consultants, Including Procurement of Materials and Equipment: In all solicitations either by competitive bidding or negotiations made by the CONSULTANT for work to be performed under a sub-contract, including procurement of materials or leases of equipment, each potential sub-consultant or supplier shall be notified by the CONSULTANT of the CONSULTANT's obligations under this AGREEMENT and the REGULATIONS relative to non-discrimination of the grounds of race, color, sex, or national origin.

4. Information and Report: The CONSULTANT shall provide all information and reports required by the REGULATIONS or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by AGENCY, STATE or the Federal Highway Administration (FHWA) to be pertinent to ascertain compliance with such REGULATIONS, orders and instructions. Where any information required of a CONSULTANT is in the exclusive possession of another who fails or refuses to furnish this information, the CONSULTANT shall so certify to the AGENCY, STATE or FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.

5. Sanctions for Non-compliance: In the event of the CONSULTANT's non-compliance with the non-discrimination provisions of this AGREEMENT, the AGENCY shall impose such AGREEMENT sanctions as it, the STATE or the FHWA may determine to be appropriate, including, but not limited to:

   - Withholding of payments to the CONSULTANT under the AGREEMENT until the CONSULTANT complies, and/or;
   - Cancellation, termination, or suspension of the AGREEMENT, in whole or in part.

6. Incorporation of Provisions: The CONSULTANT shall include the provisions of paragraphs (1) through (5) in every sub-contract, including procurement of materials and leases of equipment,

unless exempt by the REGULATIONS, or directives issued pursuant thereto. The CONSULTANT shall take such action with respect to any sub-consultant or procurement as the AGENCY, STATE, or FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance.

Provided, however that in the event a CONSULTANT becomes involved in, or is threatened with, litigation with a sub-consultant or supplier as a result of such direction, the CONSULTANT may request the AGENCY and the STATE enter into such litigation to protect the interests of the AGENCY and the STATE and, in addition, the CONSULTANT may request the United States enter into such litigation to protect the interests of the United States.

The United States Department of Transportation
Appendix A of the
Standard Title VI/ Non-Discrimination Assurances
DOT Order No. 1050.2A

During the performance of this contract, the Consultant, for itself, its assignees, and successors in interest (hereinafter referred to as the "Consultant") agrees as follows:

1. Compliance with Regulations: The Consultant (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. Non-discrimination: The Consultant, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin, sex, age, disability, income-level, or Limited English Proficiency (LEP) in the selection and retention of subConsultants, including procurements of materials and leases of equipment. The Consultant will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations as set forth in Appendix E, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 C.F.R. Part 21.

3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the Consultant for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subConsultant or supplier will be notified by the Consultant of the Consultant's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, national origin, sex. Age, disability, income-level or LEP.

4. Information and Reports: The Consultant will provide all information and reports required by the Acts, the Regulations and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations and instructions. Where any information required of a Consultant is in the exclusive possession of another who fails or refuses to furnish the information, the Consultant will so certify to the Recipient or the FHWA, as appropriate, and will set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of a Consultant's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

   a. withholding payments to the Consultant under the contract until the Consultant complies; and/or
   b. cancelling, terminating, or suspending a contract, in whole or in part.

Incorporation of Provisions: The Consultant will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Consultant will take action with respect to any subcontract or procurement as the Recipient or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Consultant becomes involved in, or is threatened with litigation by a subConsultant, or supplier because of such direction, the Consultant may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the Consultant may request the United States to enter into the litigation to protect the interests of the United States.

The United States Department of Transportation
Appendix E of the
Standard Title VI/ Non-Discrimination Assurances
DOT Order No. 1050.2A

During the performance of this contract, the Consultant, for itself, its assignees, and succors in interest (hereinafter referred to as the "Consultant") agrees to comply with the following non-discrimination statutes and authorities, including, but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat.252), prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, prohibits discrimination on the basis of disability; and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 U.S.C. § 471, Section 47123, as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and Consultants, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination of the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations 49 C.F.R. parts 37 and 38.
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).