



INFORMATIONAL MEMORANDUM

TO: **Transportation & Infrastructure Services Committee**
 FROM: **Pete Mayer, Interim Public Works Director**
 BY: **Adib Altallal, Utilities Engineer**
 CC: **Mayor Thomas McLeod**
 DATE: **July 19, 2024**
 SUBJECT: **Sewer Lift Stations 12 Upgrade**
Project 90440207
Design Services Agreement

ISSUE

Approve design services agreement with Parametrix for the Sewer Lift Station 12 Upgrade project.

BACKGROUND

The aging electrical and physical assets of Sewer Lift Station 12 prompted further investigative work in 2016 and 2020. In 2021, minor repairs were made to extend the life of the assets until a comprehensive repair or a rebuild can be completed. The City is now beginning a comprehensive repair, starting with an alternatives study and subsequently design.

DISCUSSION

Parametrix was selected as the primary design consultant after reviewing list of 9 other well-qualified consultants due to their familiarity with the sewer lift station and their proactive work to help the City find a solution long before it becomes a catastrophic failure.

FINANCIAL IMPACT

The Parametrix design services contract is proposed in the amount of \$221,304.48. Although previously identified as project to be completed in a future biennium, further degradation of the Lift Station has moved the project up in priority. The funds required to complete the design will be from provided by cost savings from the 2023 Annual Sewer Repair Project.

	<u>Contract</u>	<u>2023 Cost Savings</u>
Parametrix Contract	\$221,304.58	\$ 698,454.11

RECOMMENDATION

Council is being asked to approve the design agreement with Parametrix in the amount of \$221,304.58 for the Sewer Lift Station 12 Upgrade project and to consider this item on the Consent Agenda at the August 5 Regular Meeting.

Attachments: 2023 CIP Page
Parametrix Scope and LOE

CITY OF TUKWILA CAPITAL PROJECT SUMMARY

2023 to 2028

PROJECT: Sewer Lift Station No. 12 Project No. 90440207

DESCRIPTION: Rebuild sewer lift station 12 to better serve the northeast corner of the Commercial Business District.

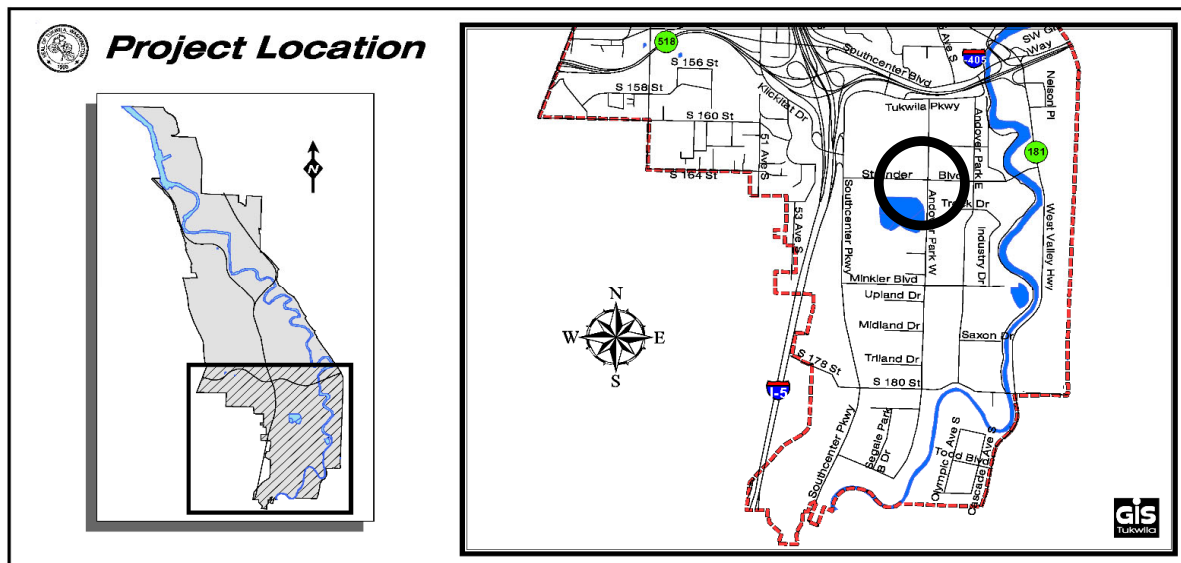
JUSTIFICATION: Lift Station No. 12 is at capacity due to its limited wetwell size. If substantial growth occurs in the basin due to the expansion of the mall or other large projects, the existing lift station will need to be upgraded.

STATUS: A study to repair the wet well is being conducted in 2022.

MAINT. IMPACT: None at this time.

COMMENT: A Sewer bond issue is proposed to cover financing of this project. Coordinate with Southcenter Blvd Sewer Upgrade and future LS13.

FINANCIAL (in \$000's)	Through Estimated										
	2021	2022	2023	2024	2025	2026	2027	2028	BEYOND	TOTAL	
EXPENSES											
Design										300	300
Land (R/W)										500	500
Const. Mgmt.										350	350
Construction										2,500	2,500
TOTAL EXPENSES	0	0	0	0	0	0	0	0	0	3,650	3,650
FUND SOURCES											
Awarded Grant											0
Proposed Grant											0
Bond											0
Mitigation Actual											0
Mitigation Expected											0
Utility Revenue	0	0	0	0	0	0	0	0	0	3,650	3,650
TOTAL SOURCES	0	0	0	0	0	0	0	0	0	3,650	3,650





PROFESSIONAL SERVICES AGREEMENT

(Includes consultants, architects, engineers, accountants, and other professional services)

THIS AGREEMENT is entered into between the City of Tukwila, Washington, hereinafter referred to as “the City”, and Parametrix, 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 design services in connection with the project titled Sewer Lift Station 12 Upgrade.
2. **Scope of Services.** The Consultant agrees to perform the services, identified on Exhibit “A” attached hereto, including the provision of all labor, materials, equipment and supplies.
3. **Duration of Agreement; Time for Performance.** This Agreement shall be in full force and effect for a period commencing upon execution and ending 31 December 2025, unless sooner terminated under the provisions hereinafter specified. Work under this Agreement shall commence upon written notice by the City to the Consultant to proceed. The Consultant shall perform all services and provide all work product required pursuant to this Agreement no later than 31 December 2025 unless an extension of such time is granted in writing by the City.
4. **Payment.** The Consultant shall be paid by the City for completed work and for services rendered under this Agreement as follows:
 - A. Payment for the work provided by the Consultant shall be made as provided on Exhibit “B” attached hereto, provided that the total amount of payment to the Consultant shall not exceed 221,304.58 without express written modification of the Agreement signed by the City.
 - B. The Consultant may submit vouchers to the City once per month during the progress of the work for partial payment for that portion of the project completed to date. Such vouchers will be checked by the City and, upon approval thereof, payment shall be made to the Consultant in the amount approved.
 - 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 the state of Washington for a period of three (3) years after final payments. Copies shall be made available upon request.

5. **Ownership and Use of Documents.** All documents, drawings, specifications and other materials produced by the Consultant 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 the Consultant's endeavors. The Consultant shall not be responsible for any use of the said documents, drawings, specifications or other materials by the City on any project other than the project specified in this Agreement.
6. **Compliance with Laws.** The 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 rendered under this Agreement.
7. **Indemnification.** The Consultant shall defend, indemnify and hold the City, 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 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.

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, employees, and volunteers, 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. **Insurance.** The Consultant shall procure and maintain for the duration of the 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. 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.

A. **Minimum Amounts and Scope of Insurance.** Consultant shall obtain insurance of the types and with the limits described below:

1. **Automobile Liability** insurance with a minimum combined single limit for bodily injury and property damage of \$1,000,000 per accident. Automobile Liability insurance shall cover all owned, non-owned, hired and leased vehicles. Coverage shall be written on Insurance Services Office (ISO) form CA 00 01 or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage.
2. **Commercial General Liability** insurance with limits no less than \$2,000,000 each occurrence, \$2,000,000 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 contractors and personal injury and advertising injury. The City shall be named as an additional insured under the Consultant's Commercial General Liability insurance policy with respect to the work performed for the City using an additional insured endorsement at least as broad as ISO endorsement form CG 20 26.
3. **Workers' Compensation** coverage as required by the Industrial Insurance laws of the State of Washington.

4. Professional Liability with limits no less than \$2,000,000 per claim and \$2,000,000 policy aggregate limit. Professional Liability insurance shall be appropriate to the Consultant's profession.
- B. **Public Entity Full Availability of Contractor Limits.** If the Contractor maintains higher insurance limits than the minimums shown above, the Public Entity shall be insured for the full available limits of Commercial General and Excess or Umbrella liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract or whether any certificate of insurance furnished to the Public Entity evidences limits of liability lower than those maintained by the Contractor.
- C. **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 with respect to the City. Any Insurance, self-insurance, or insurance pool coverage maintained by the City shall be excess of the Consultant's insurance and shall not be contributed or combined with it.
- D. **Acceptability of Insurers.** Insurance is to be placed with insurers with a current A.M. Best rating of not less than A:VII.
- E. **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 Contractor before commencement of the work. Upon request by the City, the Consultant shall furnish certified copies of all required insurance policies, including endorsements, required in this Agreement and evidence of all subcontractors' coverage.
- F. **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.
- G. **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 contract 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 Contractor.** The Consultant and the City agree that the Consultant is an independent contractor 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 the Consultant nor any employee of the 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 the Consultant, or any employee of the Consultant.
10. **Covenant Against Contingent Fees.** The Consultant warrants that he has not employed or retained any company or person, other than a bonafide 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 bonafide 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 warrant, 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.** Contractor, with regard to the work performed by it under this Agreement, will not discriminate on the grounds of race, religion, creed, color, national origin, age, veteran status, sex, sexual orientation, gender identity, marital status, political affiliation, the presence of any disability, or any other protected class status under state or federal law, in the selection and retention of employees or procurement of materials or supplies.
12. **Assignment.** The Consultant shall not sublet or assign any of the services covered by this Agreement without the express written consent of the City.
13. **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.
14. **Termination.**
 - A. The City reserves the right to terminate this Agreement at any time by giving ten (10) days written notice to the Consultant.
 - B. In the event of the death of a member, partner or officer of the Consultant, or any of its supervisory personnel assigned to the project, the surviving members of the Consultant hereby agree to complete the work under the terms of this Agreement, if requested to do so by the City. This section shall not be a bar to renegotiations of this Agreement between surviving members of the Consultant and the City, if the City so chooses.
15. **Applicable Law; Venue; Attorney's Fees.** This Agreement shall be subject to, and the Consultant shall at all times comply with, all applicable federal, state and local laws, regulations, and rules, including the provisions of the City of Tukwila Municipal Code and ordinances of the City of Tukwila. In the event any suit, arbitration, or other proceeding is instituted to enforce any term of this Agreement, the parties specifically understand and agree that venue shall be properly laid in King County, Washington. The prevailing party in any such action shall be entitled to its attorney's fees and costs of suit. Venue for any action arising from or related to this Agreement shall be exclusively in King County Superior Court.
16. **Severability and Survival.** If any term, condition or provision of this Agreement is declared void or unenforceable or limited in its application or effect, such event shall not affect any other provisions hereof and all other provisions shall remain fully enforceable. The provisions of this Agreement, which by their sense and context are reasonably intended to survive the completion, expiration or cancellation of this Agreement, shall survive termination of this Agreement.
17. **Notices.** Notices to the City of Tukwila shall be sent to the following address:

City Clerk
City of Tukwila
6200 Southcenter Boulevard
Tukwila, WA 98188

Notices to Consultant shall be sent to the following address:

18. **Entire Agreement; Modification.** 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. No amendment or modification of this Agreement shall be of any force or effect unless it is in writing and signed by the parties.

DATED this _____ day of _____, 2024.

CITY OF TUKWILA

CONSULTANT:

Thomas McLeod, Mayor

By: _____

Printed Name: _____

ATTEST/AUTHENTICATED:

Title: _____

Andy Youn, City Clerk

APPROVED AS TO FORM:

Office of the City Attorney

**City of Tukwila
Lift Station 12 Upgrade
Alternatives Analysis and Preliminary Design**

Introduction

This scope of work (SOW) describes the services to be provided by Parametrix, Inc. (Parametrix) for the Lift Station 12 Upgrade Project for the City of Tukwila (City). The City seeks to upgrade Lift Station 12 to improve reliability, provide renewed longevity, enhance operational efficiency, and bring the station into compliance with current codes. The City tasked Parametrix to provide alternatives on how to address these concerns.

List Station 12 was initially built in 1972 and serves Drainage Basins 4 and 8. Upgrades to the lift station were completed between 2001 and 2003, including pump replacements and a new on-site generator. According to the City's 2014 Comprehensive Sanitary Sewer Plan (Carollo 2014), the average annual flow for List Station 12 is approximately 0.19 million gallons per day (MGD) and peak day average flow is approximately 0.72 MGD. Peak instantaneous flows were estimated to reach approximately 1.18 MGD with infiltration and inflow contributing to approximately 0.57 MGD.

As identified in the City's 2014 Comprehensive Sanitary Sewer Plan (Carollo 2014), it was anticipated that the pumps and the lift station structure would reach their useful life by 2023. The City has considered alternative options to serve Drainage Basin 4 and currently, the pumps at the existing lift station have not been able to keep up with the variable flows due to wear.

On June 5, 2024, City staff and the Parametrix team conducted a site visit at Lift Station 12 to discuss the project. Alternatives initially discussed at the site visit with City staff included upgrades to the existing station, converting the station to a submersible pump station, or building a new wet well.

The Lift Station 12 Upgrade Project includes developing and evaluating potential upgrade alternatives through collaborative workshops with City personnel, conducting an alternatives analysis, and determining a preferred design alternative for improvements at the existing lift station. Subsequently, a preliminary design submittal will be prepared, including 30% design plans, an outline of technical specifications, and a construction cost estimate.

This SOW does not include the Final Design Phase, which will be determined during the Preliminary Design Phase, encompassing final design plans, specifications, construction cost estimates, and necessary permit applications. This SOW also does not include bid support or services during construction, which will be provided under a separate task order.

Document Organization

- Exhibit A: Scope of Work
- Exhibit B: Limits of Survey
- Exhibit C: Preliminary Sheet List – Preliminary Design
- Exhibit D: Rates and Fee Estimate
- Exhibit E: Subconsultant Proposals

- Exhibit F: Projected Project Schedule

Scope Work Breakdown Structure

Work Breakdown Summary:

- Task 01 Project Management and Quality Control
- Task 02 Data Collection and Review
- Task 03 Develop Alternatives
- Task 04 Alternatives Analysis
- Task 05 Preliminary Design
- Task 06 Subconsultant Allocation
- Task 07 Management Reserve

Task 01 – Project Management and Quality Control

Objective

Task 01 provides tracking scope, schedule, and budget for the project; overseeing project administration (filing, invoicing, etc.); coordination and communication with the City; and ensuring that Parametrix properly implements quality assurance/quality control (QA/QC) procedures over the duration of this project.

Subtask 01.1 – Project Management

Subtask 01.1 includes project start-up and establishing a project SharePoint site; documenting and communicating the scope of work, budget, and schedule as a road map for the project team; coordinating with the project team and addressing issues throughout the project; tracking the project budget using Parametrix in-house tools to verify that progress aligns with spending; and conducting check-in meetings with the City’s project manager (PM) to discuss and review information and issues that may affect the work’s progress.

Subtask 01.2 – Invoicing & Progress Reports

Subtask 01.2 includes preparing monthly progress reports to accompany each monthly invoice. Progress reports will include a narrative of work completed, anticipated work for the next period, and a description of issues affecting project progress and proposed resolutions if necessary.

Subtask 01.3 – Correspondence and Coordination with the City

Subtask 01.3 includes regular communication with the City’s PM to discuss and review information and issues that may affect the progress of the work. Communication may include phone conversations, scheduled meetings, and electronic communication.

Subtask 01.4 – Coordination with the Parametrix Team

Subtask 01.4 includes regular communication with the Parametrix team to discuss and review information needs, project information, and issues that may affect the progress of the work.

Communication may include phone conversations, scheduled meetings, and electronic communication.

Subtask 01.5 – Project QAQC

Subtask 01.5 includes time to perform quality assurance to verify quality checks have been completed and addressed, and time to review design as contract plans and specifications are being prepared. QA/QC will be performed to ensure that City comments have been thoroughly addressed and internal reviews have been completed prior to delivery of all work products to verify consistency with internal standards of practice and care.

Task 01 Assumptions

- Project duration is eight (8) months.
- Budget assumes up to six PM check-in meetings to be attended virtually by up to two Parametrix staff for up to 0.5 hours each.
- Budget assumes up to 10 design team meetings to be attended virtually by up to three Parametrix staff for up to 0.5 hours each.

Task 01 Deliverables

- Miscellaneous correspondence to document project management issues.
- Monthly progress reports enclosed with invoices (in PDF file format).
- Project Schedule (in PDF file format).

Task 02 – Data Collection and Review

Objective

Task 02 includes the collection, review, and assessment of available information and mapping prior planning efforts before beginning the alternatives analysis and preliminary design. The Parametrix team will provide comprehensive written request for information (RFI) lists, which may include record drawings and relevant planning studies.

Subtask 02.1 – Data Collection and Review

Subtask 02.1 includes collecting and reviewing available historical data, design specifications, performance metrics, and maintenance records as they pertain to the existing lift station, as well as collecting and reviewing available technical specifications, performance data, and cost estimates for submersible pumps, dry pit pumps, and new wet well designs.

Subtask 02.2 – Survey and Mapping

Subtask 02.2 includes determining the right-of-way for Andover Park W, as delineated in Exhibit A. Parametrix will provide topographic mapping for the lift station located near the southeast corner of the Westfield Shopping Center, as delineated in Exhibit A. The topographic limits will include the location of the lift station and the surrounding parking lot of Key Bank. Parcel boundaries will be limited to within the area to be surveyed and easements of record depicted on the subject property's

binding site plan will be plotted on the basemap. The setting of any survey monuments at any of the exterior boundary points of the subject properties.

All physical improvements—such as signs, guardrails, fences, driveways, utility poles, water features, telecommunication features, storm drainage features, sewer manholes, and other features—will be mapped during the survey within the right-of-way as well. All storm drainage and sewer structure invert elevations will be included within the scope of work. Trees will be mapped on-site but will be limited to trees that have trunk diameters of 6 inches or larger

Parametrix will coordinate with Applied Professional Services (APS) to have the utilities marked out. Conductible utilities will be mapped per the locate company's markings. Potholing is not included.

Subtask 02.3 – 3D Scanning

Subtask 02.3 includes 3D laser scanning of the site property, building structure exterior and internals, and existing equipment. This will include both wet well and dry well locations. Laser scanning provided will initially only be used to confirm and view structure and component locations and dimensional relevance to each other. Scanning performed will not be to any survey coordinate system but will be tied into surveyed temporary benchmarks so it can later be combined with the survey basemap during Task 05 Preliminary Design. Scanning will require physical access to areas and spaces needed to complete this project and owner shall provide access as required to complete this effort.

Task 02 Assumptions

- Up to three RFIs will be prepared and provided to the City.
- City response for each RFI list is 7 business days.
- RFIs and shared documents will be shared and accessed via an established Project SharePoint site.
- Parametrix survey crews will be provided reasonable access to all areas requiring surveys.
- Parametrix will be omitting topographic mapping with Andover Park. The topographic survey will extend to the west face of the curb within the right-of-way of Andover Park.
- All electronic mapping standards will be based on Parametrix drafting standards.
- Parametrix survey crews have client permission to perform minor brushing with machetes to conduct this survey, if needed, for field crews to perform work described within this SOW.
- Unless otherwise specified by the client, horizontal datum shall be North American Datum (NAD) 83/11 Washington Coordinate System, North Zone, and vertical datum shall be North American Vertical Datum of 1988 (NAVD 88).
- The boundary of the property will be merged into the topographic mapping, as appropriate, and shown for graphical purposes only. This service can be provided if required at a later date; however, any setting of property corners, and filing of a record of survey (if required) will be considered Additional Services and billed separately as described below.
- For safety reasons, Parametrix survey crews are not allowed to enter subsurface vaults. Parametrix work will be conducted from the surface, using measure-down techniques. Parametrix survey crews will also not open any structure covers over 80 pounds.

- Site scanning will be approximately 20 to 35 scans. Once complete, scans will then be combined and stitched together providing a single site scan.
- Budget assumes up to six hours of scanning time shall be required and up to eight hours to combine all scans into a single site scan.

Task 02 Deliverables

- RFI lists (provided electronically).
- One PDF copy of the topographic survey.
- An electronic drawing file of the topographic survey in AutoCAD Civil 3D 2020 format in one drawing file.

Task 03 –Develop Alternatives

Objective

Task 03 provides developing and evaluating viable alternatives for upgrading Lift Station 12, ensuring improved performance and compliance with current standards while minimizing bypass pumping. Initial concept alternatives include:

- Alternative 1: Upgrade Existing Station
- Alternative 2: Convert to Submersible Pump Station
- Alternative 3: Build New Wet Well

Subtask 03.1 – Determine Alternatives

Subtask 03.1 includes providing technical evaluation and support in preparation for Workshop 1 (see Task 03) in support of a concept screening to determine the two design alternative types to develop for refinement, selected from the three concept alternatives: submersible, dry pit, and new wet well. Parametrix will assess available information to determine the practicality of implementing each alternative. This subtask includes developing a description of each of the three alternatives as listed above, a concept feasibility layout, a brief list of advantages and disadvantages, and a Class 5 engineer’s opinion of construction cost. If initial evaluation determines the alternative has a fatal flaw, the concept layout and opinion of construction cost will not be developed.

Subtask 03.2 – Refine Alternatives

Subtask 03.2 includes providing technical evaluation and support to refine two design alternatives in preparation for Workshop 2 (see Task 04). This subtask includes developing a detailed description of two design alternatives and identifying potential risks and challenges for each alternative, including technical, financial, and operational. This subtask includes developing confirmation layouts for each alternative and an evaluation of real estate needs, including staging area, traffic impacts during construction, construction feasibility, as well as a Class 4 engineer’s opinion of construction cost. Estimate of property purchase costs are not included.

Task 03 Assumptions

- The number of evaluated alternatives will remain as listed in this task.

- No computer sewer model development will be included in this task.
- Sufficient data on the current pump station’s performance, maintenance, and operational history, and technical specifications will be available to evaluate and prepare cost estimates for submersible, dry pit, and new wet well alternatives for accurate comparison and evaluation.
- The three concept feasibility layouts will be one page each.
- The two planning-level confirmation layouts will be one page each.
- Subtasks 03.1 and 03.2 engineer’s opinion of construction costs will be prepared to the Association for the Advancement of Cost Engineering (ACE) Classes 5 and 4, respectively. Typical accuracy ranges for ACE classes vary depending on the technological complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination.

Task 03 Deliverables

- Information and documentation to support Alternative Analysis Workshops. See Task 03 (various file formats).
- Three concept layouts (in PDF file format).
- Two feasibility layouts (in PDF file format).
- Class 5 and Class 4 engineer’s opinion of construction costs (in PDF file format).

Task 04 – Alternatives Analysis

Objective

Task 04 provides a holistic evaluation of viable options for upgrades to Lift Station 12 with City staff. Two workshops will be conducted: the first to screen initially identified alternatives, and the second to evaluate alternatives using a Triple Bottom Line (TBL) Analysis to determine a preferred upgrade design option. This task also includes a technical memorandum (tech memo) summarizing the decision process in determining the preferred alternative.

Subtask 04.1 – Alternatives Analysis Workshops

Subtask 04.1 includes providing key services to prepare for and conduct two Alternative Analysis Workshops, including the development of presentation materials, facilitating the workshops, providing technical expertise during the workshop, and providing documentation of discussion, decisions, and action items.

Parametrix will meet with City personnel to evaluate the identified alternatives, as well as discuss the information collected and analyzed in Task 03. These workshops include:

- **Workshop 1:** Review project goals and preferences with City staff to conduct a concept screening of the three identified concept alternatives to determine two alternatives to further refine and evaluate.
- **Workshop 2:** Conduct an alternatives comparison (TBL Analysis) of two identified alternatives to determine one preferred design alternative.

Subtask 04.2 – Alternatives Analysis Tech Memo

Subtask 04.2 includes documenting and summarizing the alternatives and decisions made during the Alternatives Analysis Workshops into a tech memo, ensuring clear communication of the selection process, alternative descriptions, and supporting exhibits.

Preliminary Alternative Analysis Tech Memo sections include:

- Project Introduction and Background.
- Workshop 1 and Alternative Descriptions.
- Workshop 2 and Alternative Descriptions.
- Preferred Alternatives and Recommendations.
- Attachments:
 - Concept and Confirmation Layouts.
 - Engineer’s opinions of construction cost.
 - Workshop Agendas and Summaries.
 - Presentation Materials.

Task 04 Assumptions

- Budget assumes each Alternative Analysis Workshop will be attended to three Parametrix staff (two in-person and one virtually) for up to 1.5 hours each. Budget includes travel time to the City of Tukwila Public Works Office/Conference Room from the Parametrix Puyallup office and mileage.
- Each Alternative Analysis Workshop may be attended by up to five City personnel.
- Criteria for the TBL Analysis will be developed with the City via check-in meetings with the City PM (see Subtask 01.3). The criteria for evaluation shall include financial, environmental, and social benefits, impacts, and risks.
- Workshop materials may include tables, charts, and a decision matrix to facilitate discussion and engagement.
- The Alternative Analysis Tech Memo will be up to 15 pages with up to approximately four attachments, as described above.
- The Draft Alternative Analysis Tech Memo review comments will be collected and consolidated by the City PM and returned to the Parametrix team within 10 business days of Draft Tech Memo delivery.
- Budget assumes that review comments will not involve changes to decision made in the workshops, and will include limited tracked edit suggestions and margin comments provided by the City on the Draft Alternative Analysis Tech Memo.
- Parametrix will finalize the Alternative Analysis Tech Memo within 10 business days after receiving City review comments.

Task 04 Deliverables

- An agenda for each Alternative Analysis Workshop (in PDF File Format).

- Workshop presentation materials (various File Formats).
- Alternative Analysis Workshop Summaries (in PDF File Format).
- Alternative Analysis Tech Memo (Draft and Final in PDF File Format).

Task 05 – Preliminary Design

Objective

Task 05 provides initiating the Preliminary Design Phase of the preferred alternative determined in Task 04. This task includes an initial design meeting with City staff, preparation and submission of the Preliminary Design (30%) Submittal, including plans, specification outline, and engineer’s opinion of construction cost, as well as a design review workshop with City staff.

Subtask 05.1 – Initial Design Meeting

Subtask 05.1 includes kicking off the preliminary design phase with City staff and ensuring stakeholders are aligned with the identified preferred alternative in Task 04, project goals, design requirements, and project expectations for producing the 30% Design Submittal for Lift Station 12 upgrades. This meeting will focus on reviewing and confirming project goals and requirements; revisiting the project schedule, including milestones and deliverables; and addressing any initial questions or concerns from stakeholders.

Subtask 05.2 – Preliminary Design

Subtask 05.2 includes developing preliminary design plans for the proposed upgrades to Lift Station 12 based on the preferred alternative determined in Task 04, generating a proposed list of Construction Specifications Institute (CSI) and Washington State Department of Transportation (WSDOT) technical specifications for the project, and preparing a 30% engineer’s opinion of construction cost.

A preliminary Drawing Sheet List is included as Exhibit C.

Subtask 05.3 – Preliminary Design Review Meeting

Subtask 05.3 includes a Preliminary Design Review Meeting with City staff to review City comments and feedback on the Preliminary Design Submittal.

Task 05 Assumptions

- Budget assumes the Initial Design Meeting will be attended by up to four Parametrix staff (two in-person and one virtually) for up to 1.0 hours each. Budget includes travel time to the City of Tukwila Public Works Office/Conference Room from the Parametrix Puyallup office and mileage.
- Budget assumes up to 12 sheets will be developed as part of the Preliminary Design Submittal, as listed in Exhibit C. Should the preferred alternative determined in Task 04 require more Preliminary Design Plans than assumed, an amendment may be required.
- The preliminary cost estimate will be prepared to the AACE Class 3. Typical accuracy ranges for AACE classes vary depending on the technological complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination.

- The preliminary cost estimate will generally be estimated as single lump sum prices, with unit prices for earthwork and underground piping as appropriate.
- The City review of the Preliminary Design Submittal is 10 business days.
- The City will provide review comments and feedback to Parametrix prior to the Preliminary Design Review Meeting.
- Budget assumes the Preliminary Design Review Meeting will be attended by up to four Parametrix staff (two in-person and one virtually) for up to 2.0 hours each. Budget includes travel time to the City of Tukwila Public Works Office/Conference Room from the Parametrix Puyallup office and mileage.
- City review comments and feedback of the Preliminary Design Submittal will be incorporated into the Final Design Phase.

Task 05 Deliverables

- Agenda and meeting summary for Initial Design Meeting (draft and final in PDF file format).
- Preliminary Design Plans, half-size, 11 by 17 inches (in PDF file format).
- Preliminary Design Specification Outline (in PDF file format).
- Class 3 engineer's opinion of construction cost (in PDF file format).
- Meeting summary for Preliminary Design Review Meeting (draft and final in PDF file format).
- Revised Project Schedule (in PDF file format).

Task 06 – Subconsultant Allocation

Objective

Task 06 provides a budgetary allocation for subconsultant services that will be required for the Alternatives Analysis and Preliminary Design of the Lift Station 12 Upgrade Project.

Subtask 06.1 – Utility Locate Services

Subtask 06.1 includes a detailed proposal for utility locate services, prepared by subconsultant, APS, included in Exhibit E. In general, APS will locate and mark known utilities within the project boundaries and will sweep the project boundary areas to attempt to identify any unknown or abandoned utilities. Utility potholing not included.

Task 06 Assumptions

- The City will review subconsultant's scope and fee proposals in advance of contract execution between prime consultant (Parametrix) and subconsultant. Once proposals are acceptable to the City, authorization will be issued in writing to allow the subconsultant to be added to the prime consulting contract and provide authorization to proceed with the scoped work.
- Work will not proceed for any of the subconsulting efforts until the City has provided authorization for the subcontractor to be added to the primary contract, has approved of the subconsultant's scope and fee, and has issued NTP for the work.

Task 06 Deliverables

- See Exhibit E, Subconsultant Proposals, for detailed deliverables.

Task 07 – Management Reserve

Objective

Task 07 is a budgetary allocation so that the City has a discretionary budget to cover professional services that are not defined in this SOW and are unknown at the time of the scope development. Parametrix will provide a written scope and fee estimate for any additional services requested prior to execution for the City’s consideration. This task will remain unused unless the City issues a written (email) authorization for work to be completed under this Task.

Assumptions

- The budget for this work may be used by the Consultant, as authorized by the City.
- The City will authorize the use of funds in this task in writing (email) prior to the Consultant starting the work.

Deliverables

- Documentation for professional services not defined in this SOW, as required or requested by the City.

Rates and Fee Estimate

Rates and fee estimate for this scope of work (SOW) is included as Exhibit D. This budget is reflective of this SOW, known information, and previous experience regarding the level of effort on similar projects.

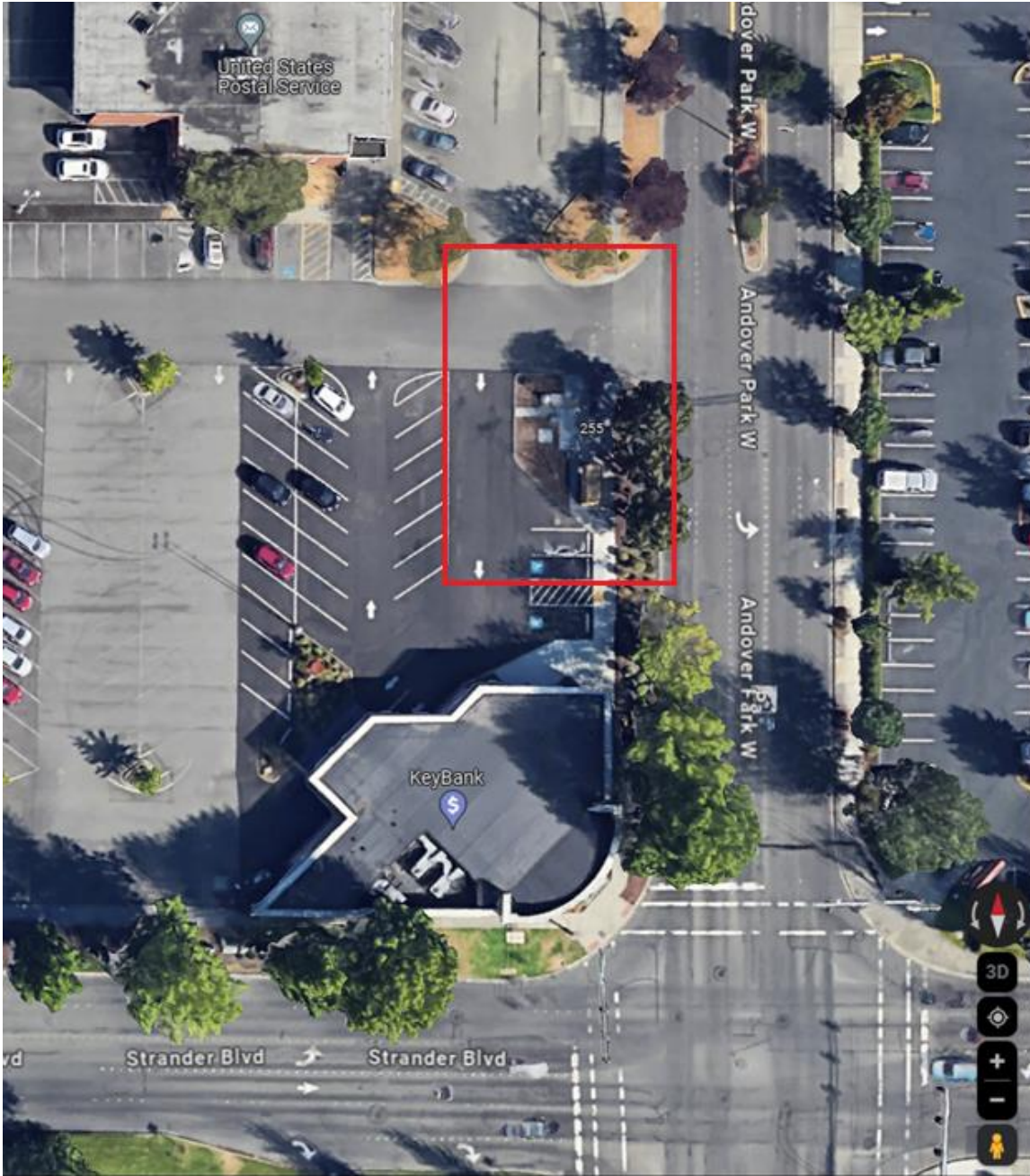
Projected Project Schedule

The schedule below summarizes project tasks based on anticipated notice to proceed (NTP) on or around August 5, 2024. Receipt of NTP after this day may result in a corresponding delay in the following projected schedule for tasks included in this SOW. A projected Project Schedule is included as Exhibit F.

Task	Start	Finish
Task 01 Project Management and Quality Control	08/2024	03/2025
Task 02 Data Collection and Review	08/2024	08/2024
Task 03 Develop Alternatives	08/2024	10/2024
Task 04 Alternatives Analysis	09/2024	12/2024
Task 05 Preliminary Design	10/2025	03/2025

References

Carollo (Carollo Engineers). 2014. City of Tukwila, WA, Final Comprehensive Sanitary Sewer Plan, .
Carollo Engineers, Seattle, WA.



The Preliminary Drawing Sheet List includes:

- General
 - Title Sheet, Vicinity Map, and Index
 - Symbols and Legend
 - Abbreviations
- Civil
 - Site Layout Plan and Survey Control
 - Plan and Elevations
 - Section and Details
- Mechanical
 - Pump and Piping Floor Plan
 - Pump and Piping Sections
- Electrical
 - Legend and Abbreviations
 - One-Line Diagram
 - Site Plan
- Piping and Instrumentation Diagram (P&ID)
 - Piping and Instrumentation Diagram (P&ID)

Exhibit D - Rates and Project Fee Estimate
City of Tukwila
Lift Station 12 Upgrade
Alternatives Analysis and Preliminary Design

				Nickel, Ray	Jakubowich, Andy	Linke, Joel	Cosgrove, Sandy	Crackenberger, Sarah	Carlson, Cameron	Ortega, JJ	Taylor, Kathy	Cost Estimator	Planner IV - Cost Estimator	Publications Supervisor	Lucas, Amanda	Survey Supervisor	Emory, Justin	Survey	Van Cleave, Ken	Printz, Whitney	Wilson, Stephen	Wittman, Connor	Merth, Joe	Linke, Jake	Mark Molinow	Denise Peterson	Cliff West		
				PIC	PM	SME/QAQC	PC	Acct	Electrical	Support	CAD	Cost Estimator	Pubs	Survey	Survey	Survey	Survey	Survey	Survey	Survey	Survey	Survey	Survey	Survey	CAD Design	CAD Design	CAD Design		
				Senior Consultant	Senior Engineer	Senior Engineer	Sr Project Control Specialist	Senior Project Accountant	Electrical Engineer VI	Engineer I	Senior Designer	Planner IV - Cost Estimator	Publications Supervisor	Survey Supervisor	Senior Survey	Project Coordinator	Surveyor III	Senior Electrical Engineer	Senior Consultant	Engineer VI	Electrical Designer II	Electrical Designer III	Senior Designer						
				Burdened Rates:	\$319.48	\$226.56	\$249.50	\$147.52	\$132.47	\$212.06	\$125.00	\$202.77	\$147.39	\$147.39	\$210.50	\$153.99	\$105.95	\$136.50	\$279.37	\$317.00	\$194.09	\$157.53	\$171.31	\$221.72					
Phase	Task	Description	Labor Hours	Labor Dollars																									
			1106	\$220,612.58	65	200	32	8	7	91	215	72	56	13	4	40	24	60	5	5	59	20	40	73					
1		Project Management & Meetings	102	\$22,977.14	9	36	16	8	7	6	6	0	0	0	4	0	0	0	5	5	0	0	0	0	0	0	0	0	
	1.1	Project Management	13	\$2,663.01		10			3																				
	1.2	Invoice and Progress Reports	16	\$2,616.28		4		8	4																				
	1.3	Correspondence and Coordination with the City	21	\$4,618.56	1	16				2	2																		
	1.4	Coordination with the Consultant Team	19	\$4,165.04	3	6	2			4	4																		
	1.5	Project QA/QC	33	\$8,914.25	5		14								4					5	5								
2		Data Collection and Review	197	\$30,229.70	2	12	1	0	0	8	16	0	0	0	0	40	24	60	0	0	8	20	0	6					
	2.1	Data Collection and Review	47	\$8,856.38	2	12	1			8	16										8								
	2.2	Survey and Mapping	124	\$16,892.40												40	24	60											
	2.3	3D Scanning	26	\$4,480.92																					20			6	
3		Develop Alternatives	302	\$59,574.40	20	56	6	0	0	24	48	40	36	0	0	0	0	0	0	0	24	0	16	32					
	3.1	Determine Alternatives	153	\$30,083.20	10	28	3	0	0	14	24	16	20	0	0	0	0	0	0	0	0	14	0	8	16				
		Concept Feasibility Layouts	123	\$24,777.90	8	24	3			12	24	16										12		8	16				
		Cost Estimates	30	\$5,305.30	2	4				2			20									2							
	3.2	Refine Alternatives	149	\$29,491.20	10	28	3	0	0	10	24	24	16	0	0	0	0	0	0	0	0	10	0	8	16				
		Confirmation Layouts	123	\$24,775.46	8	24	3			8	24	24										8		8	16				
		Cost Estimates	26	\$4,715.74	2	4				2			16									2							
4		Alternatives Analysis	168	\$30,628.86	16	40	0	0	0	14	72	0	0	12	0	0	0	0	0	0	0	14	0	0	0				
	4.1	Alternatives Analysis Workshop	56	\$10,456.20	10	14	0	0	0	28	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Workshop 1 Prep	16	\$2,919.15	2	5				8			1																
		Workshop 1 and Summary	12	\$2,308.95	3	2				6			1																
		Workshop 2 Prep	16	\$2,919.15	2	5				8			1																
		Workshop 2 and Summary	12	\$2,308.95	3	2				6			1																
	4.2	Alternatives Analysis Tech Memo	112	\$20,172.66	6	26	0	0	0	14	44	0	0	8	0	0	0	0	0	0	0	14	0	0	0				
		Draft	69	\$12,389.03	4	16				8	28			5								8							
		Final	43	\$7,783.63	2	10				6	16			3								6							
5		Preliminary Design	337	\$65,954.62	18	56	9	0	0	39	73	32	20	1	0	0	0	0	0	0	13	0	24	35					
	5.1	Initial Design Meeting	19	\$3,662.48	3	3				3	8											2							
	5.2	Preliminary Design	301	\$58,395.00	15	53	9	0	0	36	65	32	20	1	0	0	0	0	0	0	0	11	0	24	35				
		Drawings	261	\$50,886.32	12	45	9			31	65	32										8		24	35				
		Specification Outline	10	\$2,203.38	1	4				3												1							
		Cost Estimate	30	\$5,305.30	2	4				2			20									2							
	5.3	Preliminary Design Review Meeting	17	\$3,897.14	4	5				4	2											2							
6		Subconsultant Allocation (Includes 10% Markup)	0	\$742.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5.1	Utility Locate Services	0	\$742.50																									
7		Management Reserve (5%)	0	\$10,505.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7.1	Management Reserve	0	\$10,505.36																									

Project Expenses \$692.00

Mileage (assumes 800 mi for site visits and survey @ \$0.665/mile) \$532.00
 Survey Equipment (assumes 1 use @ \$160/use) \$160.00

Total Fee Estimate \$221,304.58

Utility Locating



Applied Professional Services, Inc.

43530 SE North Bend Way
North Bend, WA 98045

“Solutions that exceed expectations”

Date	Project Address/Job Number:	Services Performed For:
7/16/2024	275 Andover Park W, Tukwila	Parametrix
		Justin Emery
	Design Survey Locating	jemery@parametrix.com 253-785-3028

Scope of Work

- A. APS, Inc. will employ all industry and best practices to designate and mark the known conductible and/or non-conductible utilities within the project boundaries.
- B. APS, Inc. will sweep the area, after the known utilities have been marked, to attempt to identify any unknown or abandoned utilities.
- C. The project boundaries are defined by civil drawings or maps provided by the Client.

Cost Estimate

LABOR DESCRIPTION	HOURS	RATE	AMOUNT
RM™ Conductible Locates	5	\$135.00	\$675.00
		Total	\$675.00

Invoicing

Net 30 days on all billing unless specified otherwise under a separate contract or negotiation.

Disclaimer

APS, Inc, and or its employees cannot guarantee that all conductible and/or non-conductible utilities within the project boundaries can or will be found.

Project Estimate

NOT TO EXCEED WITHOUT WRITTEN CLIENT APPROVAL:

This hourly / not to exceed project estimate is based on the estimated number of hours it will take to perform the Scope of Work. If the project requires additional time or costs to complete the Scope of work, then written approval to exceed the original cost estimate is required.

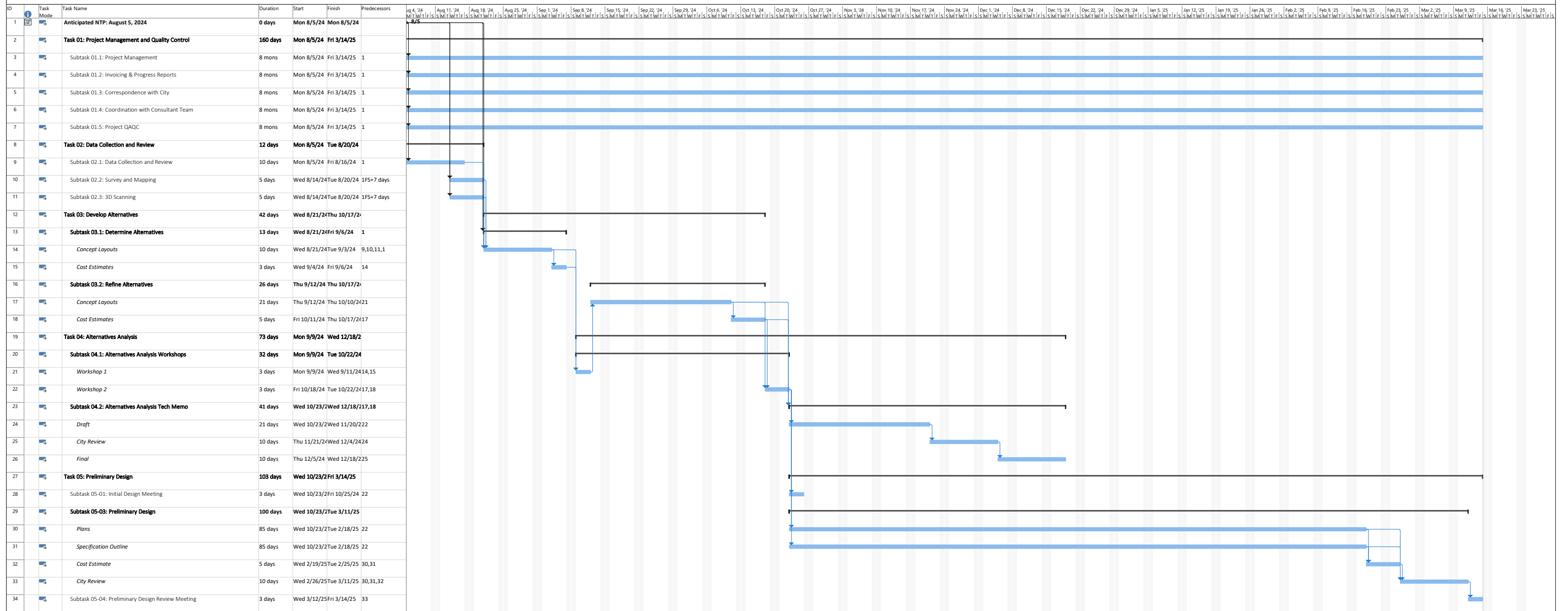
Parametrix

By _____

Name _____

Title _____

City of Tukwila
Lift Station 12 Upgrade
Alternatives Analysis and Preliminary Design
Exhibit F - Projected Project Schedule



Project: LS 12 Project Schedule Date: Thu 7/11/24

█ Task
█ Milestone
█ Summary
█ Project Summary
█ Inactive Task
█ Inactive Summary
█ Manual Task
█ Duration-only
█ Manual Summary Rollup
█ Manual Summary
█ Start-only
█ Finish-only
█ External Tasks
█ External Milestone
█ Deadline
█ Progress
█ Manual Progress