AGENDA BILL
Beaverton City Council
Beaverton, Oregon

SUBJECT: Contract Award – Water Service Transfer Program Manager

FOR AGENDA OF: 07-24-18 BILL NO: 18162

MAYOR'S APPROVAL: 

DEPARTMENT OF ORIGIN: Public Works

DATESubmitted: 07-20-18

CLEARANCES: City Attorney
Mayor's Office
Purchasing
Finance
Engineering

PROCEEDING: CONSENT AGENDA (CONTRACT REVIEW BOARD)

EXHIBITS: 1. Withdrawal Area Map
2. Proposal Summary
3. Scope of Work and Fee
4. Project Schedule

BUDGET IMPACT

| EXPENDITURE REQUIRED $2,982,177 | AMOUNT BUDGETED $3,158,000 | APPROPRIATION REQUIRED $0 |

*Account Number 605-75-3627, Water Construction Fund – Withdrawal of Areas from TVWD (Bonded) Account. The total contract amount to be awarded is $2,982,177. The FY 2018-19 Budget includes $3,158,000 for this and related projects for work that is expected to be completed by June 30, 2019. Staff will include proposals to fund the balance of the work in FY 2019-20 budget process and subsequent years.

RECOMMENDED ACTION:
City Council, acting as the Contract Review Board, authorizes the Mayor to sign a contract with RH2 Engineering, Inc., in the amount of $2,982,177 to act as the Water Service Transfer Program Manager (PM) in a form approved by the City Attorney, and directs the Finance Director to include sufficient funds for future PM services in the proposed Fiscal Year 2019-20 budget and subsequent years.

HISTORICAL PERSPECTIVE:
The City currently provides water to approximately 73 percent of Beaverton residents. Remaining residents are supplied water by Tualatin Valley Water District (TVWD), Raleigh Water District, or the West Slope Water District. City Council has expressed strong interest in seeing the City serve as many City residents as possible.

In 2017, the City and TVWD began working together on a new water service area agreement. The agreement was executed in 2018 (AB 18049 – not attached) and continues until June 30, 2057. On July 1, 2018, water service for approximately 4,100 TVWD customers was transferred to the City. The transition will help to ensure cheaper and more equitable rates among more Beaverton residents. The two agencies are working together to make this transition seamless for customers. To date, the agencies have performed the following tasks:

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- TVWD transmitted its initial inventory of assets to be transferred;
- The agencies are meeting to reach agreement on assets to be transferred (ongoing);
- The agencies are working on operations and maintenance procedures (ongoing);
- City website updates to address customer and developer frequently asked questions; and
- City transmitted Service Area Withdrawal Plan and Schedule.

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<thead>
<tr>
<th>Withdrawal Areas</th>
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* See Exhibit 1 -- Withdrawal Area Map

**INFORMATION FOR CONSIDERATION:**

A Qualifications Based Request for Proposals for professional engineering services was advertised on June 13, 2018. The mandatory pre-proposal conference was held on June 22, 2018, with two consulting firms in attendance. One proposal was received (Exhibit 2) and opened on July 6, 2018, at 2:00 p.m. from RH2 Engineering, Inc., of Bothell, Washington. The City reviewed the proposal to ensure that it met the requirements for qualifications, and then negotiated a scope of work and budget with RH2.

The Scope of Work (SOW) and Fee are presented in Exhibit 3. Although the Program Manager (PM) work is anticipated to last for five years or more, RH2's SOW and fee cover work that will be performed in the first three years. A summary of the primary SOW tasks follow:

- **Task 1 – Project Management**
- **Task 2 – Program Management**
- **Task 3 – System Planning – Cost benefit analysis (continued wheeling or direct service/separation)**
- **Task 4 – Implementation Planning – Develop transfer and separation plans**
- **Task 5 – Preliminary Engineering – Develop up to 30-percent design level plans**
- **Task 6 – Additional Services as Requested (Contingency Task)**
- **Task 7 – Design Management (if authorized, not included in proposed contract)**
- **Task 8 – Construction Management (if authorized, not included in proposed contract)**

A significant amount of work will be accomplished during the first several months of the project, and Task 3 (System Planning) is critical. RH2 will perform a cost benefit analysis to help compare and evaluate whether to continue wheeling water to customers, versus serving them directly with new city water infrastructure.

The Project Schedule is shown in Exhibit 4 and details annual expenditures of approximately $1,000,000 for the project work during the first three years. If the project work accelerates, and Tasks 7 and 8 are authorized during the first three years, the total contract expenditure during the first three years could be up to approximately $3,500,000. Beyond the first three years of project work, the level of effort and support needed from RH2 during subsequent years is expected to decrease significantly. The project team will prepare quarterly progress reports.

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EXHIBIT 2

City of Beaverton

PROPOSALS RECEIVED

Project Name: Request for Proposals Using a Qualification Based Selection Process for Water Service Transfer Program Manager #3376-18B

Closing Date: 2:00 PM on July 6, 2019

Proposals Submitted:

1. RH2 Engineering, Inc., Portland, OR
EXHIBIT 3

Scope of Work
City of Beaverton
Water Service Transfer Program Manager
July 2018

The City of Beaverton (City) has retained RH2 Engineering, Inc., (RH2) to serve as Program Manager to oversee and manage the City’s Water Service Transfer Program (Program), which is the transfer and separation of water service for customers currently being serviced water by the Tualatin Valley Water District (TVWD) to being serviced directly by the City as detailed in the February 2018 Intergovernmental Agreement (IGA) between the two parties. The areas included in this Program are described as Withdrawal Areas 2 through 6. The services that will be provided under this Scope of Work generally include planning for needed improvements to supply the withdrawal areas, preparing transfer and separation plans, and implementing the identified improvements necessary to service the withdrawal areas, including performing preliminary engineering. Additional services that may be requested and performed as authorized include, but are not limited to, design management and construction contract administration. Where requested, a separate scope of work and fee estimate will be provided for City approval prior to beginning work on additional services.

Background

The City’s Council has shown a strong interest for citizens to be provided the same level of services at the same price, including water service, to the extent possible. Currently, TVWD customers pay higher rates than City customers for water, and rates are expected to increase as TVWD moves forward with the Willamette Water Supply Project (WWSP). As a result, the City has decided to withdraw six (6) areas from TVWD and convert these areas to being served water by the City. The first area was withdrawn and separated from TVWD’s water system in 2017. Five (5) additional areas, representing more than 1,500 acres and 4,100 services, are being withdrawn in 2018.

Because TVWD will continue to serve areas adjacent to and outside of the withdrawal areas, it is recognized that many of the current mains serving the withdrawal areas will need to be retained by TVWD to serve TVWD’s remaining customers. The City understands that it will need to make numerous improvements that likely will take several years to construct to fully separate and serve all the withdrawal areas. The City Council has also expressed a strong interest in taking advantage of supplying the withdrawal areas by establishing a connection to the Joint Water Commission (JWC) North Transmission Line (NTL) to allow the City to utilize the stranded capacity it owns in the pipeline, as well as to establish a secondary supply connection to the JWC for improved reliability for the entire City system.

Transferring service in this manner is a new process to both agencies. The City has entered into an IGA with TVWD to provide terms and a schedule for the smooth and orderly withdrawal and transition of service to the City. In accordance with this IGA, the City has prepared a Withdrawal Plan and has been working with TVWD to identify which facilities are critical to TVWD’s water system and will be retained by TVWD, and those that are non-critical and will be transferred to the City.

After withdrawal of the areas (effective July 1, 2018), TVWD will continue providing service to withdrawal area customers on an interim basis until a temporary wheeling arrangement can be put into place and, ultimately, service is transferred to the City and the withdrawal areas separated from the TVWD system. As required by the IGA, several transfer and interim operating processes, guidelines, and procedures need to be developed.
between the City and TVWD to provide for the wheeling, transfer, and separation of water service. While the City has begun the planning process necessary to determine the required improvements and develop the required wheeling, transfer, and separation plans, more work is needed to complete the planning and implementation of the withdrawal process. To oversee this work, a Program Manager is needed to manage and facilitate work with City and TVWD staff to develop these plans and assist with development of the guidelines and operating procedures, as well as to perform the preliminary engineering and provide design and construction contract administration services necessary to implement the improvements and complete the separation process.

Assumptions

The following outlines general assumptions used in the preparation of this Scope of Work, as well as expectations regarding the City’s responsibilities. It is recognized by both RH2 and City staff that, due to the complex and continually evolving nature of the Program and TVWD’s role in the project, changes may occur as the Program progresses. To the extent that these changes materially affect this Scope of Work and/or the associated Fee Estimate, RH2 will notify the City and may provide a request for amendment if it is deemed appropriate and necessary by the City.

- **While the overall Program is anticipated to last for five (5) years or more, this Scope of Work and accompanying Fee Estimate is generally intended to cover work that will be performed within the first three (3) years. Work for subsequent years will be addressed in a future amendment as requested by the City.**

- **This Scope of Work and Fee Estimate is intended to provide for preliminary engineering and the oversite of design and construction contract administration of projects within the first three (3) years of the Program. Other design and construction services are not authorized at this time.**

- **RH2 will rely on the accuracy and completeness of any data, information, or materials generated or provided by the City or others in relation to the work.**

- **RH2’s role in the project is to provide program management, engineering, and technical expertise to implement the water service transfers in the IGA. While RH2 may act as a technical advisor in related matters, it is generally assumed that RH2 will not engage in the organizational and political aspects of this project, such as customer interfacing, financing, and political or City policy issues that may arise.**

- **Meetings will be held at City and/or TVWD offices. City and/or TVWD staff will assist with coordinating meeting rooms.**

- **Unless otherwise specified, RH2 will provide deliverables in electronic format (PDF or similar). The City will be responsible for the production of documents or deliverables (if necessary).**

- **RH2 is expected to assist the City and TVWD staff in reaching consensus on issues related to the operation, transfer, and separation by facilitating discussions and documenting decisions. These discussions and decisions will serve as the basis of operational, transfer, and separation plans. Both the City and TVWD will assign a primary point of contact who will be responsible for reviewing and obtaining the required approvals within their respective organization as necessary to reach consensus.**

- **RH2’s role as Program Manager is limited and RH2 is not expected to provide professionals trained in conflict resolution or public relations. Should these services be required, RH2 will work with the City to subcontract with a qualified professional.**
Not all areas within the City limits have been withdrawn from TVWD's service area. The IGA addresses these non-withdrawn areas and has established a timeline by which the City must notify TVWD of their intent to withdraw these areas. It is anticipated that RH2 will assist the City in assessing these non-withdrawn areas and determining which (if any) will be withdrawn as part of this Program and how they will be served.

The following describes the general responsibilities of the City.

- **The City will provide a project manager who is responsible for overall project management and will provide coordination between the consultant(s) and the City.**
- **The City and TVWD will retain the ultimate responsibility and final decision-making authority for meeting all terms and expectations of the IGA.**
- **The City will provide RH2 with copies of all available and relevant City utility as-built plans, reports, and studies pertinent to the project, and will assist RH2 in obtaining similar information from TVWD.**
- **The City will provide data requested in a timely manner.**
- **The City will provide timely review and comment on all reports, drawings, and specifications submitted by RH2 to City for review and approval.**
- **The City will maintain records and process consultant invoices.**
- **The City will provide legal review where required.**
- **The City will be responsible for public relations and community outreach, including providing notifications, as necessary, to the public and business community regarding the nature and timing of the work to be completed.**
- **The City will be responsible for advertising and managing the Request for Proposal/Invitation to Bid process for consultant selection and construction, except as otherwise described herein.**

**Task 1 — Project Management**

**Objective:** Coordinate with City staff and RH2 project team to manage key activities, schedule, and costs to provide timely and compliant completion of all required work tasks and final deliverables, including overseeing and managing the quality of the work and work products. Develop and maintain a project schedule and conduct regular progress and coordination meetings with the project team and City Project Manager to coordinate project resources and activities and report progress. This role will occur throughout all tasks within this Scope of Work and will be a key component in project completion.

**Approach:**

1.1 **Invoicing and Budget Monitoring:** Prepare and submit monthly invoicing; monitor expenditures with approved budget and progress; and report variances or needs for updates or budget revisions. Work also includes preparing scopes of work for additional services as requested by the City.

1.2 **Activity and Staff Coordination:** Perform project administration and management tasks to coordinate work tasks and facilitate timely delivery of work products. Conduct a project kick-off and regularly scheduled coordination meetings with project staff to discuss program goals, upcoming tasks and deliverables, project budget, schedule, stakeholder and quality assurance/quality control (QA/QC) review procedures and requirements. Prepare agendas and meeting summaries. For budgeting
purposes this task assumes two (2) internal staff coordination meetings per month for the first twelve (12) months and one (1) per month thereafter.

1.3 Progress Reporting and Project Schedule: Develop and maintain a project schedule with key activities and milestones. Meet on a regular basis to report on budget status, progress toward activities, key schedule milestones and deliverables, decision and action logs, and outstanding issues to City Project Manager. Prepare agendas and meeting summaries. For budgeting purposes, this task assumes two (2) monthly progress reporting meetings with City Project Manager for the first twelve (12) months and one (1) meeting per month thereafter.

1.4 Quality Assurance and Quality Control: Develop guidelines for internal and external review of Program deliverables and incorporate into work plans. Conduct principal- and director-level QA/QC reviews of project deliverables identified in the tasks below. Incorporate internal review comments and prepare documents for client/stakeholder review/deliverables.

Assumptions:
- RH2's Project Manager will coordinate communication through the City's Project Manager.

RH2 Deliverables:
- Monthly invoices.
- Regular communication with the City's Project Manager either verbally or in writing, as required.
- Monthly progress reports with updated project schedules.
- Preparation of scope of work amendments, as required.
- Meeting agendas, minutes, and presentation materials.
- Project schedule.

Task 2 – Program Management

Objective: Provide staff who can serve as a primary point of contact and perform Program oversight and coordination, similar to an Owner’s Representative. Act as the liaison with TVWD staff, coordinating communications and the transfer of information between the City, TVWD, RH2 staff, and customers related to the project. Coordinate with City and TVWD staff to facilitate and develop the operating guidelines and procedures per the IGA for the transfer, wheeling, and separation of water service within the withdrawal areas. Assist with facilitating the resolution of problems and issues, and coordinate stakeholder reviews and input as appropriate. Perform development review of projects within the withdrawal areas to ensure consistency with the withdrawal plan.

Approach:

2.1 Owner’s Representative: Serve as primary point of contact and Owner’s Representative for the Program, including serving as a liaison with TVWD and other stakeholder groups. Perform Program oversight and coordination, including the following:

- Coordinate and meet with TVWD Project Manager as necessary to resolve withdrawal related issues and facilitate issue resolution, manage internal and external communications, and develop recommendations for policies as appropriate.
• Coordinate stakeholder review of operation, transfer, and separation plans, as well as intermediate documents, and incorporate stakeholder input as appropriate.

• Develop and maintain a Decision and Action Log that documents critical decisions influencing the Program and identifies critical actions, responsible staff members, and target and actual completion dates. Review and distribute Decision and Action Log to key staff and stakeholders, and track issue resolution.

2.2 Stakeholder Meetings and Work Session Facilitation: Prepare for, conduct, and facilitate meetings and presentations with City Council and City stakeholder groups that are not specifically related to other tasks or activities. This task includes assisting City staff in preparing executive-level summaries on Program status and presenting quarterly reports to City Council throughout the duration of the project. This task also includes conducting periodic working session meetings with City department heads to report on Program progress and coordinate internal decisions and issue resolution. Prepare agendas and meeting summaries. For budgeting purposes, this task assumes up to twelve (12) general working session meetings and twelve (12) City Council meetings/presentations.

2.3 Communications Assistance: Assist the City in developing content for internal and external communication of information related to the Program. Topics may include changes in water service, City procedures and policies, withdrawal related projects, and timelines. The audience may include customers, City Council, City Departments, and TVWD. It is assumed that the City will generally take the lead in all internal and external communications, and that RH2's role will be to advise and provide content that aligns with the City communication strategy and branding requirements.

2.4 Functional Workgroup Guideline Development and Coordination: Coordinate, facilitate, and document City and TVWD workgroups efforts to develop guidelines and procedures for the following functions:

• Finance
• Customer Service – Billing and Accounts
• Customer Service – Field and Meters
• Communications
• Operations
• Mapping/Asset Management
• Engineering/Planning/Development Services
• Water Quality/Regulatory Compliance
• Water Resources

For planning purposes, it is assumed that City and TVWD representatives for each of the above functions will be organized into four (4) Functional Workgroups that will be responsible for developing policy recommendations and coordinating the guidelines and procedures as it relates to operation and transfer of water service within each of their individual functions.

This task includes the following for each Functional Workgroup:
1. Identify what (if any) services related to the interim operation, transfer or separation of the withdrawal areas the City will request TVWD to assist with performing. Establish the cost of services to be provided by TVWD to perform these services and the anticipated duration that these services are anticipated to be performed for the cost and benefit evaluations.

2. Collect, document, and review data from prior Workgroup meetings.

3. Schedule and facilitate up to four (4) meetings.

4. Document key decisions and actions, and prepare meeting minutes.

5. Develop draft and final Functional Workgroup Guidelines and Procedures.

2.5 Development Review Assistance: Assist City staff, on an as needed basis, in conducting development review of projects within the withdrawal areas to identify any opportunities or conflicts and ensure consistency with City plans for how the area will be served by the City during both the transition period and final separation.

2.6 Potential Withdrawal of Additional Areas: Assist the City in evaluating areas within the City Limits which have not yet been withdrawn to determine if these areas should be withdrawn as part of this Program and how they will be served. Assist City in preparing legal descriptions of potential withdrawal area boundaries, evaluate options for how the areas will be served, and assist with preparation of needed documentation and coordination for withdrawal. Coordinate with City staff to perform site visits to each area to be withdrawn and attend up to six (6) coordination meetings with City Engineering, Operations, and Finance staff.

Assumptions:

- City and TVWD staff will actively participate in stakeholder meetings and Functional Workgroups, including attendance, decision making, and review of documented results.

- The City will be responsible for developing and coordinating a communication strategy that will inform City staff, City Council, TVWD, and customers regarding the Program.

- There are approximately 600 individual parcels within City Limits that are eligible for withdrawal from TVWD’s service area. These parcels can generally be grouped into 100 separate withdrawal areas.

- The City will be responsible for the withdrawal of additional areas from TVWD. RH2’s role is to help evaluate and advise the City regarding the options for withdrawal and services, and to provide additional resources as requested to prepare the legal descriptions and documentation needed for withdrawal.

- It is anticipated that the majority of the potential withdrawal areas would be served through wheeling.

Provided by City:

- Information needed to develop guidelines.

RH2 Deliverables:

- Meeting agendas and minutes.

- Decision and Action Log.
• Draft and Final Functional Workgroup Guidelines and Procedures.
• Content appropriate and aligned with City communication strategies, as requested.
• Development review comments.
• Legal descriptions for potential withdrawal areas, as requested.

Task 3 – System Planning

Objective: Review and confirm the City’s Water Master Plan (WMP), level of service (LOS) goals, and assumptions, and integrate the withdrawal areas appropriately so hydraulic modeling assessments can be performed to identify a recommended approach for long-term service of each withdrawal area. Confirm if it is in the City’s economic benefit to make the needed improvements or for TVWD to continue wheeling water to some or all customers in each area. Confirm that the sequence of improvements and planned incremental separations can provide adequate supply as the City takes over supply to the areas.

Approach:

3.1 Data Collection and Review: Develop and submit a data request for data needs not already acquired from the City. It is anticipated this will include geographic information system (GIS) data, Water Master Plan draft chapters, latest hydraulic model, pipe asset data, etc. Identify and work to resolve data gaps.

3.2 Review and Confirm LOS Goals, Hydraulic Model Updates, and Assumptions:

• Review and confirm Program LOS goals, including supply redundancy, reliability, resilience, and service criteria (e.g., zones, pressure, velocity, fire flow, and storage volumes). Confirm assumptions for ultimate build-out conditions to inform pipe sizing requirements.

• Review WMP results for existing capacity deficiencies, future demand assumptions, and recommended capital and seismic resilience projects. Coordinate with City’s WMP consultant to resolve questions. Confirm future demand assumptions for Area 4 growth. Confirm planned supply connections and quantities for build-out demands to guide capacity evaluations of supply transmission facilities.

• Update the City’s hydraulic model with transfer area pipes from prior area modeling and available GIS data.

• Develop planning-level cost estimate assumptions for different methods of service, such as new pipe construction, continued use of existing pipes, and wheeling water for use in the Cost Benefit Analysis. For pipe construction, develop unit costs to capture the range of potential construction challenges (e.g., congested roads versus low volume roads).

• Present and discuss results of above subtasks with the City to confirm goals and assumptions.

3.3 Determine and Confirm Needed improvements for Direct City Service: Confirm improvements needed to serve each withdrawal area directly.

• Use the updated hydraulic model with transfer area pipes and demand assumptions to identify the infrastructure alternatives to supply and distribute water through the service areas to meet the established LOS goals and criteria.

• Incorporate recommended improvements from the WMP as appropriate.
3.4 **Cost-Benefit Analysis for Direct City Service or Continued Wheeling:** Compare the planning-level cost for direct City service (herein defined as supplying water through the City's water system as opposed to wheeling water from TVWD) to the costs for TVWD to continue supplying water by wheeling.

- Establish evaluation criteria other than cost.
- Prepare net-present worth costs for service over a 50-year timeframe.
- Perform a cost-benefit analysis to determine the recommended approach for long-term service to the withdrawal areas. The analysis will compare direct City service to long-term wheeling.
- Present and discuss results of Cost-Benefit Analysis.

3.5 **Separation Sequence Plans:** For each withdrawal area recommended for direct City service, develop a separation sequence plan to reduce service disruptions during separation. Consider temporary potential master meter connections. Develop cost estimates for each phase of the separation.

3.6 **Maintenance and Replacement:** Review existing main and facility age, condition, and maintenance history, and determine the level of ongoing maintenance and replacements needed for the assets being transferred to the City.

- Review and organize asset data provided by the City and TVWD. Coordinate with the City to identify an approach to organize asset data received from TVWD to match existing City records, and amend GIS pipe attribute tables with TVWD asset data.

3.7 **Reporting:** Develop three (3) technical memoranda to document: 1) Results of Cost-Benefit Analysis; 2) Recommended Separation Sequence Plans; and 3) Maintenance and Replacement Recommendations. Draft memoranda will be provided for City review. City comments will be incorporated into final memoranda. The memoranda may be used as addenda to the City's WMP. Integrate the recommended improvements with the City's WMP Capital Improvement Plan and Financial Analysis, as appropriate.
Assumptions:

- City’s WMP will be completed in a timely manner such that required data is available to meet the Program schedule. Anticipated delivery of the updated hydraulic model is September 10, 2018; anticipated WMP completion is September 2018, with City adoption in October 2018.
- Only steady-state analyses will be performed using the City’s hydraulic model. Extended period simulations are not anticipated to be used as no operational evaluations are anticipated.
- City’s WMP demand assumptions will be used to estimate customer demands in transfer areas.
- TVWD’s pipe GIS data will be provided; where not already included, GIS pipes will need to be added to the City’s GIS pipe data, including material, size, and age (as available).
- The City will request asset information, including material, age, history of leaks, and planned maintenance, as available, to support the maintenance and replacement task.
- Task 3 deliverables are not anticipated to require review or comments from TVWD.

Provided by City:

- Data requested in Task 3.1.
- Coordination with TVWD for current facility specifications, and anticipated sequencing for master meter connection.
- Coordination with consultant performing WMP.
- Review comments on three (3) draft memoranda.

RH2 Deliverables:


Task 4 – Implementation Planning

Objective: Develop the required transfer and separation plans as outlined by the IGA with TVWD for the transfer of service to wheeling and final separation. Develop the implementation schedule and Capital Improvement Program (CIP). Prepare cost estimates for facility improvements required to make the final separation for each area.

Approach:

4.1 Develop Transfer Plans (with Interim Wheeling): Develop interim water service plans for water to be wheeled to City customers (herein called “Transfer Plans”) and related documents as outlined in the IGA.

- Prepare outline of Transfer Plans for City review and confirmation.
- Prepare a Draft Transfer Plan for each withdrawal area. Incorporate findings from Functional Workgroups.
- Present draft Transfer Plans to City and TVWD staff.
- Revise Draft Transfer Plans based on City and TVWD comments. Organize and address comments in second draft.
4.2 **Develop Separation Capital Improvement Plan:** Using recommendations and costs identified in Task 3, develop a Separation CIP to supplement the City’s WMP CIP.

- Discuss and establish City budgeting goals considering supply, distribution, and other planned capital expenditures over the next fifty (50) years. Review WMP recommended CIP for timing of overlapping projects and planned annual expenditures.
- Develop a Separation CIP schedule that meets the City’s budget and separation timing goals. Identify overlap of WMP CIP and resolve conflicts of timing and budgeting. Prepare the Separation CIP in Excel format and include the City’s WMP CIP and anticipated costs for long-term wheeling, as required.
- Present Separation CIP to City.
- Prepare a draft and final CIP.

4.3 **Develop Separation Plans (with Interim Master Meter Plan):** Develop Separation Plans and related documents for long-term water supply for each withdrawal area, as outlined in the IGA.

- Prepare outline of Separation Plans for City review and confirmation.
- Prepare Draft Separation Plans for each withdrawal area. Include separation sequence plans and potential interim master metering plans for TVWD review.
- Present draft Separation Plans to City and TVWD staff.
- Revise Draft Separation Plans. Organize and address comments in second draft.
- Finalize Separation Plans.

**Assumptions:**

- *The Separation CIP will not be completed prior to completion of the City’s WMP, which includes a financial analysis assessing system development charges (SDCs). To incorporate the withdrawal area improvements into the City’s SDCs, a future financial SDC study will be required.*
- *This task does not include an affordability/rate stabilization analysis for developing the Separation CIP.*
- *The City’s WMP CIP will be provided in electronic format (Excel).*

**Provided by City:**

- Comments on reviews of draft documents.

**RH2 Deliverables:**

- Draft, second draft, and final Transfer Plans for each withdrawal area.
- Draft and final Separation CIP in Excel format.
- Draft, second draft, and final Separation Plans and related documents with interim wheeling, improvement schedule, and CIP budget in electronic format.
Task 5 – Preliminary Engineering

Objective: Perform preliminary engineering evaluations and data collection necessary to confirm alignments and further define capital project requirements for the Program, including alternative assessments as appropriate. Perform topographical survey and prepare preliminary design plans up to an approximate 30-percent completion level. Define final design requirements and develop project scopes for use in consultant selection for final designs.

Approach:

5.1 **Alignment Review and Alternatives Assessments:** Review water main alignments identified in previous planning tasks and evaluate possible alternative alignment routes. Perform field reconnaissance of proposed alignment to observe visible indicators of geologic/environmental issues or concerns. Review available geologic and environmental data and determine any further field exploration needed for final design. Prepare a brief technical memorandum summarizing alternatives, field observations, and recommendations for further investigations, if any, and provide recommendations of preferred alignment to City.

5.2 **Topographical Survey:** Subcontract and coordinate with the professional land surveyor to obtain topographic survey of field conditions and subsurface utilities. Review survey data and format drawings for design use. Perform site visit to compare survey information with field conditions. Coordinate with surveyor and update plans as necessary based upon the site visit.

5.3 **Utility Coordination:** Coordinate with the City and utility companies to obtain as-built records of the existing facilities and utilities located along the project alignment.

5.4 **Preliminary Design and Estimate of Probable Cost:** Prepare preliminary design plans to the 30-percent design level for City review, including a preliminary opinion of probable construction cost(s). Develop design criteria for final design and a draft scope of work for final design. Attend review meetings with the City. Incorporate City comments into documents and prepare package for City use in selecting final design consultant.

Assumptions:

- The above approach is intended to be general in nature and will be applied to each project listed below to the level warranted for that project. For project management purposes, work associated with each project will be tracked and reported separately.

- This Task assumes that the following projects will require Preliminary Engineering services:

<p>| NTL Supply Main | Evergreen Parkway, Cornelius Pass to 170th Ave | 15,200 lf of 24-inch pipe |
| STL Supply Main | SW 170th Ave, TV Hwy to Baseline Road | 7,300 lf of 24-inch pipe |
| Area 2 | SW Hocken-Millikan Main – SW Jenkins to Murry Blvd | 9,700 lf of 8- and 12-inch pipe |
| Area 3 | SE Oak St – SW 160th, Division to SW 164th Ave | 3,600 lf of 12-inch pipe |
| Area 4 | Five Oaks School, SW 173rd to NW 167th Ave | 1,400 lf of 12-inch pipe |
| Area 4 | W Baseline, SW 173rd to SW 164th Ave | 1,500 lf of 16-inch pipe |</p>
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</tr>
<tr>
<td>Area 4</td>
<td>SW 158th Cornell Rd to Schendel Ave</td>
<td>3,400 lf of 16-inch pipe</td>
</tr>
<tr>
<td>Area 6</td>
<td>SW Scholls Ferry Rd, Denny Rd to Hall Blvd</td>
<td>5,000 lf of 12-inch pipe</td>
</tr>
</tbody>
</table>

- The Fee Estimate assumes that only Task 5.1, Alignment Review and Alternatives Assessments, will be performed at this time for the NTL Supply Main project. At the City's request, a contract amendment may be provided in the future to complete the preliminary design for this project.

- A complete list of each main requiring preliminary design in this contract period has not been fully determined. The above list may be adjusted after the completion of Tasks 3 and 4.

- This Task does not include the pitholing or subsurface investigation of existing utilities. In general, it is assumed that pitholing of utilities to confirm location or depth will be performed in the design phase. In the event that pitholing of utilities is determined necessary as part of the preliminary engineering phase, RH2 can provide an amendment for this work if requested.

- Geotechnical and environmental investigations performed under this Scope of Work are limited in nature and primarily consist of desktop review and limited field observation. If a more in-depth investigation or additional services are determined necessary to support the preliminary or final design phase, RH2 can provide an amendment for this work if requested.

- Right-of-way and easement acquisition services are not included in this Scope of Work. Should these services be required, RH2's role will be limited by the hours identified in the Fee Estimate and will generally include identifying necessary properties and answering questions. The City shall provide appraisals and negotiations with property owners for easement acquisition.

Provided by City:

- Utility locates for City facilities.
- Pitholing if determined necessary.
- Right-of-way and easement acquisition services.

RH2 Deliverables:

- Technical memorandum for alternatives analysis.
- Preliminary design plans and engineer's estimate at 30-percent level.
- Design criteria and draft scope of work for final design.

Task 6 – Additional Services as Requested (Contingency Task)

Objective: Provide additional professional services beyond those identified in this scope of work as requested by the City.

Approach:

6.1 Provide additional management, planning, engineering, or construction related services for the project as requested or approved by the City. The City shall provide written authorization to proceed with the additional services tasks.
RH2 Deliverables:

- Other deliverables as requested by the City under the authorization for additional design or permitting services.

Task 7 – Design Management (If Authorized)

Objective: Assist the City with the selection and management of the design consultants for required facilities that are to be completed within the first three (3) years of the Program. This task includes performing design reviews and coordinating City stakeholder review and input on designs at key design milestones.

Approach:

7.1 Design Consultant Selection: Assist City throughout the request(s) for proposal/qualifications (RFP/RFQ) and consultant selection process, including defining scope of work(s) and preparing RFP/RFQ for consultant selection for final design, assisting with evaluating the consultant proposals, and selecting the most qualified proposers.

7.2 Design Engineering Oversight: Provide Owner's Representation and oversight of design consultants selected to complete the final design. Perform review of final designs at key milestones and coordinate preparation of bidding and construction documents. Facilitate and coordinate design review with City, TVWD, and design consultants to respond to issues and questions in a timely manner.

Assumptions:

- The above approach is intended to be general in nature and will be applied to each project listed below to the level warranted for that project. For project management purposes, work associated with each project will be tracked and reported separately.

- This Task assumes that the following projects will require Design Management services:

<table>
<thead>
<tr>
<th>STL Supply Main</th>
<th>SW 170th Ave, TV Hwy to Baseline Road</th>
<th>7,300 lf of 24-inch pipe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area 2</td>
<td>SW Hocken-Millikan Main – SW Jenkins to Murry Blvd</td>
<td>9,700 lf of 8- and 12-inch pipe</td>
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<tr>
<td>Area 3</td>
<td>SE Oak St – SW 160th, Division to SW 164th Ave</td>
<td>3,600 lf of 12-inch pipe</td>
</tr>
<tr>
<td>Area 4</td>
<td>SW Walker Rd, SW Schendel to SW 150th Ave</td>
<td>5,200 lf of 8- and 16-inch pipe</td>
</tr>
<tr>
<td>Area 4</td>
<td>W Baseline, SW 173rd to SW 164th Ave</td>
<td>1,500 lf of 16-inch pipe</td>
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<tr>
<td>Area 4</td>
<td>SW 173rd, W Baseline to SW Walker Rd</td>
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</tr>
<tr>
<td>Area 6</td>
<td>SW Scholls Ferry Rd, Denny Rd to Hall Blvd</td>
<td>5,000 lf of 12-inch pipe</td>
</tr>
</tbody>
</table>

- A complete list of each main requiring Design Management in this contract period has not been fully determined. The above list may be adjusted after the completion of Tasks 3, 4, and 5.

- The City shall take the lead in administering the design consultant RFP/RFQ and contract administration process. The City will responsible for the payment of all fees.

Provided by City:

- Contract administration and consultant selection.
• Review and comment of documents provided by proposers and selected design consultant.

RH2 Deliverables:
• Design proposal review and comment.
• Consultant scope of work and fee estimate review, comment, and recommendations.
• Review and comment on plans and specifications at 60- and 90-percent design stages.

Task 8 – Construction Management (If Authorized)

Objective: Act as the Owner’s Representative during bidding and construction for customers, contractor, City, and TVWD Water Operations personnel.

Approach:
8.1 Bidding Assistance: Assist City with bidding, contractor selection, and construction contract execution.
8.2 Construction Contract Administration and Field Observation: Perform construction contract administration and field observation for each improvement project.
8.3 Service Transfer Coordination: Assist in the transfer of services to City mains and separation from the TVWD system, including coordination with City customers, construction issue resolution, and coordination with TVWD for transfers and shut down of mains and services.

Assumptions:
• The above approach is intended to be general in nature and will be applied to each project listed below to the level warranted for that project. For project management purposes, work associated with each project will be tracked and reported separately.
• This task assumes that the following projects will require Construction Management services:

| Area 4 | SW Jenkins Rd, SW 158th to SW 153rd Ave | 1,500 lf of 16-inch pipe |
| Area 4 | SW Baseline Rd, SW 158th to SW 164th Ave | 1,400 lf of 16-inch pipe |
| Area 3 | SE Oak St – SW 160th, Division to SW 164th Ave | 3,600 lf of 12-inch pipe |
| Area 4 | SW Walker Rd, SW Schendel to SW 150th Ave | 5,200 lf of 8- and 16-inch pipe |
| Area 4 | W Baseline, SW 173rd to SW 164th Ave | 1,500 lf of 16-inch pipe |
| Area 4 | SW Walker Rd, SW 173rd to Schendel Ave | 3,500 lf of 16-inch pipe |

• The City will be responsible for administering the construction contract advertising, award, related notifications, construction contract execution, and payments for contractor.
• RH2 is not responsible for jobsite safety or for directing the contractor in their work.
• Construction phase services defined in this task are variable in nature and depend in part on the contractor awarded the project. RH2’s Fee Estimate is based upon an experienced and reasonable contractor being awarded the construction contract. RH2 recommends the City budget the amount shown in the estimate plus a contingency amount. The contingency would cover additional services if a more intensive level of observation and construction support is necessary.
Provided by City:

- Contract administration and contractor selection.
- Review and comment of documents provided by bidders and selected contractor.

RH2 Deliverables:

- Construction contractor bid review and recommendation.
- Approved shop drawings.
- Recommended Pay Estimates.
- Daily construction observation reports.
- Final walkthrough and acceptance.
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<th>RATE</th>
<th>UNIT</th>
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</tbody>
</table>

**Water Service Transfer Program Manager**

Preliminary Schedule and Estimated Annual Expenditures

**EXHIBIT 4**