EXHIBIT A

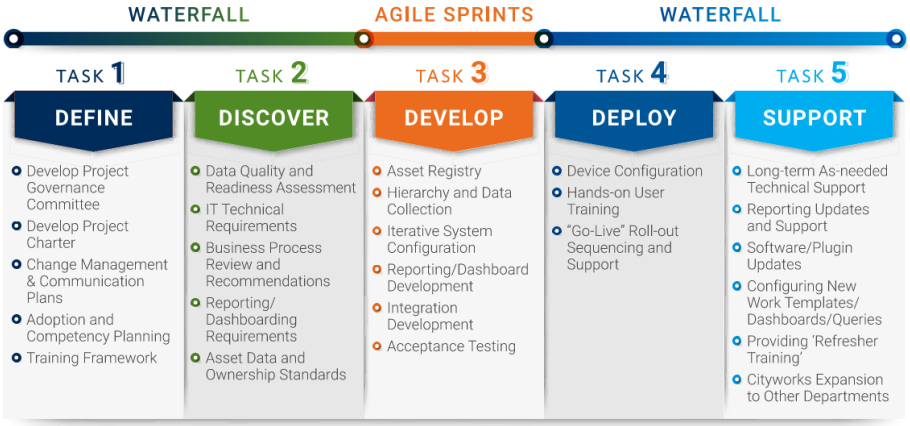
Date:	10/13/2023

1. PROJECT INFORMATION:

Project Title:	Asset Management System Implementation
City Project Number:	
City Plan Set Number:	
Consultant Project Number:	

2. SCOPE OF SERVICES:

Black & Veatch's (ENGINEER) work execution plan follows a hybrid-agile approach. The first two tasks of the scope, Define and Discover, occur sequentially in the style of a traditional waterfall execution plan. The third phase, Develop, occurs as a series of agile sprints that allows Cityworks to be Designed, Built, Tested, and Revised through a controlled iterative process. The fourth phase, Deploy, will be performed as a waterfall approach with the device configuration and user training followed by go-live deployment and the fifth task, Support, which provides ongoing support after the project is complete.



I. Task 1. DEFINE:

In this first task, the project team will establish the protocols and procedures to ensure success. A project governance committee will be established that develops and oversees change management plans, communication plans, and stakeholder engagements. Additionally, adoption and competency checks and the City of Clearwater's (City) program- wide training framework will be established.

Task 1.1: Establish Project Governance

ENGINEER shall assist the City with the development of a Project Governance Committee. This committee will be comprised of City and ENGINEER representatives. Nick Alexandrou, Project Manager, will co-chair this committee with City staff from each facility group (Administration, Water Treatment and Wellfields, Wastewater Treatment, Distribution, Reclaim and Collections, Maintenance and Lift Stations, Warehouse and Meter Shop), who will be identified as the Cityworks program owners/champions.

Project Governance Committee shall meet monthly for the full project duration (18 months) to review project status, risks, trends, and upcoming efforts.

ENGINEER, along with the Project Governance Committee, shall develop a project charter which will define and develop the project's governance model, project-level decision criteria, list of key stakeholders, Responsible-Accountable-Consulted-Informed (RACI) matrices, Risk-Action-Issue-Decision (RAID) log, escalation management strategies, exit criteria, change control process, and acceptance criteria. The committee will also be responsible for the development and oversight of change management planning, monitoring and measuring program adoption, communication planning, and approving standards developed throughout the project.

For broader decisions related to policies, procedures, and practices that could impact stakeholders from outside of the Utilities department, an 'Enterprise Governance Committee' shall be formed with stakeholders from all relevant departments to review and agree upon Enterprise-wise decisions that will impact those Departments' future implementation of Cityworks and/or integrations with Cityworks.

Task 1.2: Change Management Plan

ENGINEER shall facilitate four (4) half day workshops. These workshops will be on-site/hybrid sessions that will help evaluate and develop a change management plan that the Cityworks implementation program shall follow. The first session will be with stakeholders from the both the water and wastewater treatment plants, and second session will be with stakeholders from the distribution and collection systems, the third session will be with Utility department management, and the final session will be with stakeholders from

IT. Topics to be discussed and included in the change management plan include, but are not limited to:

- Specific Changes and Change Types
- Impacted groups
- Resistance identification
- Mitigation strategies
- Change readiness
- Risk assessment

ENGINEER will monitor changes in the project scope and vision and adapt the plan accordingly with City review and approval. ENGINEER will develop and provide access to the City a PowerBI Change Management Tracking Platform to monitor when each Utility group will be exposed to changes, the type of change, and if certain staff or groups are projected to be "overloaded" with changes.

Task 1.3: Communication Plan

Members of the Project Governance Committee will serve as the key points of contact for their group and will be responsible for communicating the right messages regarding the changes to come, why they are important, and how they fit into the big picture of Cityworks usage.

ENGINEER shall work with the Governance Committee to develop a communication plan for the major phases and changes anticipated for the project. The Communication Plan will include, but is not limited to, the following components:

- Stakeholder(s)/Recipient(s)
- Owner(s)
- Content
- Frequency
- Priority
- Delivery Method

Task 1.4: Training Program Framework

Before developing training materials, ENGINEER shall work with the Project Governance Committee to develop a training framework that defines:

- Role based courses
- Curriculum requirements
- Training material standards
- Training delivery approaches
- Training schedules, including refresher training plans

The framework, and the standards defined within it, will be used to develop training materials, videos, and recordings that will be delivered on-site in *Task 4.2 - Hands-on User Training.* This training program framework will be presented to the Project Governance Committee for review, comment, and approval.

Task 1.5: Adoption and Competency Checks

During the Discover, Develop, and Deploy phases, City stakeholders will be introduced to new technology and business process changes. It is important to track those changes and measure their effectiveness. Changes are tracked in the monitoring platform developed in Task 1.2 - Change Management Plan, but their effectiveness is measured through competency checks.

ENGINEER shall define when competency checks will be assigned, who they should be assigned to, the criteria to be covered, and the acceptable pass/fail scoring. Competency checks will take the form of questionnaires, mini-quizzes, and self-guided assessments.

ENGINEER shall develop the content of the competency checks for the Project Governance Committee to review and approve ahead of assignment to staff.

Additionally, final platform user acceptance testing will be developed and approved by the Governance Committee. These will include the testing acceptance requirements, scenarios, and workflows for users to evaluate.

II. Task 2. DISCOVER:

ENGINEER shall work hand in hand with City stakeholders from all groups to understand current conditions, review and document as-is business processes, identify technical and functional requirements, perform a data readiness assessment, and gain an understanding of any integration requirements with existing City enterprise systems.

Task 2.1: Data Quality and Readiness Assessment

Data accuracy, consistency, and completeness is a foundational component for any computer maintenance management system (CMMS). In this effort, ENGINEER will evaluate the data associated with the asset hierarchy, asset registry, and the City's historical operations and maintenance (O&M) work history.

Subtask 2.1.1: Asset Hierarchy Assessment

ENGINEER shall host four (4) on-site workshops centered around asset hierarchy, asset types, and asset attribution. The workshops will center on plants and facilities where non-spatial (vertical GIS) assets are found:

- Water Reclamation Facilities (full day)
- Water Treatment Plants (full day)
- Lift Stations & Pump Stations (half day each)
- Wellfields (half day)

ENGINEER shall guide stakeholders through the development of an asset hierarchy that supports easy navigation for O&M activities, as well as asset and

cost roll-up for finance, Utilities Management, and asset management business initiatives.

ENGINEER shall also guide stakeholders in defining the 'parent-child' relationships that support the hierarchal structure, as well as defining what constitutes an 'asset' and should be included in the hierarchy, as well as the attributes and criteria that should be tracked for each asset type.

ENGINEER shall document the hierarchal structures into a technical memo. Comments received by the City will be updated and reflected in the Final memo. This will be used to develop and update the City's Enterprise Geodatabase and put into production in *Task 3.2 – Asset Registry Inventory/Data Collection.*

Subtask 2.1.2: Asset Registry Assessment

ENGINEER shall evaluate existing data for distribution, reclaimed, and collection systems (linear assets) in GIS, OWAM, and captured as part of Master Planning and Condition Assessment efforts.

ENGINEER shall also review existing plant, lift station, reclaim water booster station, and wellfield assets (vertical assets) inventory data housed in Oracle WAM (OWAM) or other systems and data sources, where available.

Data will be evaluated for its readiness to be used by Cityworks. Common characteristics to be evaluated include, but are not limited to:

- Asset identification and naming standards
- Asset attribute standards, usage, consistency, and completeness
- Data duplication
- Data redundancy
- Organizational standards

ENGINEER shall document the results of the asset registry assessment as a data gap and needs technical memo. This will steer the data collection plan and efforts to follow in *Task 3.1 - Asset Registry Database Development* and *Task 3.2 – Asset Registry Inventory/Data Collection.*

Subtask 2.1.3: Historical O&M Data Assessment

ENGINEER shall assess existing O&M data recorded in OWAM. ENGINEER shall also assess existing data not tracked in OWAM including backflow inspections, water samplings, wellfield monitoring data, and data captured as part of Master Planning and Condition Assessment Efforts.

Data evaluation will focus on legacy work orders and inspections. Data will be evaluated for its quality and feasibility for migration including, but not limited to:

- Costs
- Dates
- Unique assets worked on
- Work types
- Comments to determine data quality and feasibility for migration

ENGINEER shall document the results of this assessment into a Historical O&M Data Migration Plan to be executed in *Task 3.3 - Iterative System Configuration.*

Task 2.2: Technical Requirements Assessment

Understanding and documenting the technical requirements for a Cityworks implementation helps ensure the configuration is implemented efficiently, is scalable to other departments, and meets the highest security requirements possible.

Subtask 2.2.1: IT Discovery

ENGINEER shall host two (2) half-day hybrid workshops with IT and Utilities stakeholders centered around IT requirements. This discovery effort will identify, evaluate, and provide guidance on the following examples:

- Cityworks Platform and Licensing
  - Cityworks Online Security and Accessibility Overview
  - Contract and Licensing model evaluation
  - Plug-in Requirements
- Cybersecurity Protocols
- Data Format Standards
  - SQL, Excel, fgdb, Enteprise Geodatabase, and others
- Mobile Devices
  - What devices are currently in use, what devices are a best fit for City staff on a use case basis, how many, and for whom should they be assigned?
- Enterprise GIS
  - Esri Licensing Needs
  - ArcGIS Accessibility (externalized vs. internal with VPN)
  - ArcGIS Platform Version (ArcGIS Portal and/or ArcGIS Online)
  - ArcGIS Performance
- Server and RDBMS requirements
- Network accessibility
- Attachment Storage/Documentation Links
  - SOPs, O&M Manuals, Drawings, Diagrams

ENGINEER shall document the results of these workshops and discussions in an IT Requirements and Recommendations Document to be used as a guide in *Task 3.3 - Iterative System Configuration.*

The results of the Enterprise GIS evaluation and recommendations will be documented in a separate memo.

Subtask 2.2.1: Integration Requirements

A fully mature CMMS provides the most value to an organization when it is integrated and communicates with other business critical enterprise systems.

ENGINEER shall host six (6) on-site half-day workshops, with follow-up meetings as-needed, to identify and document system integration requirements. Existing systems that are already known and may require integration with Cityworks include:

- SeeClickFix for customer service requests
- Cayenta for customer billing, account turn off/on
- Tyler MUNIS for material procurement
- GraniteNet for PACP CCTV
- ATL SampleMaster LIMS for laboratory sampling
- LaserFiche and Accela for Document Management

In addition to the known software systems, ENGINEER will conduct an evaluation and fully document any remaining legacy software currently in use by the Utilities department. ENGINEER will document their size, maturity, and criticality to operations.

ENGINEER will produce a document that outlines a summary of the software and applications in use by the Utilities department, whether they will require an integration, and a recommended phasing for integration.

Additionally, ENGINEER will document the integration requirements for the top six (6) software systems identified by ENGINEER and Utilities department as mission critical, considering complexity, criticality, and operational impact. This will include up to six (6) unique Integration Requirements documents that will include, but not limited to:

- Integration workflow diagram(s)
- Data directionality
- Data to be exchanged
- Data exchange frequency and/or triggers
- Data exchange method (API, webservices, webhooks, etc.)

The execution of integrations will be implemented within *Task 3.5 - Integration Development.*

Task 2.3: Functional Requirements (Business Process Review)

Functional requirements gathering is key to ensuring that Cityworks is configured in a manner that supports existing business needs, optimizes business processes, and is prepped for future enhancements and scalability.

Subtask 2.3.1: Existing Business Workflows and Process Reviews

ENGINEER shall utilize national subject matter experts, and local resources with intimate knowledge of the City, to meet with stakeholders for three (3) full weeks of in-person workshops with management and operations teams from each Utility group (Administration, Water Treatment and Wellfields, Wastewater

Treatment, Distribution and Collections, Maintenance and Lift Stations, Warehouse and Meter Shop) to discuss and evaluate existing business processes. Common business processes include, but are not limited to:

- Standard Preventative vs. Corrective Maintenance Processes
- Assignment & Equipment Tracking (for individual users and groups)
- Map representation of individual, group, division, and department work activities
- Emergency Repairs
- Issue Identification and Work Escalation Planning
- Cyclical Inspections/PM's vs. Runtime PM's
- Material Management
    - Requisitions, Purchasing, Receivals, Storage, Transfers, Installs, Non-standard materials
    - Mobile Storerooms, Warehouse, and Central hubs
- Equipment Management
- Work Communication Protocols
    - Email/Text
    - When should communication occur
    - Who should communication be sent
- Internal and External Service Requests Processing
- Regulatory Compliance
- Labor, Equipment, and Material Cost Assignments and Updates
- Underground Utility Locate Process
- Routine Samplings
- External Claim Processing
- Engineering/Construction Management
- Contractor/External Workforce Maintenance and Cost
- Backflow Management
- Failure Codes
- Work Order Management Cycles
    - Assignment
    - Fulfillment
    - Review
    - Close Out

ENGINEER shall document the findings of the workshops into as-is workflow diagrams that will serve as the starting point for to-be, best practice, workflow diagrams developed in *Task 2.3.2 – Develop Best Practice Protocols.*

Subtask 2.3.2: Develop Best Practice Protocols

Following the evaluation of the City's existing business processes, ENGINEER shall develop recommended 'to-be' business workflow diagrams and business process configuration requirements that will follow Cityworks best practice, as well as optimize the City's communication and workforce efficiencies.

These 'to-be' workflows will help drive platform configuration and will be used to communicate change and educate staff impacted by the updated and/or new processes.

Additionally, ENGINEER will develop a list of standardized maintenance activities, per asset type, to be used as Cityworks 'templates' for work orders, inspections, and service requests. The list of activities will be comprehensive and account for preventative, corrective, sampling, and regulatory requirements.

Task 2.4: Reporting/Dashboarding Requirements

ENGINEER shall host up to two (2) half-day on-site workshops to identify existing and new reporting requirements. The results of these discussions and reviews will be a catalog of Key Performance Indicators (KPIs), financial and O&M performance metrics, and a listing of static reports to be developed/migrated onto the Cityworks platform. KPIs will include, but are not limited to, asset inventory and performance, financial metrics, regulatory compliance, and workforce efficiencies.

Common KPIs include, but are not limited to:

- Average service request response time
- Monthly average work order costs, and percent change compared to previous months
- Average number of labor hours per work activity
- Average equipment, labor, and material costs per work activity
- Preventative vs. reactive ratio
- Number of work activities completed - by date range
- Summary costs per facility, system, and subsystem - by date range
- Preventative maintenance compliance rate
- Percent of work activities that required a "repeat repair"
- Number of SSO's – by date range

Common static reports include, but are not limited to:

- FDEP CCP Reporting
- SWFWMS Reporting
- Summary performance and financial metrics for divisions
- Monthly usage and financial reporting

- Water Quality reporting (flushings, complaints, purging/levels, sampling results, autoflusher meter reads, etc.)
- Safety/Incident reporting

Once KPIs have been defined, ENGINEER shall review available dashboarding platforms to identify best-fit for the City. Recommended platform will likely be based in Cityworks, ArcGIS, PowerBI, or a combination of all three.

ENGINEER shall develop and present sample dashboards that account for City branding standards and presentation platform requirements. These design elements will be documented in a Dashboard Branding and UX Guideline Document for use in *Task 3.4 - Reporting/Dashboard Development.*

Through coordination and one-on-one meetings with stakeholders ENGINEER shall develop a user access matrix that outlines user roles and the types of dashboards they should have access to.

Task 2.5: Asset Data and Ownership Standards Development

Having proper policies, procedures, and processes in place for the management of data ensures that the City will continue to build trust in the data, and confidence in their decisions.

Two important standards that will help sustain long-term success are based around asset lifecycle management and asset data editing.

Subtask 2.5.1: Asset Lifecycle Management Standards

Defining and implementing best-practice asset lifecycle management and asset data editing/management standards is critical to having standardized maintenance planning and reliable, trustworthy data.

ENGINEER shall host up to four (4) half-day hybrid workshops centered around developing Standard Operating Procedures (SOPs) for asset and data lifecycle management. SOPs can cover a broad range of subjects, but will typically include:

- New Asset Onboarding
  - Including procedure for contractors and vendors to follow, with a standardized template to provide inventory list of assets for efficient upload and prep for O&M activities.
- Documenting Swap-outs & Replacements
- Standardizing the use of Problem, Cause, Remedy Codes for Root Cause Failure Analysis
- Asset Decommissioning

ENGINEER will help to develop up to six (6) SOPs specific to using Cityworks for asset lifecycle management. These will help guide system configuration as well as serve as educational material during training.

Subtask 2.5.2: Data Editing Standards and Procedures

Asset data editing standards address roles and responsibilities, data validation, attribute rules, QC processes, nightly geodatabase maintenance, and versioned editing guidelines, to name a few.

ENGINEER will work through multiple sessions with City IT and GIS staff around existing data editing workflows, standards, and procedures. The findings from these discussions will be used to develop and/or update City of Clearwater GIS Data Editing Standards and Procedures documents that will cover, at a minimum:

- GIS User Roles and Responsibilities
- GIS User Access
- Versioned Editing
- Data QC Processes
- Handling Field Mark-ups
- Data and Attribute Validation
- Schema Changes
- Geodatabase Performance Administration

III. Task 3. DEVELOP:

This is the configuration and implementation phase. ENGINEER will utilize all documented information from the Discover phase to build-out the Cityworks environment to meet the needs of the City.

Task 3.1: Asset Registry Database Development

Building on *Task 2.1 - Asset Hierarchy Assessment*, ENGINEER shall develop a geodatabase design for facility assets in an Esri geodatabase format. Based on the results of asset registry design workshops, a draft registry will be developed and populated with a sample set of assets for water reclamation facilities, water treatment plants, lift stations, pump stations and wellfields. The geodatabase will be reviewed along with the sample data in a series of four (4) two-hour remote workshops to provide a reference to City staff for what the hierarchy designs will look like within Cityworks.

The hierarchy designs will go through up to two (2) rounds of review for each facility type before being considered final and ready for production implementation.

Task 3.2: Asset Registry Inventory/Data Collection

During discussions conducted during *Task 2.3 - Asset Registry Assessment* regarding maintenance managed items, ENGINEER will have coordinated with City staff to gather all necessary source data for asset repository data population. Source data will include existing databases, reports, construction drawings, and inventories developed by third-party engineering firms as part of master planning or other efforts (commonly provided in excel format).

Once acquired, ENGINEER will use those sources to populate the GIS asset registry with maintenance managed items. Once the asset data population is completed for an entire plant or facility, it will go through an independent quality review check by the project quality assurance team. The final geodatabase will be delivered to the City to be included in the City's enterprise GIS.

Once the updated facility geodatabase has been incorporated into the City's Enterprise GIS, ENGINEER will develop field collection apps and deploy a two-person team to inventory maintenance managed assets at three (3) water reclamation facilities, three (3) water treatment facilities, seventy-eight (78) lift stations, three (3) reclaimed water pump stations, and one (1) wellfield. ENGINEER will utilize subject matter experts to assist the two-person team inventory and document assets, as needed. These SME's include, but are not limited to, mechanical, electrical, civil, and process engineers.

Estimates for the field collection assume three (3) full days for each treatment plant, four (4) lift stations per day for a total of twenty (20) full days, one (1) full day for reclaimed pump stations, and two (2) full days for the wellfield.

ENGINEER shall develop and grant access to a field collection progress monitoring dashboard for use by City stakeholders, as well as an asset data QC app for reviewing and correcting field captured data.

Field data collection efforts, as well as monitoring and QC apps, will leverage the City's existing ArcGIS Portal environment. If this is not possible, ENGINEER will use ArcGIS Online as an intermediate step to collect data and will provide the collected assets in a file geodatabase with tables that can be appended directly into the City's Enterprise Geodatabase.

Task 3.3: Iterative System Configuration

Following the functional and technical specifications defined in Task 2, ENGINEER shall conduct an iterative configuration process that is based on choosing a subset of requirements identified in the Configuration and Implementation Plan, configuring the system to support that subset of requirements, reviewing those configurations with IT and Utilities staff in a workshop, adjusting the configuration based on feedback from the workshop, and then repeating the process again up to a total of four (4) times per group (Administration, Water Treatment and Wellfields, Wastewater Treatment,

Distribution, Reclaim and Collections, Maintenance and Lift Stations, Warehouse and Meter Shop). Sessions will be held hybrid in-person and remote. Configuration subset requirements may include, but are not limited to:

- GIS Map(s) Layout and Set-up
- Work Order, Inspection, and Service Request Templates
- Work Activity Priority and Statuses
- Process Workflows
- Respond User Dashboard Set-up
- Respond Style Profiles for Page Layouts
- Group Membership
- User Permissions
- Crew Employee, Labor, and Equipment Assignments
- Contractor access/use-cases
- Material Management
- Emergency Repairs
- Work Escalations

ENGINEER shall configure Cityworks for the use at Plants and Lift Stations. This will incorporate, but is not limited to:

- Each facilities hierarchal tree for easy navigation
- User and Role based permissions for accessing hierarchies and functionality
- Security permission for adding/editing/removing assets

The configuration will go through a similar iterative design-build process, up to two (2) rounds of review for each group (Water Treatment, Wastewater Treatment, Distribution & Pump Stations, Collections & Lift Stations, and Wellfields).

If opted for, ENGINEER will conduct the configuration through Black & Veatch's 'Plantworks' plugin, which optimizes the Cityworks user experience and interface for working with vertical assets. This will be discussed, determined, and negotiated separately from this implementation contract.

All iterative changes are recorded and tracked in a configuration log that will serve as the tracking and acceptance document for each configuration change. This allows for frequent City participation and feedback preventing misunderstandings in how the system will function and be configured.

Additionally, ENGINEER shall follow the historical O&M data migration plan developed in Task 2.4 - Historical O&M Data Assessment to migrate historical O&M data into Cityworks. City acceptance evaluation will be conducted through a one (1) on-site workshops that highlights how the data was imported and organized in the system, and how the data was successfully tied to assets and/or

addresses for tracking and financial reporting. A summary report will be provided that will include, but is not limited to:

- Number, or percent, of work activities imported into Cityworks
- Number, or percent, of work activities that were successfully tied to an asset and/or address
- Number, or percent, of work activities that were able to incorporate historical costs
- Number, or percent, of work activities that were able to retain images/attachments/comment logs

After the review workshop, ENGINEER shall make the necessary updates and import the historical data into the Production Cityworks environment.

Task 3.4: Reporting/Dashboard Development

ENGINEER shall develop/transform up to fifteen (15) custom reports in the City's preferred reporting platform (Crystal Reports, SSRS, Power BI) that were identified in *Task 2.4 Reporting/Dashboarding Requirements.* Reports will have two rounds of City review before being considered final and ready for production use.

ENGINEER shall also develop up to six Dashboards (separate from any Respond User Inbox Dashboards used for executing and monitoring work activities) to be used by stakeholders to monitor work management KPIs, work order cost metrics, system usage, and workforce performance efficiency.

Dashboard development will follow the guidelines and requirements outlined in *Task 2.4 Reporting/Dashboarding Requirements,* and will be subject to two (2) rounds of review before being deployed in the production environment.

Task 3.5: Integration Development

Following the technical and functional requirements, as well as the schedule and roadmap outlined in *Task 2.7 Integration Requirements,* ENGINEER shall provide two (2) senior application developers as support to the City's IT department for up to two hundred (200) hours each, to assist City IT with the development, testing, and roll-out of integrations.

In this task, the City's IT department will be the lead integrators, with ENGINEER serving in an advisory and technical support role.

After each system is integrated into a development environment, ENGINEER will assist with independent testing, and shall develop scenario testing to execute with stakeholders from each system to ensure expectations are met and all users have been trained and educated on the nuances of their integration.

Once the integration has been tested and accepted by stakeholders, ENGINEER will assist City IT with migrate and executing the integration into the production Cityworks environment.

Task 3.6: Acceptance Testing

Before 'go-live', the City will have the opportunity to test the final Cityworks build-out to confirm it meets technical and functional requirements. Testing will be a completed as defined in *Task 1.5 Adoption and Competency Checks.*

During the testing process the appropriate documentation will be updated with scenarios and checklists specific to each work group's configuration and required integrations. ENGINEER will facilitate on-site and remote testing, and City end-users will sign off on pass/fail designations. Defects requiring correction will be identified, corrected, and re-tested up to two (2) times per group (Administration, Water Treatment and Wellfields, Wastewater Treatment, Distribution, Reclaim and Collections, Maintenance and Lift Stations, Warehouse and Meter Shop).

Once configuration and integrations have been accepted, the related documents will be updated with any resulting changes to the associated configuration.

IV. Task 4. DEPLOY:

Deployment is where the "rubber meets the road". This is where the culmination of all the planning, design, configuration, evaluation, and testing performed up to this point are put in production and Cityworks becomes the focal point of work management and communication for the Utilities department. Black & Veatch recognizes the importance of a planned and well communicated roll-out and will work closely with the Governance Committee to schedule and sequence device set-up, training, and go-live for each group.

Task 4.1: Device Configuration

ENGINEER shall host a two-hour on-site session with each group (Administration, Water Treatment and Wellfields, Wastewater Treatment, Distribution, Reclaim and Collections, Maintenance and Lift Stations, Warehouse and Meter Shop) to ensure their mobile devices, tablets, and/or computers are prepped and ready for training and subsequent go-live.

Common configuration set-up can include device assignment, app installs, app preference settings, multi-factor authentication (MFA) configuration (if needed), VPN configuration (if needed), confirming staff account access, and sign-in verification.

ENGINEER shall document device configuration standards in a Cityworks Device Configuration Document to be used by the City in the future.

Task 4.2: Hands-on User Training

ENGINEER shall develop the materials, videos, and quick reference user guides necessary to deliver user training through four (4) different courses. Users will be assigned to their specific course(s) based on their role and typical daily work activities. All materials developed for the training will be provided to Project

Governance Committee for review and approval and will serve as the foundation for the City's Cityworks Training Program.

The four proposed courses are:

1. Administrators
2. Managers & Supervisors
3. Operators & Technicians
4. Material Management

The following outline shows the agenda for each of the four recommended courses.

CITYWORKS ADMINISTRATORS COURSE EXAMPLE AGENDA

Grouping: All Administrators
Duration: 4 days onsite
Purpose: Staff will have the knowledge and materials necessary to provide internal support and Cityworks administration to the Department.

Day 1	• Navigating the Cityworks User Interface • Using the Cityworks Map • How to Create and Assign Work Activities (Service Requests, Inspections, Work Orders)
Day 2	• Creating Preventative Maintenance Schedules • Respond Management (Queries, Dashboards, Side-menu Management)

Day 3	• System Administration
	  • Adding/Deactivating Employees
	  • Groups, Crews, Employee Relates, Employee Plugins
	  • Work Activity Templates
	  • Labor, Materials, and Equipment

Day 4	• Technical Maintenance (Plugin Updates, System Updates, System Patches) • System and Usage Monitoring/Cleanup

MANAGERS AND SUPERVISORS COURSE EXAMPLE AGENDA

Grouping: Individual supervisor groups, as they are scheduled to be brought online
Duration: 2 days onsite
Purpose: Staff will have the knowledge and materials necessary to create, manage, monitor, review, and report on activities that occur and are documented within the Cityworks system.

Day 1	• Navigating the Cityworks User Interface • Using the Cityworks Map • How to Create and Assign Work Activities (Service Requests, Inspections, Work Orders)
Day 2	• Creating Preventative Maintenance Schedules • Work Activity Monitoring, Reviewing, and Closing • Handling Work Escalations • Performance Metric Monitoring (Dashboard Usage, Reporting)

OPERATORS AND TECHNICIANS COURSE EXAMPLE AGENDA	
Grouping: Individual Operator/Technician groups, as they are scheduled to be brought online **Duration:** 1 full day per group (water treatment plant operators, wastewater treatment plant operators, water distribution and reclaim operators, wastewater collections operators) **Purpose:** Focus on the Cityworks Mobile Application and/or Respond Web Application.	
Day 1	• Reviewing your Work Assignments in your Inbox and Map • Adding Labor Hours, Equipment Usage, and Material Quantities • Adding Comments and Photos • Performing Observations • Recommending Follow-up Actions & Escalations • Completing the Work Assignment

MATERIAL MANAGEMENT COURSE EXAMPLE AGENDA	
Grouping: All warehouse and material management staff together **Duration:** 1 full day **Purpose:** Focus on the Cityworks Storeroom plug-in and its use for material management at the City. Attendees will be warehouse management and procurement staff.	
Day 1	• How to perform: Requisitions, Receivals, Transfers, Assignments • Performing and Scheduling Audits • Cost and Material Data Maintenance Strategies

It is anticipated that go-live will be staggered, with each group being brought on-line sequentially, one week after the other. We recommend administrator training being held all at once; However, the full day managers, operators, and technician training sessions should only be provided to the group that is scheduled to be brought online the following week. This ensures that users who are scheduled to go-live attend training right before their go-live dates.

Training will be provided for four full weeks, with a fifth week reserved if needed. The exact grouping of staff, their training content and materials, and the sequencing of their training sessions, will be determined by the Project Governance Committee.

The culmination of the on-site training sessions will be a competency checks to measure and quantify user understanding and adoption. An additional week of training has been factored into the project schedule and fee if the results of the competency checks do not meet the Project Charter's level of expectations.

Task 4.3: Cityworks Go-Live Roll Out

Once training is completed and the competency check meets the Project Charter's defined standards - a "Go-Live" date will be determined by the Project Governance Committee and ENGINEER for each group within the Public Utilities department.

ENGINEER shall provide two (2) senior Cityworks specialists to be on-site for two (2) days per group to support Cityworks production roll-out. On-site ENGINEER

staff will be available to resolve technical issues from staff, answer questions, provide additional training (small group, 1-on-1, etc.) and perform general technical triage should any issues arise.

V. Task 5. INITIAL GO-LIVE SUPPORT:

This initial support task will help to fill the gap between 'go-live' and long-term maintenance support, by providing direct and immediate administrative and technical support to the City for the calendar month immediately following go-live for all groups.

ENGINEER shall make appropriate team members available for up to eighty (80) hours to fulfill requests from the City and provide remote and on-site support to assist with common technical support items, including but not limited to:

- User access
- Reporting updates and support
- Software/Plugin updates
- Configuring new work templates
- Revising technical configurations
- Dashboard/query revisions or updates
- General technical troubleshooting

After one month of technical support, the project team will transition into long-term maintenance and support, detailed in a separate Work Order.

VI. Task 6. PROJECT MANAGEMENT/ADMINISTRATION:

ENGINEER shall perform general administrative duties associated with the Project, including project set-up, resource management, progress monitoring, scheduling, general correspondence, office administration, and invoicing.

ENGINEER shall maintain the schedule and an accurate project documentation, filing, and cost accounting system throughout the project.

ENGINEER shall manage the Quality Assurance process.

3. PROJECT GOALS & DELIVERABLES:

The primary goal of this project is to assist the City in transitioning the Public Utilities Department to a modern, comprehensive, and user-friendly work management system using the Cityworks platform. This initiative will streamline and enhance the department's work management processes, thereby increasing efficiency, data accuracy, and communication. The plan comprises five key tasks, each with distinct objectives that collectively contribute to the successful realization of the project's overarching aim.

Task 1: Define

Objective: To understand the City's current work management practices, identify gaps, and establish a robust foundation for the project. This task aims to carry out comprehensive assessments of the existing system, understand user requirements, define roles and responsibilities, develop a training plan, and create a detailed project schedule.

Deliverables:

Subtask	Deliverables	Workshops
Subtask 1.1	1. Project Governance Committee Monthly Progress Meeting Minutes 2. Project Charter 3. Project Governance Documentation	1. Monthly Governance Committee Meetings (Up to eighteen)
Subtask 1.2	4. Change Management Plan 5. Change Management Tracking Platform (PowerBI)	2. Four (4) half-day hybrid workshops
Subtask 1.3	6. Communication Plan	
Subtask 1.4	7. Training Program Framework	
Subtask 1.5	8. Delivery and Grading Standards 9. Content and Materials 10. User Acceptance Testing Criteria	

Task 2: Discover

Objective: To design a robust, effective, and tailor-made work management system based on the information gathered during the Discovery phase. This involves designing asset hierarchies, assessing current data, developing requirements for reporting and dashboarding, and planning for system integrations.

Deliverables:

Subtask	Deliverables	Workshops
Subtask 2.1	1. Asset Hierarchy Technical Memo 2. Data Gap, Needs, and Readiness Technical Memo 3. Historical O&M Data Migration Plan	1. Two full day workshops, two half day workshops

Subtask	Deliverables	Workshops
Subtask 2.2	4. IT Requirements and Recommendations 5. Enterprise GIS Recommendations 6. Software and Licensing Support 7. Software/Application Integration Evaluation and Roadmap 8. Up to Six Integration Requirements Memos 9. Integration Roadmap Document	10. Two half-day IT workshops 11. Six half-day integration workshop
Subtask 2.3	12. As-is Business Process Workflow Diagrams 13. To-be Business Process Workflow Diagrams & Process Config Requirements 14. Standardized Maintenance Activity Templates	15. Three full weeks of business process workshops
Subtask 2.4	16. Dashboarding platform recommendations 17. KPIs and Metrics Catalog 18. Dashboarding Branding and UX Guidelines	19. Two half-day Dashboard and Reporting Workshops
Subtask 2.5	20. Up to eight asset lifecycle SOPs 21. GIS Data Editing Standards and Procedures Documentation	22. Four half-day asset lifecycle workshops

Task 3: Develop

Objective: To build and configure the Cityworks system based on the specifications and requirements defined in the Develop phase. This involves developing an asset registry database, data collection, iterative system configuration, developing reports and dashboards, creating system integrations, and performing acceptance testing to ensure the system meets the City's requirements.

Deliverables:

Subtask	Deliverables	Workshops
Subtask 3.1	1. Esri geodatabase configured with final asset hierarchy schema	1. Four two-hour geodatabase & hierarchy review workshops
Subtask 3.2	2. File geodatabase loaded with all existing assets 3. Field data collection tools for asset inventorying 4. Field data collection monitoring dashboard 5. Field data collection review and QC app	
Subtask 3.3	6. Iterative Cityworks configuration 7. Iterative Plantworks configuration 8. Configuration change log 9. Historical O&M data migration 10. Historical O&M data migration summary report	11. Up to four Cityworks iterative review sessions, with up to six groups 12. Up to two Plantworks iterative review sessions, with up to six different groups 13. One half-day historical O&M data migration review workshops
Subtask 3.4	14. Up to fifteen static reports 15. Up to six dashboards	
Subtask 3.5	16. Two senior application developers for up to 200 hours, each	
Subtask 3.6	17. Acceptance testing documentation and checklists 18. Up to two rounds of acceptance testing revisions to Cityworks, for each group stated, documented in a config revision log	

Task 4: Deploy

Objective: To ensure a seamless transition of the City's Public Utilities Department to the new Cityworks system. This involves device configuration, hands-on user training, and managing the go-live rollout. The aim is to ensure all system users are competent and comfortable with the new work management system, paving the way for successful implementation.

Deliverables:

Subtask	Deliverables	Meetings & Workshops
Subtask 4.1	**1.** Support for configuring City purchased mobile devices, tablets, and computers for Cityworks training and go-live **2.** Device Configuration Standards Document	**1.** Two-hour on-site device config sessions with each group stated
Subtask 4.2	3. Four weeks of on-site training sessions. Fifth week reserved if needed. **4.** Training Materials and Content	
Subtask 4.3	**5.** Two senior Cityworks specialists on-site for two days (per group – up to 6 days)	

Task 5: Initial Go-Live Support

Objective: To provide immediate administrative and technical support to the City post go-live, thereby ensuring a smooth transition to the new system. This involves addressing common technical issues, user access, configuring new work templates, revising technical configurations, updating reports, and software/plugin updates. The support period extends for one calendar month post go-live before transitioning into long-term maintenance and support.

Deliverables: Deliverables for support will be determined and communicated to stakeholders as needs arise.

Task 6: Project Management/Administration

Objective: The objective of Task 6 is to ensure efficient and effective project management and administration throughout the project's life cycle. This task aims to maintain proper resource allocation, accurate schedule tracking, comprehensive project documentation, and transparent financial accounting to ensure the project's seamless execution. Additionally, it encompasses managing the quality assurance process to ensure that every aspect of the project aligns with the set standards and expectations, thereby guaranteeing the project's overall success.

Deliverables: Comment-Response Logs, Progress Status Reports; Document Catalog; and regular project updates with City's PM to communicate progress and discuss any issues, improvements, or necessary changes to project delivery.

4. FEES:

See Attachment "A".

This price includes all labor and expenses anticipated to be incurred by Black & Veatch for the completion of these tasks in accordance with Professional Services Method "A" – Hourly Rate, for a fee not to exceed one million, six hundred thirty-nine thousand, six hundred nine ($1,639,609) Dollars.

5. SCHEDULE:

The project is to be completed in 18 months from issuance of notice-to-proceed (NTP). The project deliverables are to be phased as follows:

Task	Deliverable/ Milestone	Weeks Following NTP
	Notice to Proceed (NTP)	
1	Define	78 (Full Project Duration)
2	Discover	30
3	Develop	+30
4	Deploy	+10
5	Initial Go-Live Support	+8
6	Project Management / Administration	78 (Full Project Duration)
	Total Duration:	78 Weeks (18 months)

6. STAFF ASSIGNMENT:

The City's staff assignments to this project:

Dan Mayer, CGCIO	IT Director
David Pearson	Solutions Manager
Billie Kirkpatrick	Project Manager
Marina Kiriyeva	Sr. Systems Programmer (OWAM)
Matt Woloschek	Sr. Systems Programmer (GIS)

Jay Ravins	Finance Director
Monica Mitchell	Finance Assistant Director
Richard Gardner, P.E.	Public Utilities Director
Michael Flanigan	Public Utilities Assistant Director
To Be Determined	Business System Analyst (PU)

The ENGINEER's staff assignments to this project include:

Amanda Schwerman, PE, ENV SP	Client Director
Nick Alexandrou, GISP, IAM	Project Manager
Rebecca Oliva, P.E., BCEE, ENV SP, PMP	Project Administration & Controls
Mark Seastead	CMMS Practice Lead

7. CORRESPONDENCE/REPORTING PROCEDURES:

ENGINEER's project correspondence shall be directed to:
Nick Alexandrou, Project Manager, with copies to Rebecca Oliva, Project Administration & Controls.

All City project correspondence shall be directed to:
Daniel Mayer, Project Manager, with copies to Richard Gardner.

8. INVOICING/FUNDING PROCEDURES:

City Invoicing Code: _____

Commented [OR1]: City please provide.

Commented [MD2R1]: Not yet available

For work performed, invoices shall be submitted monthly to:

ATTN PROJECT MANAGER
CITY OF CLEARWATER, INFORMATION TECHNOLOGY DEPARTMENT
PO BOX 4748
CLEARWATER, FLORIDA 33758-4748

9. INVOICING PROCEDURES:

At a minimum, in addition to the invoice amount(s) the following information shall be provided on all invoices submitted on the Work Order:

1. Purchase Order, Project and Invoice Numbers and Contract Amount.
2. The time period (begin and end date) covered by the invoice.
3. A short narrative summary of activities completed in the time period.
4. Contract billing method – Lump Sum or Hourly Rate.

5. Hours, hourly rates, names of individuals being billed, amount due, previous amount earned, the percent completion, total earned to date for each task and other direct costs (receipts will be required for any single item with a cost of $50 or greater or cumulative monthly expenses greater than $100).
6. If the Work Order is funded by multiple funding codes, an itemization of tasks and invoice amounts by funding code.

10. CONSIDERATIONS:

ENGINEER acknowledges the following:

1. The ENGINEER named above is required to comply with Section 119.0701, Florida Statutes, where applicable.
2. All City directives shall be provided by the City Project Manager.
3. All submittals must be accompanied by evidence each has been internally checked for QA/QC before providing to City.
4. Documents posted on City website must be ADA accessible

11. ASSUMPTIONS:

- City staff will make available appropriate staff for workshops, business process reviews sessions, trainings, and other meetings, as needed.
- All stated Technical Memo's will be provided to the City as drafts. The City will have two (2) weeks (unless otherwise agreed upon) to review and provide comments back to ENGINEER. ENGINEER will address comments and submit a Final version of the Technical Memo, with a comment log indicating how each comment was addressed.
- All stated meetings will include summary meeting minutes, and a copy of any materials that were developed for the meetings.
- At least one (1) City staff representative from each group will be included in Acceptance Testing.
- City staff will provide timely feedback on Deliverables, Data, Migration Efforts, Cityworks Configuration, and Acceptance Testing.
- At least one representative from each Department and Division who has a stake in Cityworks will be present at Governance Committee Meetings.
- Although ENGINEER will be providing clarification on technical specification and devices for mobile users, Black & Veatch is not responsible for purchasing of, or ensuring they have appropriate mobile data connectivity.
- Third-Party barcode solution is not included in this SOW.
- Integrations will leverage Cityworks API and Webhooks wherever possible, and will only recommend a scheduled flat file data exchange, if required.
- Historical Work Order data in Oracle WAM and other repositories have been created and associated to individual assets and have matching unique identified between the asset and work order. If this is not the case, ENGINEER will attempt to associate work orders to individual assets, within reason, but cannot

guarantee a 1 to 1 match for all historical work orders will be attainable – at a minimum, the work orders should be associated to an asset type.

- City staff will be the technical leads for developing and implementing integrations, Black & Veatch will serve as advisors and technical support as needed.
- City will provide appropriate remote access to necessary environments/systems to facilitate system and data evaluation as well as integration assessments.
- City will provide timely responses, within reason, to fulfill data and documentation requests.
- City will provide equipment and facilities for all Cityworks training sessions.
- City will facilitate coordination with technical staff/vendor resources that have familiarity with non-Cityworks systems, for integration requirements gathering.
- City will provide access with appropriate permissions to Enterprise GIS environment and Oracle WAM system and database.
- Billing rates are subject to escalation, as mutually agreed, 1 year after the contract date, and annually thereafter.
- Grand Total below does not include Plantworks licensing cost. Plantworks licensing will be negotiated and agreed through a separate licensing contract, and will be invoiced separately from implementation effort.
- A list of software and applications has been provided by the City that includes candidates for integration review. This does not mean the software will be integrated, or will require integration, but are good candidates for evaluation and determination. This includes:
    - Cues – GraniteNet Software
    - Aquatic Informatics – Linko & WIMS
    - Insource Software – Dream Reports
    - Rexel – Rockwell Automation
    - Hach – WIMS Data Management
    - Rexel – PLC Software
    - Insource Software – Citect SCADA
    - First Arriving – Digital Signage – Software Licensing Fee
    - Rexel – Factory Talk View
    - Accelerated Technology – LIMS & Result Point Software support
    - Rexel - Studio 500
    - Rexel - Studio Mini
    - CHI- PCSWMM Hydraulic modeling
    - Leica Handheld GPS unit software (FLT GeoSystems)
    - Backflow Tracking
    - Share Point
    - Water Distribution/Wastewater Collection System Field Metrics
    - Various spreadsheets

12. PROJECT FEE:

Task	Description	Subconsultant Services	Labor	Total
1	Define	$0	$128,037	$128,037
2	Discover	$0	$473,473	$473,473
3	Develop	$0	$549,755	$549,755
4	Deploy	$0	$201,165	$201,165
5	Initial Go-Live Support	$0	$33,272	$33,272
6	Project Management and Administration	$0	$64,352	$64,352
	SUBTOTAL, LABOR AND SUB-CONTRACTORS			**$1,450,054**
7	Other Direct Costs (travel, expenses, prints, photocopies, etc.)			**$40,500**
	SUBTOTAL, WITHOUT CONTINGENCY			**$1,490,554**
8	Contingency (10%)			**$149,055**
	GRAND TOTAL			**$1,639,609**