

AMENDATORY AGREEMENT

This **AMENDATORY AGREEMENT** is made between the **CITY AND COUNTY OF DENVER**, a municipal corporation of the State of Colorado (the “City”) and **TRAPEZE SOFTWARE GROUP INC**, a Delaware corporation, f/k/a/ **ASSET WORKS LLC**, whose address is 998 Old Eagle School Road, Wayne, Pennsylvania 19087 (the “Contractor”), jointly (“the Parties”).

RECITALS:

A. The Parties entered into a Master Services Agreement dated December 4, 2019 (the “Agreement”) to provide the hosted solution under the terms and conditions as set out in the Agreement.

B. The Parties wish to amend the Agreement to extend the term, increase the maximum contract amount, amend the Examination of Records clause, and amend the No Discrimination in Employment clause.

NOW THEREFORE, in consideration of the premises and the Parties’ mutual covenants and obligations, the Parties agree as follows:

1. All references to “...Exhibit A...” in the Agreement shall be amended to read: “...Exhibit A and A-1...” as applicable. The scope of work marked as **Exhibit A-1** attached to this Amendatory Agreement is hereby incorporated by reference.

2. All references to “...Exhibit B...” in the Agreement shall be amended to read: “...Exhibit B and B-1...” as applicable. The order form marked as **Exhibit B-1** attached to this Amendatory Agreement is hereby incorporated by reference.

3. All references to “...Exhibit E...” in the Agreement shall be amended to read: “...Exhibit E and E-1...” as applicable. The requirements matrix adding the Enterprise Asset Management module to the AssetWorks platform supporting the Department of Transportation and Infrastructure marked as **Exhibit E-1** attached to this Amendatory Agreement is hereby incorporated by reference

4. Article 17 of the Agreement entitled “**TERM**” is amended to read as follows:

“**17. TERM:** The term of the Agreement is from December 4, 2019 through December 4, 2024.”

5. Article 18.4.1 of the Agreement entitled “**Maximum Agreement Liability**” is amended to read as follows:

“18.4.1. Notwithstanding any other provision of the Agreement, the City’s maximum payment obligation will not exceed **THREE MILLION FIVE**

HUNDRED THIRTY-TWO THOUSAND FOUR HUNDRED SIXTY-FOUR DOLLARS AND EIGHTY-FIVE CENTS (\$3,532,464.85) (the “Maximum Agreement Amount”). The City is not obligated to execute an Agreement or any amendments for any further services, including any services performed by Contractor beyond that specifically described in the attached Exhibits. Any services performed beyond those in the attached Exhibits are performed at Contractor’s risk and without authorization under the Agreement.”

6. Article 21 of the Agreement entitled **Examination Of Records** is hereby deleted in its entirety and replaced with:

“21. EXAMINATION OF RECORDS:

Any authorized agent of the City, including the City Auditor or his or her representative, has the right to access, and the right to examine, copy and retain copies, at City’s election in paper or electronic form and at a mutually agreed upon time, any pertinent books, documents, papers and records involving transactions related to this Agreement. Contractor shall cooperate with City representatives and City representatives shall be granted access to the forgoing documents and information during reasonable business hours and until the latter of three (3) years after the final payment under the Agreement or expiration of the applicable statute of limitations. When conducting an audit of this Agreement, the City Auditor shall be subject to government auditing standards issued by the United States Government Accountability Office by the Comptroller General of the United States, including with respect to disclosure of information acquired during the course of an audit. No examination of records and audits pursuant to this paragraph shall require Contractor to make disclosures in violation of state or federal privacy laws. Contractor shall at all time comply with D.R.M.C. 20-276.” City shall give Contractor no less than five (5) business days’ notice of any audit under this section. City shall bear all costs associated with the audit.

7. Article 35 of the Agreement entitled **No Discrimination In Employment** is hereby deleted in its entirety and replaced with:

“35. NO DISCRIMINATION IN EMPLOYMENT: In connection with the performance of work under the Agreement, the Contractor may not refuse to hire, discharge, promote, demote, or discriminate in matters of compensation against any person otherwise qualified, solely because of race, color, religion, national origin, ethnicity, citizenship, immigration status, gender, age, sexual orientation, gender identity, gender expression, marital status, source of income, military status, protective hairstyle, or disability. The Contractor shall insert the foregoing provision in all subcontracts.”

8. As herein amended, the Agreement is affirmed and ratified in each and every particular.

9. This Amendatory Agreement will not be effective or binding on the City until it has been fully executed by all required signatories of the City and County of Denver, and if required by Charter, approved by the City Council.

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By:

Contract Control Number:
Contractor Name:

TECHS-202159892-01 (201951363-01)
TRAPEZE SOFTWARE GROUP INC

By: 
553E027451A7419...

Name: Rob Hallett
(please print)

Title: General Manager
(please print)

ATTEST: [if required]

By: _____

Name: _____
(please print)

Title: _____
(please print)

Exhibit A-1 Statement of Work



STATEMENT OF WORK

City and County of Denver



Enterprise Asset Management

AssetWorks EAM

June 9, 2021



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Introduction

AssetWorks (AW) is pleased to partner with the City and County of Denver (CCD) for a successful implementation of the AssetWorks Enterprise Asset Management (EAM) system. AssetWorks views this as a collaborative approach to facilitate the successful and timely implementation of the EAM solution for the City and County of Denver. In this spirit, AssetWorks commits to a partnership approach to address all project challenges, risks, and decision-making and anticipates that CCD will engage with the AssetWorks team in a similar fashion.

This Statement of Work identifies the activities, resources, and responsibilities required for the implementation of the AssetWorks EAM solution and is based on AssetWorks' current understanding of CCD'S stated requirements and AssetWorks' experience with similar engagements.

AssetWorks understands that CCD desires to implement an enterprise asset and maintenance management solution to address the following key requirements and functional needs.

- To standardize Asset Management and Maintenance tracking on a single enterprise-wide platform for all constructed assets listed in the Requirements Traceability Matrix (RTM)
- To implement a cohesive enterprise-wide platform of asset maintenance, planning, and capital improvement.
- To facilitate the periodic condition assessment, ongoing deterioration modeling, condition resets, and all necessary activities for Lifecycle Management & History tracking of constructed assets.
- To produce budget constrained optimized multi-year asset management for the constructed assets as listed in the Requirements Traceability Matrix (RTM).
- To produce budget constrained, optimized cross-asset management across all departments and all constructed asset categories.
- To perform inventory management of supplies and materials.
- To perform work order management in a consistent manner across constructed asset categories.
- To provide asset management planning functionality including, but not limited to, future maintenance planning, asset deterioration modeling, level of service maintenance, cross-asset analysis and preventative maintenance.
- To provide Budget Scenario analysis including Cost Forecasting, Automated Investment Planning, and Condition Forecasting
- Provide Reporting functionality including Production Reporting, Costs Reporting, Ad hoc Reporting , and Custom Reporting
- Business Intelligence and Analytics as defined in the RTM, including, but not limited to Analytics Capabilities , Self-service Analytics, Dashboarding, Other BI & Analytics Capabilities
- Integrations as specified in the RTM
- Mobile requirements as specified in the RTM
- Technical requirements to meet the needs of the defined scope of work and as further detailed in the RTM
- And to perform all other requirements as specified in the Requirements Traceability Matrix (RTM) document Etc.



The statement of work includes our complete response to the requested scope of work as defined in the Requirements Traceability Matrix (RTM) and is structured to achieve the above stated goals and requirements. AssetWorks proposed scope of services addresses the following items as they relate to CCD's requirements.

- Project management approach
- Project team discussion, including roles and responsibilities
- Detailed overview of our standard implementation approach
- Detailed activity definition and timeline
- Training approach
- Data migration and loading approach
- Interface development approach and integrations included in the proposed scope of services
- Testing approach
- Listing of milestone deliverables and documentation for each project work element

To best facilitate the implementation, AssetWorks urges CCD to formally identify a key user or subject matter expert (SME) for each of the critical business groups who will participate in or be affected by the project implementation. This involvement must come from all parties. These SMEs should be both technically qualified and knowledgeable of the overall organization's as well as their groups' business practices. These individuals will be providing critical information to Asset Works to own the CCD-specific system configuration, data mapping, and workflow tasks to ensure a feasible and effective production roll-out.

The AssetWorks team will provide CCD with technical expertise in the AssetWorks EAM platform, expertise in industry consulting, technical consulting for integration and data migration and loading, effective training for a wide variety of roles and functions, and project management and documentation to ensure the highest quality implementation.

Circumstances may necessitate changes to the project's activities and/or time estimates, at which time AssetWorks and CCD will discuss these changes in good faith at their earliest opportunity.

AssetWorks follows a collaborative approach to the implementation effort, engaging CCD staff in each step of the process. This approach is built upon a foundation of teamwork and knowledge transfer, which allows AssetWorks to focus on implementing the solution and collaborate on those aspects of the project that represent the biggest challenges. As we work through the implementation together, CCD staff will become increasingly knowledgeable and experienced with the product, how and why configuration decisions were made, how the data was organized and loaded, and how to manage and execute workflows within the system. In our experience, this approach leads to the quicker adoption of the solution by the organizations staff, and results in a much smoother transition from implementation to operations and enables CCD to take full leadership of the solution.

One of the important aspects of the proposed AssetWorks implementation methodology is the inclusion of business process discovery sessions and workshops to explore current and desired processes. AssetWorks will drive the CCD requirements definition and validation activities and facilitate documenting the 'As-is' and lead the definition of the 'To-be' process work flows, configure these processes into the proposed solution, and train CCD staff to effectively operate the new AssetWorks solution.



WBS 1.0 Initiate Phase

WBS 1.0 Project Management Approach

Project Management Philosophy

AssetWorks has a Project Management Office (PMO) to guide the application of project management best practices and standards for the execution of this and all projects. The objective of this organization is to facilitate the application of project management in a scalable manner to all projects executed by the AssetWorks professional services organization. Within the AssetWorks PMO, AssetWorks applies best practices and standards consistent with those advocated by the Project Management Institute (PMI) through their Project Management Book of Knowledge (PMBOK). Project managers at AssetWorks are encouraged to obtain their PMP and many project managers within our PMO currently carry their PMP.

As part of our organizational focus on effective project management, AssetWorks has developed best practices and standards around all aspects of project life-cycle management. Project execution begins with effective planning and initiation of the project, including project planning, scope and schedule finalization, risk and quality planning, and a formal project kick-off. Once initiated AssetWorks follows a structured and standards-based process throughout the execution of the project, including risk and issue management, scope management and control, schedule and cost management and control, and quality assurance for all work activities associated with project execution. Finally, AssetWorks follows a structured project close-out process, which facilitates a smooth transition of the live production system to AssetWorks Customer Care & Support organization for the long-term success of the implemented solution.

Project Team

AssetWorks recommends CCD appoint a core project team with representatives from all functional or operational areas of CCD's business. This core group must have the authority and charter to make appropriate decisions regarding the implementation. The core group representatives should have complete knowledge and familiarity with CCD's operations and objectives and will form the majority of the roll-out team later in the project. CCD project team will define their roles and responsibilities and establish project standards and controls.

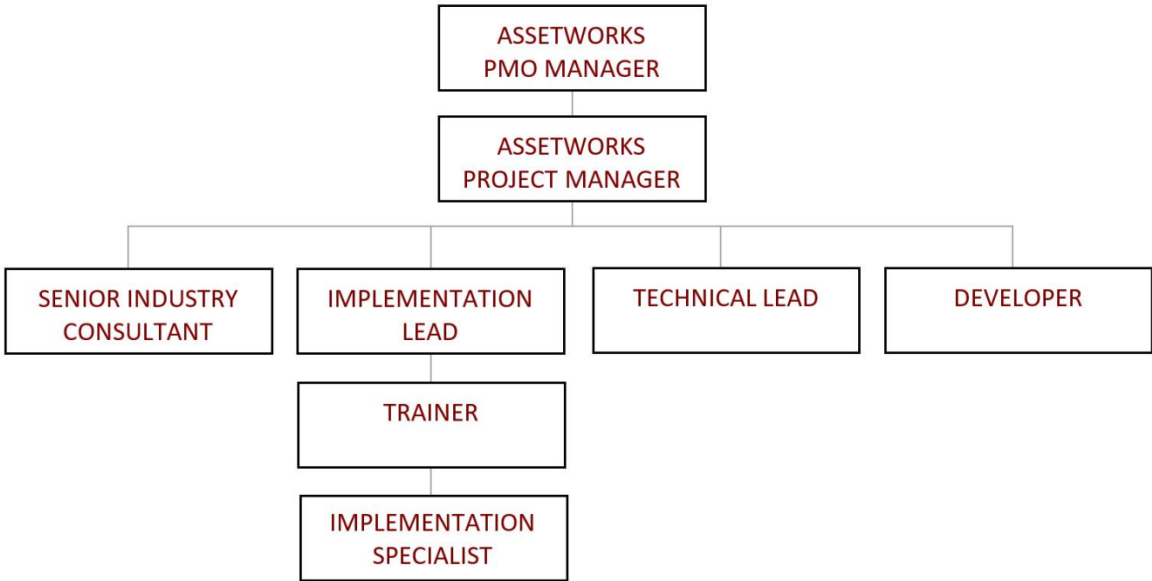
CCD will appoint a Project Manager, Subject Matter Experts, and supporting personnel from the designated CCD functional and operational areas. CCD Project Manager will own the overall CCD project team and be responsible for CCD personnel and resources on the project. The CCD Project Team will be responsible for the CCD-specific configuration decisions and for facilitating decisions among the core maintenance group.

AssetWorks will work with CCD project manager to review AssetWorks' standard project management processes, which are based on the Project Management Institute's PMBOK® guides and standards. The process will include tools used for status reporting along the lines of integration, scope, time, resource, communications, cost, risk, quality, and procurement. The Project Managers will also define the schedule for project status meetings and communication channels.



Project Team

AssetWorks will assign a dedicated Project Manager, who will work with CCD project manager and technical staff to successfully implement AssetWorks EAM at CCD. In addition, AssetWorks will provide the necessary consulting and technical resources to complete all aspects of the project. This will include, but not be limited to, consulting and technical implementation staff to facilitate design, lead the design of interfaces, drive data migration efforts; provide development staff to complete the development of the MAXQ portion of interfaces, custom reports, and custom notifications; and trainers to provide ‘train the trainer’ sessions and guide end user training.



CCD Resources

AssetWorks expects that CCD project team resources will be defined as of the project start date, and recognizes that level of effort from these individual resources may vary during the course of the project duration. CCD has designated Executive Sponsors, Implementation Leadership, Technology Working Group, Program Development Working Group and ad-hoc Process Working Groups to the project.

AssetWorks further expects that CCD will provide the following resources to facilitate a successful implementation.

Project Steering Committee –The role of the Project Steering Committee will be to participate in setting the goals and scope of the project and to participate in periodic status meetings with the project team. The CCD defined Implementation Leadership team will serve in this capacity.

Project Manager - The Project Manager will be assigned with appropriate decision-making authority. This person will be the primary point of contact for CCD with AssetWorks and will be engaged in all aspects of the implementation effort. This person should be able to access and organize CCD’s resources, schedule workshops and meetings, commit to dates and time lines, and facilitate completing the activities requiring CCD staff participation.

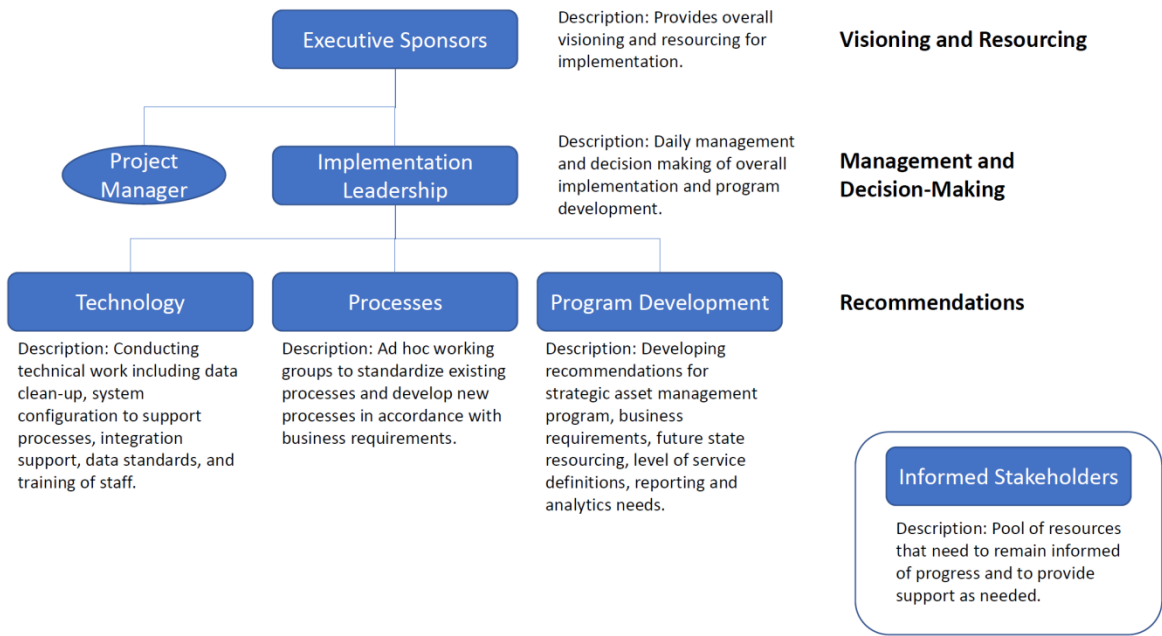


Subject Matter Experts - These resources will be considered part of the core project team and will participate in tasks including data clean-up and migration, system configuration, and project team training. Often these experts consist of functional SMEs in their respective areas of expertise (e.g., maintenance), as well as other supporting personnel from the various departments. The resources designated for these roles should have a good working knowledge of how CCD processes are performed and understand the reasons for the current processes. The CCD-defined Program Development and Technology teams will serve in this capacity.

Technical Experts – A team of technical experts will be involved in the technical duties that come with an AssetWorks implementation. Examples include:

- System Administrator – who will support basic IT administrative functions, including network and security for the web, application, and integration administration and troubleshooting, etc.
- Application Administrator – who will be a key user of the system, and will facilitate identification of data sets to provide to the AssetWorks technical resources owning the data loading effort during implementation, user training, and once the system is live, be the first point of contact for all user issues in operating the system.
- GIS Specialist – to provide AssetWorks GIS system-specific information to facilitate AssetWorks ownership of the development of the EAM integration with the existing GIS database environment:

This team will include members from CCD DOTI Technology Working Group and CCD Technology Services (TS).



1.1 Project Kick-Off



General note regarding collaboration:

MS Teams / SharePoint is the designated collaboration tool of choice. CCD will own the SharePoint document repository, as a source of record for the project,

A shared risk registry will be included on the MS Teams / SharePoint site.

Asset Works will support CCD by uploading required deliverables and supporting working documents into the Microsoft Teams collaboration space.

General notes regarding meetings:

All meetings shall be virtual via Microsoft Teams unless mutually agreed upon by both CCD and AW. DOTI to consider travel budget in future phases of project (if/as circumstances warrant).

All virtual (or hybrid) meetings shall be recorded and shall be stored in the MS Teams / SharePoint document repository by 3 business days after the original meetings conclusion meeting. AW is responsible for the recording of meetings in a timely manner and delivery to CCD. CCD to store in central repository (SharePoint). AW will resend or re-record a session, if feasible, if file is not sent, corrupted or otherwise unusable. This includes, but is not limited to, identified meetings and trainings specifically.

General Assumptions regarding Implementation Methodology:

The intention of this project is the successful implementation of the AssetWorks Enterprise Asset Management (EAM) system for CCD identified constructed assets. To support the long-term goals of CCD, AssetWorks proposes to complete many of the tasks within this SOW in a “train the trainer” model wherein a collaborative effort will occur between AssetWorks (trainer) and CCD (trainee) that both individuals are working together simultaneously to successfully transfer knowledge and prepare CCD to take ownership of the EAM solution post-implementation.

AssetWorks PM will commit the time necessary towards the successful completion of the project. AssetWorks expects the CCD PM will also commit the time necessary towards the successful completion of the project.

AssetWorks technical team will commit the time necessary towards the successful completion of the project. AssetWorks expects the CCD subject matter experts and technical resources will also commit the time necessary towards the successful completion of the project.

AssetWorks shall not replace project team members without written consent and approval from the CCD Implementation Leadership. Unreasonable consent will not be withheld.

CCD shall reserve the right to have AssetWorks project team members removed from the project based on the mutual agreement of AssetWorks Leadership and the CCD Implementation Leadership team.

Asset Works will provide a weekly status report to the CCD PM throughout the duration of this project.

Kick-Off Planning

Prior to scheduling the project kick-off meeting, the AssetWorks Account Manager, PMO Manager, and assigned Project Manager will meet to formally transition the project for implementation, at this time the AssetWorks project manager and implementation lead will be formally assigned to the project and the AssetWorks account manager will reach out to the CCD team to introduce the AssetWorks project leadership team to CCD.



During the introductory call the AssetWorks Project Manager will start the process of planning and scheduling the project kick-off meeting and other administrative and project planning activities. This will include validating the key high-level project goals and objectives, learning about CCD's project resources, and defining the agenda and time line for the project kick-off. Prior to the formal project kick-off, the AssetWorks Project Manager will provide an agenda for the kick-off meeting and product orientation sessions, and draft the kick-off presentation and other materials. The kick-off materials will be reviewed with CCD's Project Manager prior to the Kick-off meeting and AssetWorks and CCD will collaborate to finalizing the materials to be presented to the core project team and CCD's subject matter experts and user groups.

Deliverable for Project Kick-off Planning

- Project Kick-Off Agenda
- Product Orientation Session Agenda
- AssetWorks EAM Product Orientation Session Recording
- Project Kick-Off Presentation

Project Kick-off

Once the project kick-off schedule is defined, AssetWorks will lead a project kick-off meeting. The kick-off meeting will consist of both an administrative kick-off with the CCD project management team (implementation leadership and executive sponsors) and a general project kick-off to provide an introduction to the project for CCD's core implementation teams (implementation leadership and working groups)

The administrative kick-off will provide the opportunity for the project management team to finalize and agree upon specific administrative actions. This will include agreement on the frequency and schedule for status meetings, rules and means for project communication, agreement on project billing frequency/milestones, and other administrative activities to facilitate project execution.

The general kick off meeting will review the initial project scope and timeline as well as review the roles of each team member and expectations for project participation. The meeting will also provide a high-level timeline for the project, and identify the goals, objectives, and critical success factors for the project. The kick-off meeting will also provide a forum for general discussion of potential risks, benefits, and challenges to the project.

Deliverable for Project Kick-off

- Project Kick-off Meeting
- Project Communication Plan, including status meeting schedule
- Administrative kick-off meeting minutes documenting decisions on project administrative items.
- Shared Risk Plan and Register in CCD MS Teams Collaboration Space

Initial Product Orientation

Following the project introduction, AssetWorks will host an initial product training and orientation session to review the software with CCD project team and appropriate CCD asset management and maintenance staff (Implementation Leadership and Working Groups). The goal of this training session is to prepare CCD staff to effectively participate in all aspects of the implementation effort. All the product orientation meetings will be recorded and provided to the CCD PM within 3 business days of the original meeting.



Deliverable for Product Orientation

- Product Orientation Session, including session recording
 - Link must be in a format acceptable for posting within the CCD Microsoft Teams Project Collaboration space.

Project Planning

After the kick-off meeting, AssetWorks will provide the CCD PM with a draft project plan with all applicable activities, estimated dates, deliverables, milestones, owners, and other standard project plan data as defined in the below 'Deliverable for Post Kick-off Project Planning'. Assetworks will continue to work with CCD's Project Manager to finalize the project plan based on information that was discussed at the kick-off meeting and through subsequent discovery meetings. The AssetWorks Project Manager will complete the Project Management Plan, which will include the key project documentation to facilitate successfully guiding the implementation to its successful and timely production roll-out. The project management plan will consist of standard project documentation, including the project plan and schedule, scope management plan, risk management plan, communication plan, and project roster and responsibility matrix. Assetworks owns the Project Management Plan deliverable. The CCD Project Manager owns the project schedule. The AssetWorks PM and CCD PM will collaborate and mutually agree to all changes to the Project Management Plan and Project Schedule as the project moves forward.

Deliverable for Post Kick-off Project Planning

- Project Management Plan, including
 - Revised/finalized project plan/schedule for the phased implementation with WBS tasks per the SOW
 - Scope management plan, including change control log, action log, and decision log in CCD MS Teams collaboration space
 - Project roster
 - Communication plan
 - Change control plan
 - Shared Risk plan and register in CCD MS Teams collaboration space
 - Shared Issue tracking log in CCD MS Teams collaboration space
 - Responsibility matrix in CCD MS Teams collaboration space

Project Phasing Approach

As part of the implementation effort, AssetWorks understands that CCD is looking for a phased approach. The implementation will start with an initial focus on the overall business process, workflow requirements, and high-level solution design activities. Once the high-level design and process and workflow requirements are documented, AssetWorks will work with CCD to roll-out the implementation in four (4) phases, one each for Transportation Operations, Street Maintenance Division, Bridges, and Storm/Wastewater assets. In addition to the four initial phases for each group, there is a data gathering project underway to refresh data currently tracked by the pavement group, as well as a requirement to begin capturing assets not currently tracked in any system. It is anticipated that these phases will be executed partially in parallel and partially consecutively and will each last approximately 6 months. As part of the proposed approach the requirements and design phase will include all participating groups, which will allow AssetWorks and CCD to narrow down the specific requirements for the enterprise-wide deployment, while moving with setup and configuration for the phase 1 asset group. This approach



will also enable the project team to consider the requirements or needs of the various agencies and asset groups in the subsequent phases when configuring the system to more easily facilitate these groups being added at a later time. AssetWorks will call out the individual items associated with each phase throughout the SOW.

Phasing Assumption: Assetworks assumes subsequent phases may start during the current or preceding phase. This means AssetWorks understands that subsequent phases may start after the completion of the implementation of the phase 1 asset groups, or during the execution of phase 1. The goal to the phased approach is to facilitate rolling each phase into production no later than 6 months subsequent to the preceding phase. All opportunities for concurrent phases are open for discussion and may be brought to the implementation leadership team for consideration. CCD Implementation leadership team will provide approval or denial to move forward with each successive phase.

1.2 Project Management - Monitoring and Controlling Services

AssetWorks will provide project management monitoring and control services to execute the project plan. The AssetWorks' project manager will coordinate all AssetWorks project activities. AssetWorks will provide the following project management services:

- Coordination of project resources and work so that milestones are met in an efficient manner; tasks will be designed so as to reasonably minimize implementation time and cost while taking into consideration resource and time constraints such as CCD staff availability, CCD project deadlines, contracting deadlines, etc.
- Serve as the main point of contact for CCD project manager
- Provide weekly status reports and progress updates to the work plan and project budget to the CCD project Manager.
- Ensure quality deliverables
- Communicate and resolve project related issues and risks
- CCD governance decision making process confirms technology solution deliverables meet CCD standards

The AssetWorks PMO Manager will serve as the project director to provide additional project oversight and guidance to help the assigned project manager monitor the project resources and budget, and ensure quality delivery of services. This manager is CCD's first escalation point for any issues arising during the project.

The AssetWorks Project Manager will monitor the project resources to ensure quality delivery of services and that the deliverables are completed on time and in accordance with the project requirements.

Scope Management

As part of the overall project management approach, AssetWorks will follow standard project change control procedures. This will include both regular status updates, which may vary in frequency throughout the project as deemed necessary by the AW and CCD project managers, as well as formal status meetings, typically bi-weekly, to review progress, issues, and potential requirement changes throughout the project. As identified issues or requirement changes occur, these will be documented in the project issue log for tracking and documenting actions throughout the project. If an issue requires a change to the scope, or will introduce additional requirements to the project, these will be documented in the project change log, and the AssetWorks PM will review these potential changes with CCD PM to determine the need and priority for the change. At the CCD PM's discretion, a change may



be taken to the CCD Governance group for further discussion and CCD Leadership team approval prior to execution of the change. If the change is something that will be required, then the next determination will be who will be responsible for executing the change, if the change will result in a change of scope requiring additional support or effort from AssetWorks a formal change order request may be developed and provided to CCD for review and approval to be added to the scope of work. Any changes to the scope of work will be reflected in the project decision log, and will result in updates to the project scope of work, schedule, and budget, including the addition of any additional milestones. Only after CCD PM and Leadership team approval on the need for the change, and the plan for integrating the change into the overall implementation project plan, will AssetWorks begin work on this change.

Schedule Management

As with scope management, changes to the schedule will following the same change control process outlined above. All potential changes to the schedule, either as a result of scope changes, or other internal/external factors will be documented in the project issues log, if a change is necessary the decision will be documented in the decision log and recorded in the project change log. Only after the project team (both AW PM and CCD PM) and CCD Implementation Leadership formally approves the change will it be implemented in the schedule.

Risk Management

AssetWorks follows PMI best practices as it relates to project risk management. As part of the project kick-off activities potential areas of risk will be documented in the project risk register, which will be subject to review at all project status meeting and discussions. Risks will be monitored for their triggering events, and mitigation strategies will be defined ahead of time to be able to effectively address risk as they become issues. In the register, Risks will always be documented using the structure Cause – Risk – Effect to effectively understand the risk, its impact, and to define effective mitigation strategies in advance of the project risk occurring.

Quality Management

AssetWorks will provide for both collaborative development and draft review with CCD project team for all consulting deliverables, once the draft deliverable process is complete, all deliverables undergo an internal peer review process to validate both the content of the deliverable, as well as the form of the deliverable to facilitate the delivery of quality in for content and form. To ensure product quality, AssetWorks performs detailed manual testing of enhancements and fixes included in each release before the release is made available, as well as regression testing to ensure continued quality of stable areas of functionality. AssetWorks also continues to expand automated testing cases to cover more areas of the application to further reduce defects or configuration issues.

Communication Management

As part of the overall project management plan, AssetWorks will provide a communication management plan, which will include guidance on the most adequate forms of communications for the project team, this will include protocols for use of email, meeting, and verbal communications. It will define the schedule for the regular status meeting and check-ins. Typically, AssetWorks will host a regular weekly status check-in meeting for the project management team, as well as regular formal project status meeting.



Project Change Control

Project change control is an integral part of the overall AssetWorks project management approach. Our approach proposes the following project procedure to address changes, which may potentially impact the project scope, schedule, and/or budget.

- A formal group (Change Control Board) will be defined to oversee potential scope, schedule, and budget changes, this will include CCD PM and other designated staff (TBD by CCD) and the AssetWorks PM, PMO Manager, and Account Manager.
- When a potential change is identified the PMs for both CCD and AssetWorks will discuss and seek initial agreement that the change is needed
- Once this occurs, the change will be escalated to the Change Control Board for discussion and agreement. This will include agreement that the change is needed, a formal understand of the impact of the change, as well as a discussion of potential impacts not executing the change.
- Once the change has been deemed necessary by the CCD Implementation Leadership Team, AssetWorks will prepare a formal project change request to document the scope of the change, as well as the potential costs associated with the change.
- The joint CCD and AssetWorks change control group will review the change request and determine whether to proceed.
- If the decision to proceed is made, the change request will be executed and integrated into the project scope, schedule and budget.

This process should facilitate a better understanding of potential changes to the scope, impacts to the project when scope changes are not made, and the effective project planning updates required to formally integrate potential changes into the project. Changes that do not significantly impact the proposed timeline or budget, will be discussed with the collective team, and once agreed upon will be noted in the project change and/or decision log. Change that ultimately add or remove scoped deliverables, or expand the scope of implementation to other CCD user groups or departments will require a more formal change order process.

Out of Scope

Anything not addressed in this SOW or the RTM is out-of-scope and not included in these services. Either party may submit a Change Request to the other party in accordance with the Change Control Plan (established during the planning phase of the project).

Specifically, out of scope is:

- Production of any documentation not listed as a deliverable for the WBS items presented in this Statement of Work.
- Configuration of the licensed program(s) over and above what is specified in the in-Statement of Work as documented below.
- Migration of images, pictures, or other attachments unless specifically addressed in the System Deliverables section of the Statement of Work.



Deliverable for Project Management Services

- Relevant status reports, issues log, and meetings regarding AssetWorks EAM.
- Phased project plan
- Project management plan
- Project change control plan

WBS 2.0 Design Phase**2.1 Requirements Validation and Planning****Requirements Assessment and Workshops**

AssetWorks will conduct workshops with each of the major asset management and maintenance groups within CCD, who are participating on this implementation across all planned phases to review the requirements identified in the RFP documents as well as to identify additional requirements. It is anticipated that CCD staff associated with the management and maintenance of the following asset groupings will participate in these workshops.

In-scope Teams & Area Processes

- Department Transportation and Infrastructure (DOTI)
 - Transportation Operations
 - Street Maintenance Division –(including Asphalt Plant)
 - Asphalt Plant
 - Bridges
 - Storm and Wastewater
 - Survey (Range Points)

This initial review of requirements will be a precursor to a detailed Business Process evaluation and recommendation process to follow. After documenting and reviewing CCD's requirements with CCD staff, AssetWorks will map the requirements to existing functionality of the AssetWorks EAM application. AssetWorks will document which modules, screens, reports or Ad Hoc Queries will satisfy each requirement. This process will enable AssetWorks to either validate our assumptions from the statement of work, CCD developed RTM, and project plan, or to capture additional requirements. All existing business processes and functionality in legacy systems will be implemented in the AssetWorks EAM platform within the framework of best practices in using the AssetWorks EAM product. Additionally, all scope of work as defined in the SOW and/or the CCD developed RTM will be included in the EAM implementation. Further, this review will enable AssetWorks and CCD to agree on the potential for custom reports, development of custom ad hoc query reports, and the configuration of out of the box notifications or custom notifications. These recommendations can then be aligned to the specific user group and associated project phase. Further, these requirements and recommendations will be prioritized and assigned to the planned phases of the implementation.

As a result of this review AssetWorks will be in a position to work with CCD to finalize the priorities for certain requirements, determine which requirements will be addressed with the out-of-the-box capabilities, or which requested capabilities may be satisfied with changes to work flow by CCD.



In-Scope Functionality and Capabilities

- Asset Management and Tracking
- Inventory/Materials Management and Tracking
- Work Order Management
- Planning
- Budget Scenario Analysis
- Reporting
- Business Intelligence & Analytics

Integration Assessment

As a further part of this process AssetWorks will review the possible points of integration with other CCD systems and work with CCD to finalize the specific needs and priorities for interfaces. This process will enable AssetWorks to validate assumptions and work with CCD to finalize the scope of interface development, and prepare a final detailed scope for integrations for the new AssetWorks system.

Current Integrations in Scope Include:

- GIS
- CCTV Pipe Inspection Software (Pipe Tech Granite XP, WinCam, or other pipe inspection software)
- Salesforce
- Aurigo
- Workday (Purchasing, Asset Data, and Vendor Management delivered in Fleet Implementation)
- Active Directory (Delivered in Fleet Implementation)
- Single Sign-on (Delivered in Fleet Implementation)
- Samsara
- Accela

Requirements Validation Report

AssetWorks will prepare a report that identifies the primary requirements, provides recommendation on how to accomplish those with the available software, will identify specific needs for legacy data, and data development to support system configuration, and will document the required integrations for the future system.

Responsibilities and Deliverable for Requirements Definition and Review Services

WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
2.1.1.2		Requirements Work shops	<ul style="list-style-type: none"> • Provide questionnaires prior to the workshops • Prepare workshop agendas • Conduct workshops and provide meeting minutes 	<ul style="list-style-type: none"> • Complete and return advance questionnaires • Participate in work shops • Review meeting minutes and provide additional feedback



WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
	2A	Requirements Workshops Complete		
2.1.1.3		Integration Assessment	<ul style="list-style-type: none"> Document current and potential interfaces resulting from the requirements discussions Prepare documentation identifying integration priorities Propose initial design of interfaces & APIs Define alignment of planned/proposed integrations with the planned implementation phases. 	<ul style="list-style-type: none"> Review documentation and deliverables provided by AssetWorks Provide assessment input to AssetWorks CCD will review, request revisions, & approve/deny all design interfaces
2.1.1.4		Prepare Requirements Validation Report	<ul style="list-style-type: none"> Gather the information gathered through the questionnaire and work shop discussions Prepare draft report for review by CCD 	<ul style="list-style-type: none"> Review report and provide feedback.
2.1.1.5		Deliver Final Report to CCD	<ul style="list-style-type: none"> Prepare final report 	<ul style="list-style-type: none"> CCD will review, request revisions, & approve/deny final report. .
	2B	Final Requirements Validation Report*		

****Requirements Validation Report will include the following***

- Assessment of requirements and recommendations for configurations
- Recommendations for reports and defined queries
- Recommendations for interfacing to other system(s)
- Summary and recommendations for notifications and potential software modifications to be incorporated by each project phase

Task Assumptions

Assumption: All working sessions will be conducted virtually using the Microsoft Teams Platform, and meetings recorded. Prior approval from CCD Governance Implementation Leadership required for in-person working sessions, hybrid working sessions, and necessary travel expenses.

Assumption: AssetWorks will conduct virtual working sessions with CCD, first to conduct the initial workshops and the second to review the findings of the validation report. The working session will be broken out into a series of 2 to 3 hours remote web meeting sessions. The remote session will be spread out over a series of 1 to 2 weeks and



will encompass the same amount of time as the single on-site session (24 hours). All required meetings will be conducted to confirm high quality and complete deliverables. It is anticipated this will take 1-2 weeks for requirements gathering. Any additional meetings that may be needed will be discussed with the CCD PM and Implementation leadership for approval.

Business Process Validation

Following the requirements workshops and completion of the validation report under WBS 2.1, AssetWorks will review workflows associated with current practices and procedures as a means of understanding the “As Is” environment, including current spatial data, operational and management procedures and work flows, business processes, and reporting requirements. Additionally, AssetWorks will observe CCD’s existing operations and work with CCD team to identify where improvements can be made, such improvements shall be documented in the Business Process Report. This process will build on the requirements validation and is designed to develop the necessary information to prepare recommendations for the “To-Be” state for the implementation with the capabilities and tools available through the AssetWorks solution.

The Business Process report will identify and document practices and procedures that can be adapted to the capabilities of the AssetWorks EAM software to provide a more effective operation and a smoother implementation and subsequent production usage of AssetWorks EAM solution. As part of the review and validation process, AssetWorks will conduct workshops, observe, and review the following with each of CCD groups participating in the implementation. Should additional items be found during the requirements discovery sessions, a good faith discussion between the AW and CCD PMs will occur to determine if a change control item is needed or if the requirement fits within the existing scope as defined.

- **Data Creation and Management**, which will address topics including discussion of data development methods, application of best practices for spatial data management, data network management, integrated maintenance strategies for asset inventory information.
- **Asset Management**, which will address topics including discussion of asset organization and hierarchies, asset acquisition, disposal, depreciation, state of good repair scoring/capital planning, maintenance, repair, and rehabilitation strategies, key performance indicators, deterioration modelling, and total lifecycle management
- **Maintenance Operations**, which will address topics including maintenance organization, reporting structure, and areas of responsibility, opening work orders, work assignments, labor hour tracking, indirect time, reviewing work orders, requesting parts, configuring a newly constructed asset and other work management functions such as PM scheduling, PM programs, inspections, and the development of PM/inspection checklist items
- **Inventory and Purchasing Management**, which will address topics including inventory management, charging materials, creating purchase requests, replenishment, handling parts warranties, dealing with serialized parts, and other inventory management functions

After completing the workshops defined above and reviewing documentation, including remote Web Meeting follow-up sessions, AssetWorks will compile the results of the interviews and document the recommended future



state processes and workflows. AssetWorks will virtually present these recommendations to CCD in a “**Conference Room Pilot**” format to review the recommended workflows and processes and gather final feedback from CCD.

The Conference Room Pilot (CRP), is an extended working session designed to present the recommended processes and workflows to CCD’s project team as a means of confirming the process and workflow requirements. This will be presented with mocked-up CCD workflows using available sample data, or data similar in nature to the data managed by CCD. This session is presented virtually in a series of remote web meeting not exceeding a total of 24 hours.

Based on the results of the working sessions and the Conference Room Pilot, AssetWorks will prepare a future state report and submit the final version to CCD. The documented processes and workflows will be based on best practices in using the AssetWorks EAM solution and will identify recommendations for changes to existing work flows and business processes or, if a business process change is not possible, AssetWorks will work with CCD to identify potential changes or enhancement to the software and work towards adding those to the project scope, as needed. The overall objective of this task is the:

- Elimination of non-value added administrative activities such as manual re-entry of data and paper based maintenance management processes.
- Identification of the information that needs to be captured within the data to support the maintenance management programs and business processes to be supported with the AssetWorks EAM solution.
- Documentation of the information that needs to be captured within the data to support the required performance metrics.

Responsibilities and Deliverable for Business Process Assessment

WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
2.1.1.2		Business Process Validation – ‘As-is’	<ul style="list-style-type: none"> • Guide Business Process ‘As-is’ Discovery Sessions • Document ‘As-is’ process • Prepare Business Process Report including any identifying any gaps in existing business processes or recommendations for improvements 	<ul style="list-style-type: none"> • Participate in work shops • Provide ‘As-is Process Feedback • SME’s Validate & Confirm ‘As-is’ • CCD Leadership team will work with Program Development team to review any process improvement recommendations. • CCD Leadership team to review and approve/deny recommendations
???		Business Process	<ul style="list-style-type: none"> • Own Business Process ‘To-be’ Definition Working Sessions 	<ul style="list-style-type: none"> • Participate in work shops • Identify GAPs between ‘As-is’ and ‘To-be’ processes



WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
		Validation – ‘To-be’	<ul style="list-style-type: none"> Document GAPS between ‘as-is’ and ‘to-be’ processes Document ‘To-be’ process Provide technology optimization flow Identify Change Risks based on GAPS and technical knowledge of the EAM application 	<ul style="list-style-type: none"> Document Change risks from GAPS SME’s to Review & Confirm ‘To-be’ Process Implementation Leadership to review , make recommendations and Approve/deny ‘To-be’ process
		Business Process Report Document with ‘As-is’ and ‘To-be’	<ul style="list-style-type: none"> Develop Business Process Report 	<ul style="list-style-type: none"> Implementation Leadership to review , make recommendations and Approve/deny Business Process Report
2.1.2.2		Business process review work shops	<ul style="list-style-type: none"> Plan for and prepare workshop agendas Conduct workshops and provide meeting minutes 	<ul style="list-style-type: none"> Participate in work shops Review meeting minutes and provide additional feedback
	2C	Business Process Workshops		
2.1.2.3		Prepare preliminary functional “To Be” report	<ul style="list-style-type: none"> Compile the workshop information and previously defined requirements to prepare work flow recommendations. Use the future state work flow recommendations to prepare a preliminary future state “To Be” report. 	<ul style="list-style-type: none"> Review the recommendations and report and provide feedback. Participate in follow-up discussion and provide on-going feedback of recommendations.
2.1.2.4		Submit Preliminary Plan	<ul style="list-style-type: none"> Provide the preliminary “To Be” plan report Guide collaborative review sessions with CCD 	<ul style="list-style-type: none"> Participate in the collaborative review sessions Provide feedback on work flow and process recommendations
2.1.2.5		Review of proposed functional “To	<ul style="list-style-type: none"> Present a Conference Room Pilot (CRP) work shop to interactively 	<ul style="list-style-type: none"> Participate in the CRP and provide feedback on the recommended functional solution



WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
		Be" solution (CRP)	review the proposed work flow recommendations <ul style="list-style-type: none"> Conduct a full day work shop with each of the data departments/divisions included in the implementation 	
	2D	Conference Room Pilot		
2.1.2.6		Complete and submit final functional "To Be" report	<ul style="list-style-type: none"> Use feedback from reviews and the conference room pilot to finalize the future state "To Be" report. 	<ul style="list-style-type: none"> CCD will review, request revisions, & approve/deny final report.
	2E	Future State Report		

Task Assumption

Assumption: AssetWorks will conduct all working sessions necessary to complete data requirements discovery phase for the successful execution of the data migration effort. It is anticipated that this task require 2 (two) on-site working sessions to support the review and completion of these WBS elements. Each session will be no less than three (3) working days of a maximum of eight (8) hours each.

Assumption: Should on-site travel not be available, the working session will be broken out into a series of 2 to 3 hours remote web meeting sessions. The remote session will be spread out over a series of 1 to 2 weeks and will encompass the same amount of time as the single on-site session.

Data Migration Planning

As part of the requirements validation and workflow definition activities, AssetWorks will work with each of the divisions identified above, including defined asset and maintenance groups to determine the necessary data required to make the system operational (e.g., asset data, current assignments and locations, etc.). AssetWorks will then identify, in conjunction with CCD staff, what data will be available from current systems in comparison to what data CCD may have to develop or enter. This assessment will be done independently for each of divisions listed above participating in the implementation and a separate section of the data migration plan will be prepared for each.

As part of this planning effort, AssetWorks will work with CCD to map existing data values to the appropriate fields within the AssetWorks database, as well as collaborate with CCD to identify gaps in their existing data as it relates to either system required values within the AssetWorks software or to identify required data elements to support specific business processes and workflows. This mapping exercise will guide the development of the migration plan and help determine the structure and content of the appropriate data loading templates. These templates will be provided by AssetWorks. As part of this effort, CCD is expected to review its existing data coding values. AssetWorks will provide any coding conventions and/or schema requirements for coding values from the onset. It is anticipated that CCD will migrate and apply as many of the legacy data coding values as appropriate to facilitate the



commonality of data organization between legacy systems and the new AssetWorks system, and to facilitate future asset history reporting. In the case that CCD specifies revised coding values, both the historic and new values will be retained within AssetWorks.

Once the data conversion specifications are completed, AssetWorks will document the specifications and recommendations for the data loading process in a report and provide this to CCD. This report will include the data mapping for various types of information, recommendations for data cleansing, configuration of the GIS integration, and a migration strategy which includes both direct transfer of data from CCD's GIS database as well as the batch loading of data elements.

Additionally, AssetWorks anticipates working with CCD to include inventory and material management functions. These functions support the maintenance and reporting activities associated with managing and maintaining the identified assets that will be migrated to the new AssetWorks EAM system.

Task Assumption

Assumption: AssetWorks will conduct 1 (one) on-site working sessions to support the review and completion of this WBS element. Each session will be no less than three (3) working days of a maximum of eight (8) hours each.

Assumption: Should on-site travel not be available, the working session will be broken out into a series of 2 to 3 hours remote web meeting sessions. The remote session will be spread out over a series of 1 to 2 weeks and will encompass the same amount of time as the single on-site session.

Deliverable for Data Migration Planning Services

- Data Migration and Loading Plans for the participating groups per this document and the RTM
 - Transportation Operations
 - Signals/Signalized Intersections
 - Signal Heads
 - Signal Cabinets and Controllers
 - Underground wiring
 - RRFB's – Rapid Repeating Flashing Beacons
 - UPS battery backup units
 - Flashing Beacons and Driver Aids
 - Support Structures
 - Signposts
 - light poles
 - signal supports
 - etc.
 - Signs
 - Signs and Sign Posts
 - Sign Manufacture and Inventory
 - Fiber Infrastructure
 - Controllers
 - UPS
 - PTZ Cameras
 - Switches
 - VMS Signs
 - Fiber Conduit



- Streets Lights
 - Lighting Fixtures
 - Light Poles
 - Panels, connections, and underground wiring.
 - Meter Box
 - Pavement Markings
 - Long lines
 - Specialty Markings
 - Bike Lanes
 -
 - Barriers
 - Vertical barriers (Includes bollards?)
 - Guardrails
 - Fences
 - Walls
 - Curb and Gutter (specialized)
 - Parking Meter Poles
 - Other
 - Bike Racks
 - Street Furniture
 - Staircases
 - Parking Areas
- Pavement
 - Street and Pavement Assets
 - Pavement
 - Alleys
 - Curb and Gutter
 - Sidewalks
 - Pedestrian Curb Ramps
 - Medians and other hardscapes within the right-of-way
- Bridges
 - Bridge infrastructure and assets (Major and minor structures)
 - Retaining Walls
 - Components and structural elements
- Wastewater and Stormwater
 - Wastewater
 - Easements
 - Casings
 - Fittings
 - Force main valves
 - Service Lines
 - Taps
 - Sanitary Structures
 - Wastewater pipes (Gravity and Force Mains)
 - Manholes and clean-outs
 - Pump/lift stations
 -
 - Stormwater



- Easements
- Casings
- Fittings
- Mains
- Service Lines
- Storm Structures
- Detention/Retention Basins
 - Water Quality Facilities
- Cleanouts
- Inlets and Catch Basins
- Manholes
- Pipes (Laterals and Gravity Mains)
- Outfalls
- Streams, Creeks, and Rivers
- Crosspans
- Lift Stations

This includes data from the below sources:

- Cartegraph
- dTIMS
- Infor
- Lucity
- Asphalt Plant (excel sheets)
- Vendor Data Collection Effort
- Data Formats: CSV, excel,

Responsibilities and Deliverable for Requirements Definition and Review Services

WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
2.1.3.1		Data review and mapping work shops	<ul style="list-style-type: none"> • Prepare workshop agendas • Conduct workshops with each Phase group and provide meeting minutes 	<ul style="list-style-type: none"> • Participate in work shops • Review meeting minutes and provide additional feedback
2.1.3.2		Complete data mapping	<ul style="list-style-type: none"> • Document the data mapping for each major asset type • Provide data mapping spreadsheets to CCD for review 	<ul style="list-style-type: none"> • Review data mapping spreadsheet and provide feedback on legacy data content
	2C	Data Migration Plan		

****Data Migration Plan will include***

- Recommendation for data loading priorities
- Requirements for definition of data elements and coding value to create complete asset records
- Data mapping for major asset types
- Recommendation for GIS integration configuration



Task Assumption: Only the asset management groups and the types identified above will be included. Additional groups, not noted in this statement of work, will not be included in the data migration at this time. All individual asset types within each of the asset class families listed above and/or as included in the RTM are to be included in the data migration.

2.2 System Setup Services

Software Installation

AssetWorks assumes that the EAM solution will be implemented within the current CCD AW(FleetFocus) hosted environment. AssetWorks will facilitate having the license keys updated and will guide CCD staff in updating the licensing to enable the expansion of the FleetFocus system into the full AssetWorks EAM solution.

Initial Coding Value Work shops

AssetWorks will own the provisioning of training, guidance, and setup of the required system and work flow setting and options and asset, repair, and materials management coding and domain table values to make the system operational. This will be done in collaboration with the same Departments/Division and Asset Groups defined above. CCD should engage their designated SMEs for each of the asset groups participating in the implementation to provide input on the critical implementation decisions related to the definition of coding values and functional options to make the system operational and enable configuration of the workflows and elements needed for the EAM solution. Decisions made during this phase of the project will have a **direct effect** on the work flow in the roll-out of AssetWorks EAM.

This group of SMEs must have the authority and charter to make appropriate configuration decisions regarding the AssetWorks EAM implementation. The designated SMEs should have solid knowledge and familiarity with their operations, workflows, and data. All decisions made during these sessions will be documented as part of the decision log and the implementation guide, which will be maintained by AssetWorks (on project Sharepoint site). throughout the system setup and data migration process to track progress and facilitate the inclusion of all relevant data elements.

AssetWorks will lead a series of workshops to train CCD staff to effectively define and gather the appropriate coding conventions for asset numbering, asset classes, repair codes, PM/inspection schedules, parameters, checklists, organization codes, and other items. Following the training workshops, AssetWorks will work with CCD staff to support the loading of this information through a series of remote working sessions. AssetWorks will produce data templates prior to facilitate the data loading phase. The set-up tasks will facilitate the work flows in CCD's operation. The coding definition training is very much a dialogue and exchange of information where CCD's project team will plan the overall integration of AssetWorks EAM into CCD operation under the guidance and with the support of the AssetWorks implementation team.

CCD's preparation for this engagement includes the collection and distribution of relevant asset, inventory and maintenance data prior to the initial session. The goal for these working sessions is to achieve at least 90% of the standard coding schemes and business practices required for system roll-out, the remaining 10% to be finalized outside working sessions and reviewed by AW prior to data load.



Finalize data definition and processes

As part of the training workshops, CCD staff will take action items from the individual training workshops to finalize the definition of all relevant AssetWorks EAM data elements and work processes, including asset management, maintenance, parts management, procurement, and other job functions. CCD's deliverable for this task is complete documentation of CCD's definitions for all applicable AssetWorks EAM data elements. This deliverable is a critical prerequisite to the development of the training material for the roll-out. AssetWorks will work with CCD to prepare this documentation.

AssetWorks will work with the team to configure AssetWorks EAM per the discussed work flow. This configuration will build on the coding values defined and the options set with CCD core team and will focus on specific decisions, such as location options, department settings, etc. This task will occur as soon as possible after the initial training workshops.

Task Assumptions

Assumption: Coding definition and options setup training activities will be focused on the asset groups documented in this statement of work but will be inclusive of anticipated future expansions. It is anticipated the session will start with the combined SME group to review and agree upon global or enterprise-wide settings. This may also require engaging the Fleet SMEs to discuss global option settings within the system, which may include base options, security options, shop, inventory, and asset/equipment options. After these initial sessions, there may be separate workshops with individual asset groups for specific, or location-based setting and values. The scheduling and phasing of the workshops will be spread out to align with the agreed upon project phasing schedule.

Assumption: AssetWorks will be implementing the EAM solution within the existing FleetFocus hosted environment. As a result, the setup of the solution will build on implementation decisions made during the FleetFocus implementation. This will facilitate an accelerated start to the system design and configuration, and will enable the project team to focus on the location configuration needs of the participating groups.

Assumption: AssetWorks expects that CCD will make the needed staff available to engage in tasks to define system configuration, user setup, and module configuration and validation in a timely manner. Should CCD fail to make staff available in accordance with the required timeline, the overall roll-out of the system may be delayed.

Assumption: CCD expects that AssetWorks will make the needed staff available to engage in tasks to define system configuration, user setup, and module configuration and validation in a timely manner. Should AssetWorks fail to make staff available in accordance with the required timeline, the overall roll-out of the system may be delayed. This includes the availability of AssetWorks project team members as required to meet milestone deadlines. AW will make appropriate SME's available for support meetings at a minimum of 1 hour per week during activities they are leading or supporting.

Assumption: Following initial configuration and load training, AssetWorks expects CCD staff to take ownership in gathering, organizing, and validating the PM or Inspection schedules and checklists to the system for assets requiring inspections. AssetWorks will support CCD throughout this activity, providing guidance and refinement of data sets to confirm effective loading of required data. Through joint agreement between the AW and CCD PM, and with approval from CCD Implementation Leadership, both parties will decide when appropriate to handover activities to CCD to manage.



Assumption: In order to facilitate the identification and input of the coding conventions, CCD will have all existing coding convention information available prior to the start of the training workshops. These conventions will include reason and fault codes, work accomplished codes, repair task/activity codes, location codes, employee information, user groups, and authorizations, etc.

Assumption: It is also anticipated that AssetWorks will provide guidance and loading templates to CCD, but that CCD staff will take the lead in finalizing the definitions and preparing for the loading of the values to the AssetWorks environment. AssetWorks will provide sample value lists for a number of coding types, including repair codes and reasons, asset class and types, etc. CCD will use these sample sets as a starting point to finalizing their selected values.

Responsibilities and Deliverables for System Setup Training Services

WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
3.2		System Setup Workshops*	<ul style="list-style-type: none"> Conduct a series of interactive workshops to initiate and drive initial system setup and configuration Provide workshop schedule and agendas Document decisions using the AssetWorks implementation Guide template 	<ul style="list-style-type: none"> Participate in the working sessions Provide input regarding business needs and coding values Review recommendation and setup options Participate in decision making
	3A.1	System Setup Training Workshops Complete – Transportation Operations		
	3A.2	System Setup Training Workshops Complete – Street Maintenance Division		
	3A.3	System Setup Training Workshops Complete - Bridges		
	3A.4	System Setup Training Workshops Complete – Waste and Stormwater		
2.2.4		Finalize Coding Structures	<ul style="list-style-type: none"> Provide guidance and configuration training to CCD regarding coding structure, options and functional setup, and creation of CCD lists and domain values Review content of Fleet starter database for compatibility with CCD work flow needs 	<ul style="list-style-type: none"> Review and validate best practice coding values in the starter database Provide or define coding values, CCD lists, domain values for review and formatting for loading Organize value to be loaded into tabular/spreadsheet format Participate in reviewing and setting configuration



WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
			<ul style="list-style-type: none"> Review CCD defined code values for usability and completeness Facilitate loading new or updated values into test environment Provide updated documentation and progress reporting using the standard Implementation Guide template. 	<ul style="list-style-type: none"> options and loading of values in test environment. Execute configuration setup and loading of coding value in production environment.
	3B.1	Final Data Coding Values and Setup Option Configured in Test – Transportation Operations		
	3B.2	Final Data Coding Values and Setup Option Configured in Test – Street Maintenance Division		
	3B.3	Final Data Coding Values and Setup Option Configured in Test - Bridges		
	3B.4	Final Data Coding Values and Setup Option Configured in Test – Waste and Stormwater		

***Coding structure training and data definition workshop(s)**

- A series of remote workshop sessions to be conducted over a several weeks to review core codes, starter database configurations, and to discuss initial workflow design conversations; services are fulfilled at the conclusion of the nine day time frame with the understanding additional follow-up is to occur to finalize the coding values and value loading, as well as during the subsequent system configuration sub tasks

WBS 3.0 Execute Phase

3.1 Data Migration and Loading Services

Data Conversion Preparation

As with the design and coding value definition activities, data migration activities will rely on the specific subject matter expertise from CCD project team. Thus, CCD asset, historical, and configuration data will be migrated to support those groups participating in the implementation. The data loading process will also be aligned with the project phasing schedule defined as part of the project kick-off.

The objective of these data loading services is to process data from the applicable CCD asset data sources identified and documented within the data loading plan developed under WBS 2.0, to execute the data cleansing and to load that data into AssetWorks EAM. It is anticipated that this will include data from existing systems and data stored in stand-alone databases, existing asset management solutions (Cartegraph, dTIMS, Infor and Lucity), Excel data tables, and CCD GIS database. This will also include data conversion of non-currently tracked assets and City-wide



data collection effort. CCD will provide samples of the data as soon as possible. Using these samples and the data mapping performed as part of the data planning efforts, the AssetWorks team will prepare the necessary loading templates for formatting and then loading the data into AssetWorks EAM.

As part of the process AssetWorks will collaborate with the CCD team to load the data that cannot be loaded directly through the GIS integration. This process will include both the loading activities, as well as training for designated CCD staff and knowledge transfer in the use of the loading tools and troubleshooting loading errors and issues. In line with the proposed phased approach, AssetWorks anticipates leading the loading activities in Phase 1 of the implementation, while also training and preparing CCD staff to gradually take the lead on these activities in subsequent phase. The goal to this approach is to facilitate helping CCD in becoming self-sufficient in the use of the EAM solution and the associated supporting administrative tools and processes.

Data Conversion Procedures and Assumptions

The necessary data required to make the system operational (e.g., asset data, current assignments and locations, KPI calculations, condition/deterioration modelling etc.) will have been defined in the Data Migration and Loading plan for each participating group (named above under WBS 2.0). It is anticipated that this will include data available from current systems, and data that CCD may have to develop or enter manually. AssetWorks will provide guidance, collaboration, and facilitation to CCD staff in cleansing and preparing the data for migration into the AssetWorks EAM database.

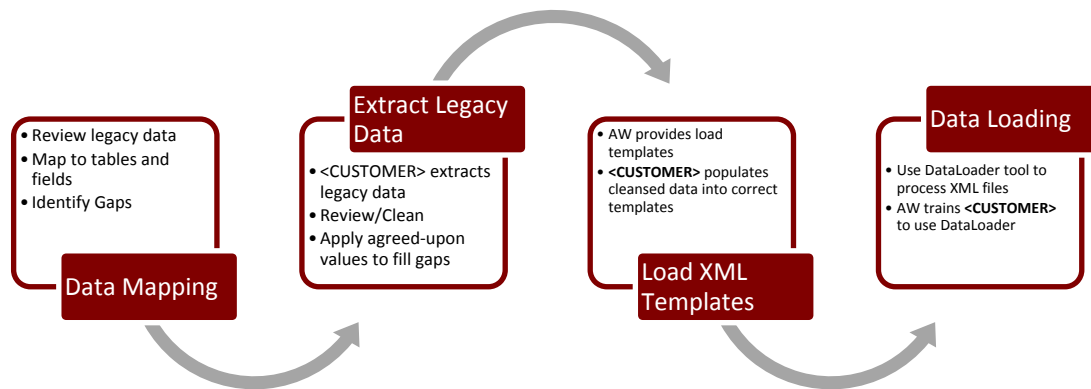
AssetWorks will load the asset information for CCD departments included in the new system implementation effort and support the training of CCD staff with this task. This will include asset data inventories for each of the named Departments/Divisions under WBS 2.0, as well as supporting data from Finance, Human Resources, and Information Technology. The data elements to be included have been documented under the Data Migration Planning task, which is part of WBS 2.1.

Format of Loaded Data

AssetWorks assumes that the bulk of CCD's **non-spatial** asset data will be loaded using the AssetWorks data loading tools. Files will be formatted to facilitate uniform electronic loading. AssetWorks requires that CCD supply all **non-spatial** data initially in a tabular Microsoft XML Spreadsheet 2003 format, which will be used for loading the cleansed and reconciled information into the AssetWorks database as part of a batch loading process.

AssetWorks will provide the appropriate XML data loading templates to CCD, and will provide training and guidance to CCD staff on how to populate the legacy data into the template to ensure successful loading of the data to the AssetWorks EAM database. This will include both the legacy Asset data as well as data developed to support loading the required coding values and configuration. Data that does not map into AssetWorks EAM will be evaluated for need and usefulness. If the data is required, AssetWorks will work with CCD to identify the appropriate associations of the data elements, and define and load this data as additional attributes, or as subsystem component information for the associated asset records. Further, only data elements that can be entered on an AssetWorks EAM screen are part of this loading effort.





GIS Data

Data that is already formatted and managed within CCD's GIS database is expected to be loaded directly from GIS. This will include relevant Feature Class information, spatial location information, or other location relevant information managed within the GIS database. AssetWorks will work with CCD to configure the Feature Class mapping in AssetWorks based on the data mapping defined above to automate the loading of asset information directly from the GIS database. This include verifying the availability of a unique ID value for all asset, which may be used as the primary relationship key between the GIS and AssetWorks EAM database. This process will include both the spatial features – lines, points, and polygons – as well as the associated attributes of the spatial data features.

Data Loading Testing

After AssetWorks and CCD have jointly documented the data mapping and data load process, AssetWorks will collaborate with CCD subject matter experts to complete the testing of CCD's data to validate the data migration strategy that the team defined in earlier stages. This process may require involvement from CCD staff.

AssetWorks will guide and train CCD to load samples of the data for review and validation purposes. AssetWorks will assist CCD Project Manager and Team in the validation process. AssetWorks will guide CCD in loading the data based on the rules defined earlier in the project. Data will be loaded into the development environment and validated by CCD before being converted into the production environment.

Task Assumptions

Assumption: In order to facilitate the loading of data, and training of CCD staff to administer and operate the AssetWorks system in the future, Assetworks will provide guidance to CCD staff throughout the data compilation, loading, and validation process. CCD staff will perform the cleansing tasks to complete this effort. AssetWorks will not cleanse any of CCD data, but may provide guidance to CCD on an approach in order to prepare data for Assetworks loading into the AssetWorks database.

Assumption: To facilitate the transfer of knowledge and skills for data loading AssetWorks and CCD will work together on this task in a 'train the trainer' method. To this end, AssetWorks will lead and own the bulk of the loading activities in Phase 1 of the implementation while training and mentoring CCD staff. In subsequent phases this responsibility will shift to CCD staff, as AssetWorks will continue to mentoring and guide the process.



Assumption: The sample data for each of the data elements to be batch loaded to the new system will be provided to AssetWorks during the requirements validation process under WBS 2.0. This is necessary to facilitate the development of the data loading plan and data mapping templates. Should the provision of the sample data sets be delayed, this will result in a delay to the delivery of the project.

Assumption: Should CCD's spatial data not be available for loading from CCD's GIS database, CCD will be required to cleanse and update the configuration of the GIS data. Alternatively, CCD may use the batch loading process to process their spatial data into the system. Should CCD require AssetWorks's assistance with batch loading data from the GIS database, this may require a change order to add this effort to the scope of services.

Assumption: AssetWorks will **NOT** be loading detailed maintenance history or labor, materials, or commercial posting to historic work orders. AssetWorks will work with CCD to load historic inspection for the 5 years preceeding the planned go-live of the EAM system. Should CCD wish to load additional work order detail information, AssetWorks will review this need with CCD and either provide guidance and recommendations to CCD for loading the data, or may provide a change order to add detailed history to the scope of work.

Assumption: AssetWorks will collaborate with CCD to load existing images and files via a bulk data loading process to the EAM database. As part of this effort AssetWorks will provide the necessary data loading template, training, and assistance in moving the images and files onto the AssetWorks hosted database environment. CCD will be responsible for extracting, organizing, and cleansing the file attachments in accordance with the template and training provided. In the AssetWorks hosted environment there is a maximum file size for individual files of 12 MB.

Assumption: AssetWorks expects that CCD will make subject matter experts for each area impacted by the implementation available to extract, prep, cleanse, and collaborate with AssetWorks to load CCD's legacy data. This will be done following the guidance and training of AssetWorks staff. AssetWorks further assumes that CCD will load the data for all the locations using those project dedicated resources on a schedule to be defined collaboratively by CCD and AssetWorks. This is critical to maintaining the agreed upon project timeline, should CCD not have sufficient staff to support the project the proposed timeline may slip.

Responsibilities and Deliverables for Data Conversion Services

WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
3.1.2		Conversion Preparation	<ul style="list-style-type: none"> Provide and guide CCD on the configuration of the data loading tools Provide training on the use of the data loading tools 	<ul style="list-style-type: none"> Identify staff to execute data loads Participate in configuration and training activities
	4A	Data Loader Training Session		
3.1.3		Provide Data Loading Templates	<ul style="list-style-type: none"> Based on the data mapping, update and configure the standard data loading templates 	<ul style="list-style-type: none"> Review the data loading templates Populate the data loading templates with legacy data



WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
			<ul style="list-style-type: none"> • Provide Data Loading templates to CCD • Provide training on the use of the templates and the data loading utility 	<ul style="list-style-type: none"> • Review and cleanse legacy data • Participate in data loader utility training
	4B	Data Loading Templates Provided		
3.1.4		Batch Loading and Load Facilitation	<ul style="list-style-type: none"> • Conduct a series of data loading workshops to facilitate the loading data to the test environment • Initiate the loading of legacy data to test environment • Validate cleansed data for conformance to the requirements of the load templates and completeness • Provide guidance on data load error troubleshooting and corrections • Review loaded data and validate loaded data in test environment • Process load templates into test • . 	<ul style="list-style-type: none"> • Populate and cleanse legacy data • Review and validate data loaded to test environment • Process load templates into test • CCD SME's populate data within AW data template, • Collaborate on data load error troubleshooting and corrections • Execute data loading to production database.
	4C.1	Data Loaded to Test – Traffic Operations		
	4C.2	Data Loaded to Test – Street Maintenance Division		
	4C.3	Data Loaded to Test - Bridges		
	4C.4	Data Loaded to Test – Waste and Stormwater		

3.2 Technical and Development Services

Integration Services

Interface Development Preparation

AssetWorks standard procedures for developing interface design specifications include the following tasks:



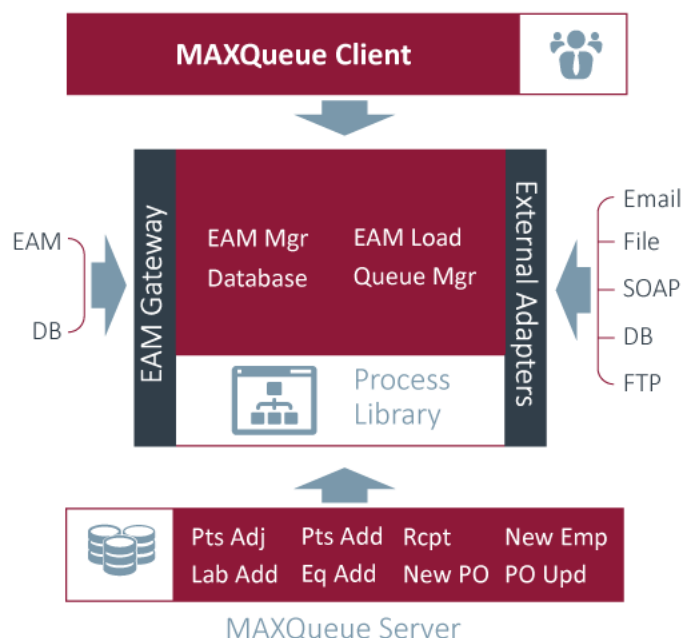
- Create a preliminary specification/interface design plan including data mapping and interface rules and testing scenarios (use cases)
- CCD project team reviews the preliminary specification/interface design plan
- AssetWorks reworks the specification/interface design plan as required
- CCD project team provides final approval of the specification/interface design plan

Based on the priorities defined within the over project plan, the AssetWorks and CCD project team will update the project plan in a mutually acceptable plan and schedule for the integration and development work to be completed and identify the additional project resources and timeframe required for the development efforts. AssetWorks assumes CCD will involve the appropriate staff to reach consensus and decisions on all interface specifications during the discussion and according to the proposed timeline. When interfacing to applications such as GIS or ERP systems, AssetWorks makes use of XML data streams. Using XML, external applications access MAXQueue, the AssetWorks EAM integration module, to interact directly with the AssetWorks EAM components in real-time, applying all of the standard AssetWorks EAM business rules and processing logic. This has the same effect on the data as if it was manually keyed into a standard AssetWorks EAM page.

Interface Development Methodology

AssetWorks can create an on-demand or scheduled batch interface that uses text files to update or extract records in AssetWorks EAM. When AssetWorks EAM has been interfaced to export data to flat file legacy systems, programs are created that insert rows into the target transaction file. In some cases, intermediary staging tables are used in lieu of file transfers. Using MAXQueue, users can setup recurring schedules to execute individual interfaces. For inbound batch integrations, AssetWorks EAM looks in a standard file directory or to a staging table for incoming data. When data is found, AssetWorks EAM processes the data through MAXQueue in the same manner as the real-time interfaces. For outbound data, when the interface is executed, AssetWorks extracts the data into either a data file or a staging table.

In general, MAXQueue supports a wide range of communication methods and protocols and the ability for different topic subscribers to use different protocols and processes (example: a real-time purchasing interface connecting to a SOAP server and pulling down XML documents, side-by-side with a batch-driven interface that uses FTP to pass a formatted text file). MAXQueue is separate from the base application code of AssetWorks EAM, allowing it to be installed in a CCD's DMZ, allowing communication between internal databases and external vendor systems without compromising network security.



MAXQueue includes a user interface which may allow interfaces to be configured by CCDs and typically provides CCD with the flexibility to control when and how often interfaces are processed.

When a business event occurs in an AssetWorks product or in the external system, the other product receives pertinent data for further processing, storage, or both. Typically, the data has been completely processed in the initiating product before being passed and it is simply stored in the receiving product for reference purposes.

AssetWorks is willing to discuss alternative, more extensive integration options and designs with CCD to ensure the optimum design for the interfaces. However, for the basis of this proposal, the following assumptions and designs have been incorporated as the basis for the quotes provided. The project team will define a detailed specification for each interface before any work begins.

Assumption: AssetWorks and CCD understand the development of interfaces is a collaborative effort. AssetWorks will be responsible for all development work on the AssetWorks EAM side. CCD will be responsible for any development activities in their third party system. CCD will need to make these resource available to assist in the design and testing processes in collaboration with AssetWorks technical resources.

Proposed Interfaces

CCD has identified several interfaces to the proposed AssetWorks EAM solution, in addition to the GIS integration discussed below. As part the initial Fleet implementation several required integrations have already been developed and will be in production use during the implementation of the EAM solution. These interfaces are called out in section 2.1 and will be reviewed as part of the Integration Plan development activity. AssetWorks is including a contingency budget in as part of the overall cost proposal to be used should additional specifications or requirements be identified requiring changes to the interfaces delivered as part of the fleet implementation.

Based on the listed requirements, AssetWorks is proposing the following integrations to be developed within this statement of work. A proposed estimated budget for these integrations, based on our current high-level understanding of the integration need, has been included in the completed proposal. These integrations will require additional discussion and discovery prior to initializing and design and development work, or finalizing budgetary estimates for their development and delivery. It is not anticipated these interfaces will exceed the previously agreed upon pricing, however, should it be identified the interface will cost more than expected, AssetWorks will promptly bring the new cost and reasoning to the CCD PM and Leadership team for further discussion. It is also anticipated that during the initial requirements validation activities under WBS 2.0, additional points of integration, which were not documented in the RTM document may be defined.

Integrations to be Included

WBS #	Milestone #	Interface Name	Proposed Interface Scope
3.2.2		Aurigo MasterWorks – Interface	The resulting Aurigo interface will be a bi-directional interface to maintain Asset information between AssetWorks EAM to Aurigo. The design of the interface will be determined during the project, but it is anticipated to include sending Work Order and Asset information to Aurigo to maintain an inventory and facilitate planning. It is anticipated data will include base asset information, condition, value, relationships, and other data relevant to



WBS #	Milestone #	Interface Name	Proposed Interface Scope
			<p>asset replacement and capital program planning. The integration will also facilitate bringing in updated information about assets, including rehabilitations, replacements, updated or new warranty information, or new assets created through a project. It is also anticipated that specific project data or project related costs, work orders, or other similar data will be included in this integrations.</p> <p><u>Assumptions</u></p> <ul style="list-style-type: none"> • Two way, between Aurigo and AssetWorks EAM via web services. • All supporting data will have been pre-loaded into the AssetWorks EAM system by the client • 15 to 20 data fields may be included • 5-7 special rules will be needed • All FA configurations will be used OTB • Standard MAXQueue error handler, no additional processing rules for errors.
	5A	Aurigo Interface Design	
	5B	Aurigo Interface Delivered to Test	
3.2.2		Pipe Inspection Application – Interface	<p>This integration will share CCTV video and pipe inspection data to AssetWorks EAM, and update inspection and maintenance information from AssetWorks to the CCTV pipe inspection software. The will include feeding Asset information to CCTV pipe inspection software and receiving inspection results from CCTV pipe inspection software back to EAM, which will enable the triggering of potential maintenance actions.</p> <p><u>Assumptions</u></p> <ul style="list-style-type: none"> • Two way, between CCTV pipe inspection software and AssetWorks EAM via web services. • All supporting data will have been pre-loaded into the AssetWorks EAM system by the client • Up to 25 data fields may be included • 8-10 special rules will be needed • All FA configurations will be used OTB • Standard MAXQueue error handler, no additional processing rules for errors. • Could be PipeTech, Granite XP or other inspection Software, CCD will determine
	5C	Pipe Inspection Application Interface Design	



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WBS #	Milestone #	Interface Name	Proposed Interface Scope
	5D	Pipe Inspection Application Interface Delivered to Test	
3.2.2		Workday/HR – Interface	<p>One-way interface to update and maintain employee information, charge rates for labor costing, and other relevant employee information within AssetWorks EAM to facilitate the effective use of the system. This interface will be shared by all participating class groups in an equal fashion.</p> <p><u>Assumptions</u></p> <ul style="list-style-type: none"> • One way, between Workday and AssetWorks EAM via web services. • All supporting data will have been pre-loaded into the AssetWorks EAM system by the client • Up to 25 data fields for three tables (screens) may be included • 4-5 special rules will be needed • All FA configurations will be used OTB • Standard MAXQueue error handler, no additional processing rules for errors.
	5E	Workday/HR – Interface Design	
	5F	Workday/HR – Interface Delivered to Test	
3.2.2		Accela – Interface	<p>Potentially a two-way interface to pull permitting data for project coordination (road closures, capital improvement projects, etc.) from Accela into AssetWorks EAM.</p> <p><u>Assumptions</u></p> <ul style="list-style-type: none"> • Two way, between Accela and AssetWorks EAM via web services. • All supporting data will have been pre-loaded into the AssetWorks EAM system by the client • Up to 15 data fields for three tables (screens) may be included • 4-5 special rules will be needed • All FA configurations will be used OTB • Standard MAXQueue error handler, no additional processing rules for errors.
	5E	Accela – Interface Design	
	5F	Accela – Interface Delivered to Test	
3.2.2		SalesForce (Work Request) – Interface	<p>Potentially a two-way interface to bring requests for services and customer complaints from Salesforce to create service requests or work orders and feed status information back to Salesforce</p> <p><u>Assumptions</u></p>



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WBS #	Milestone #	Interface Name	Proposed Interface Scope
			<ul style="list-style-type: none"> Two way, between Salesforce and AssetWorks EAM via web services. All supporting data will have been pre-loaded into the AssetWorks EAM system by the client Up to 15 data fields for three tables (screens) may be included 4-5 special rules will be needed All FA configurations will be used OTB Standard MAXQueue error handler, no additional processing rules for errors.
	5E	SalesForce – Interface Design	
	5F	SalesForce – Interface Delivered to Test	

In addition to the above named interfaces, AssetWorks will work with CCD to define and prioritize potential additional integrations. At this time we have only included the requested integrations identified in the table above in the scope of services and proposed cost estimate, but will work with CCD, either during the negotiation phase, or as part of the requirements validation phase to define a final scope of work and budget for other useful or potentially required integrations.

Software Enhancement Services

As part of the proposed scope of work, AssetWorks is proposing the following core software enhancements. These enhancements will be developed and delivered to address identified gaps in the current functional capabilities of the AssetWorks EAM in order to meet identified CCD requirements. It is planned that the enhancements will be delivered over a cycle of three major releases starting with version 22.1. The following represents the required timeline for approved functional specifications and the associated release of the enhancement with the core software.

- Version 22.1 (October 2022) – Requires the approved functional specification to be completed and signed-off by CCD no later than December 1, 2021
- Version 23.0 (April 2023) – Requires the approved functional specification to be completed and signed-off by CCD no later than June 1, 2022
- Version 23.1 (October 2023) – Requires the approved functional specification to be completed and signed-off by CCD no later than December 1, 2022

The AssetWorks PM will work with CCD to determine the priorities for development to finalize the schedule for the roll-out of each enhancement. It is anticipated that AssetWorks will deliver one of the following enhancements with each of the above listed version releases. This initial assumption is based on the current understanding of the requirements and the anticipated level of effort expected to develop the proposed functionality.



Asset Condition and Cost Rollup

This enhancement (included in defined project scope and associated project budget) will expand the current condition assessment and tracking capabilities, by creating weighted condition roll-ups to parent assets, including weighing a calculating the condition of associated child assets to the parent asset. Thus a purchased or constructed asset that requires condition tracking on the individual major assemblies or structural components, and which could be could then be used to calculate a condition rating using definable weighting values for the entire asset. This will enable the calculation of an overall condition rating for the parent assets. A further part of this enhancement would enable the development and configuration of user defined deterioration/condition scenarios. These scenarios would augment the current standard deterioration scenarios included in the software, and provide CCD the ability to customize the scenarios and condition curves. The second part of this enhancement will do the same for asset costs. So has maintenance and other operational costs are captured on the individual components of a single parent asset, the roll-up operational costs will be calculated and managed by the system for the complete asset hierarchy of the parent asset. The follow specifics will be addressed with this enhancement.

- Needs to support an Asset Hierarchy and facilitate the roll-up of both condition values to produce a common, calculated overall condition, as well as roll-up asset cost values – original costs, capital costs, projected replacement costs, and operational costs
- A bridge, building, or other large built asset contains groups of child assets (components) all within a single hierarchy. Will support the breakdown into multiple levels of the hierarchy.
- These child assets or components are assembled to create the complete asset, for example a bridge may have a superstructure, substructure, decking, etc.
- These groupings may be further broken down into specific components types, such as abutments, pavement, piers, foundation, supports, etc.
- Needs to support parent/child relationships
- Asset will be grouped into common asset categories to define condition ratings based on asset category. This will use current OTB functionality
 - Groups of assets will need to show the overall condition based on a weighted condition score from each of the child assets
 - Should also be able to 'ignore' assets for consolidated condition score
- The new functionality should enable the assessment of priorities for rehabilitation and replacement and how much it costs to maintain/fix this bridge
- Enable reviewing the cost rollup of all child assets when viewing a parent

Consolidated PM Plan

This enhancement (included in our scope) shall expand the current PM planning and scheduling functionality, by enabling the asset hierarchy roll-up to facilitate the comprehensive maintenance planning activities for multiple assets and asset components in a single plan. This will include:

- Track and report on the impact to condition of an asset based on maintenance performed on the individual asset and the group/hierarchy of assets
- Enable tracking of how certain maintenance work or treatments may extend the life by improving or maintaining the condition of the asset
- Provide a combined degradation curve of a single asset/component and/or the group of assets included in the asset hierarchy
- Include degradation curve data with Risk Analysis and risk management planning
- Enable determination of replacement or rehabilitation costs for the parent asset, based on the roll-up of the child assets



Scenario Planning – Asset Hierarchy and groupings for EAM Assets

This enhancement (included in defined project scope) shall provide functionality to enable scenario planning for asset rehabilitation or replacement, based on defined scenarios or options. This might include the ability to determine the value of a rehabilitation today and the impact of asset life-expectancy vs. asset replacement. This will include:

- Treatment recommendations for entire asset class (bridges, buildings, etc.)
 - I.e. We need to focus on sub-structures in 2025 because we have X bridges at risk”
 - The most pressing needs for 2023 are X,Y,Z. They should be included in the annual rehab plan”
- If we perform this maintenance in 2022, it will delay rebuilding the bridge until 2030, or we can wait to perform the maintenance until 2025. Which option is cheaper long-term?”
- Will also include capabilities to be able to build scenarios where external factors impact the recommendations to perform maintenance

Enhancement Assumption: The current defined scope includes “enhancements” as discussed herein and is based on preliminary discovery discussions. AssetWorks anticipates engaging in more detailed discovery and development of detailed enhancement design and specifications as part of the early stages of the project. This will allow for a final update to the enhancement scope of work and provide the appropriate level of detail to create a delivery plan as well as specific testing plans. The “enhancements” as defined in this SOW are included in the budget provided for the project and shall not initiate change orders.

Enhancement Assumption: The delivery of proposed “enhancements” will be aligned with the standard FA/EAM product release cycle as defined above. The specific version in which the functionality will be included will be defined once we have an agreed upon design and specification. Typically, at time of project kick-off we will look at the product roadmap, identify when the items will be included and provide CCD with a timeline for the development and approval of the specifications in order to meet the specific targeted release date. This scheduled is generally built into the project plan from a top-down perspective. Meaning we will identify the planned release version and date, and then back into the other incremental delivery dates for the design and development process. AssetWorks understands the importance of these enhancements to the overall success of CCD’s asset management program. AssetWorks will make every effort to deliver these enhancements in alignment with the roll-out of the EAM solution for the OAM groups included within the implementation as defined within this document. The enhancements will be aligned with the proposed project phasing structure. Should AssetWorks determine that is not possible, it will immediately notify the CCD PM of the schedule change, and provide an alternative plan for implementing this required functionality for review by the CCD PM and CCD Implementation Leadership.

When CCD is testing these interfaces for initial receipt, and end-to-end, AssetWorks will make their development resources available to do quick turnaround fixes and issue investigations. CCD will coordinate their test planning with AssetWorks to confirm resource availability.

GIS Integration

The AssetWorks EAM solution offers out-of-the-box geospatial data management capabilities, which will enable CCD to effectively load and use their current GIS information into the AssetWorks EAM asset inventory. CCD will be able to load their linear and location-based stationary assets, and effectively manage those assets, generate preventive maintenance plans, execute inspections, and create repair work requests and work orders as needed.



As part of our implementation effort, the AssetWorks team will work with CCD to review the current GIS data management environment and collaborate to design processes and procedures to enhance spatial data management, identify additional spatial data needs for assets, and develop more enhanced tools for creating a comprehensive and synchronized spatial data maintenance program to facilitate the accuracy and consistency of information across both the current spatial data environment and the future AssetWorks EAM asset inventory.

In this manner AssetWorks will work with CCD to enhance our compliance with CCD's requirements, and identify best practices and strategies for enhancing the geospatial capabilities into the future as the system matures and more assets types are brought on-line and integrated into the asset management and maintenance work flows.

A further part of the implementation effort will include the design of processes and workflows, for accessing, sharing, viewing, and reporting on asset information through CCD's existing GIS-based portal. This includes defining and configuring the flow of data between the AssetWorks EAM system and CCD's ESRI geospatial solution. It is anticipated that all geometry data will reside in the ESRI geodatabase as the system of record with additions and updates being pushed to EAM through the standard integration. Additions or updates to attributes, which will be relevant to spatial data reporting would be pushed from EAM to the ESRI geodatabase. AssetWorks will work with CCD to define the various attributes, by feature class, which should flow back to CCD's GIS database. AssetWorks offers a built in spatial data viewing and query tool, which facilitates simple queries and map views within the AssetWorks portal environment. Additionally, the AssetWorks team will work with CCD to define GIS-based tools for viewing spatial data, conducting more advanced queries, and for spatial reporting and thematic map viewing.

In this manner, AssetWorks will provide options to CCD users, once the solution is implemented for viewing and working with asset information by facilitating both simply viewing and querying, and enabled advanced spatial data operations against data stored both in the GIS database as well as within the AssetWorks EAM database.

3.3 System Configuration Services

Configure Modules

AssetWorks will provide an orientation for the modules included within the software licensing portion of the proposal.

- List of modules included in the scope of services, this will include:
 - Updated configuration for the modules already implemented with Fleet, including
 - Work management
 - Storekeeper
 - Enterprise purchasing
 - EAM Standard Software Module Set
 - Mapping and Esri Integration
 - Capital Planning
 - Asset Performance Assessment
 - Asset Management
 - Ad Hoc Query

In addition, AssetWorks will consult with CCD to configure the modules for maintenance, back office functions, and standard interface workflows. Configuration includes, but is not limited to:



- Defining user groups and user access rights
 - Defining screen based user roles and rights
 - Configure mobile user access rights
 - Defining field level rights
 - Assigning user groups for specific functions
- Creating automatic report schedules and distribution lists
- Work with CCD to define depreciation schedules
- Mobile application support for iOS/Android/Windows 10
- Establish process for deploying MobileFocus.
- Setup and configure SSO
- Deploy standard reports, which require no additional modifications or enhancement
- Initializing standard OTB notifications to facilitate business processes
- Assisting with Dashboard layout and design
- Modifying screen naming conventions and field data entry requirements
- Creating custom menus for specific user groups

Configure Mobile Users

As part of the configuration of the web portals, AssetWorks will work with CCD to identify those users, who will be using the EAMConnect package as part of the MobileFocus enterprise license, and identifying on which platform those users will be using the EAMConnect application. This will include the configuring of the mobile users to be able to use the tablet application, and to configure the web portal-based administrative tool to identify which user groups will have access to which EAMConnect functions.

AssetWorks will provide instructions and training materials to CCD for downloading the mobile software, configuring the user and web mobile administrative tools, and providing assistance in configuring and testing the mobile device deployment. AssetWorks will not setup or configure mobile hardware, will not provide services to deploy an MDM solution, or deploy the software to the individual mobile devices.

Train and Configure Ad Hoc Query Reports

As part of the configuration of the web portals, AssetWorks will work with CCD to identify those users, who will be using the implemented system to develop both on screen as well as exportable reports. This will include training in using the ad hoc reporting tools, and well as instructions and training materials in building reports. It is anticipated that AssetWorks will collaborate with CCD staff to create up to 5 reports as examples for CCD staff to follow going forward.

Configure GIS Integration

AssetWorks will deliver technical services to own the configuration for the two-way integration of CCD GIS environment and the AssetWorks system. These configuration activities will be based on the results of the GIS Design activities and will be conducted in a collaborative manner, which will include training and mentoring in the setup, configuration, usage, administration, and management of the GIS integration tools. It should be noted that any changes or modification to the AssetWorks EAM system to support the development and configuration are not software customizations specifically for CCD, but reflect an integration configuration design to support the unique data management environment and data management work flows in use by CCD. Thus, these changes will be made



to the out of the box integration and will be part of all future releases of the AssetWorks EAM software, thus facilitating future software upgrades.

Responsibilities and Deliverables for System Configuration Services

WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
3.3.2		Configure Web Modules	<ul style="list-style-type: none"> Setup and train CCD administrators on the creation of user groups and user access right Setup of the web/work flow modules for managing assets and maintenance activities in test Setup workflows associated with inventory management <p>Works with CCD to configure firewall parameters, such as static IP for white list</p>	<ul style="list-style-type: none"> Collaborate on user documentation and setup Align planned users to access needs and user groups Provide input to workflow settings Execute the web portal setup in production AssetWorks will be available for support during production push. Test and validate workflow configuration
	6A	Web Portals Configured in Test		
3.3.3		MobileFocus – EAM Connect	<ul style="list-style-type: none"> Setup users to use mobile application and configure user access to mobile apps Provide training on mobile setup and management Mobile configuration and testing. 	<ul style="list-style-type: none"> Procure and configure mobile devices Download and install mobile software on mobile devices Test and validate mobile workflow configuration
	6C	Mobile – EAM Connect Configured		
3.3.4		Train and Configure Ad Hoc Query Reports	<ul style="list-style-type: none"> Provide formal training session to selected CCD users on the Ad Hoc Query module Collaborate with CCD user to define and configure 5 ad hoc query reports. This could be customizations to our of the box query reports, or new query reports 	<ul style="list-style-type: none"> Designate up to 8 users to be trained in using the Ad Hoc query module Participate in training Provide input in the data to be reported on Participate in the setup of the 5 scoped query reports.
	6B	Ad Hoc Query – 5 Reports Configured and Training Complete		



WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
3.3.6		Configure GIS Integration	<ul style="list-style-type: none"> Using the data mapping from the data migration planning activities, train CCD staff to configure the GIS integration tools Configure MAXQ tools to initiate GIS data loading A two-way GIS interface Provide guidance for testing of the GIS integration Set up first few assets 	<ul style="list-style-type: none"> Provide GIS key users to work with AssetWorks for GIS configuration Review and update data currently stored in GIS to facilitate linking cleansed data to AW EAM Test the integration and following training complete configuration of GIS integration in Test and Production environments.
	6E	GIS Integration Configured		

3.4 System Testing Services

Prepare Integrated Test Plan

AssetWorks will prepare a standard System and Functional Test Plan. The final test plan for CCD will be developed based on the requirements identified within the Requirements Validation and/or Business Process Report delivered under WBS 2.0, and the data and work flow configuration defined in WBS activities 3.1, 3.2, and 3.3. It is anticipated that some of the testing scenarios will include, but not be limited to:

- Verify the security and access control functions for several User Groups
- Add and modify asset primary information
- Add and modify parts primary information
- Open a repair order and a PM order/inspection for an asset
- Charge labor to the work orders and verify the charges/credits of hours and costs
- Charge inventory parts to the work orders and verify the charges/credits of quantity and cost as well as proper inventory relief
- Charge commercial charges to the work orders and verify the charges of labor and parts
- Configuration of capital asset plans
- Verify work order charges
- Adjust parts inventory both upward and downward
- Generate a sampling of standard reports
- Verify a sample of asset master records
- Managing materials inventory

Task Assumption: The Test Plan will be provided by AssetWorks and will be based on the AssetWorks standard testing plan. It will be provided to CCD for all user groups as a single deliverable. This will include the workflows and requirements defined in during WBS 2.0. The plan will be delivered in an editable MS Office format (Excel or Word)



and CCD will make appropriate updates for the specific of the individual workflows to be tested. AssetWorks and CCD will review and approve the test plan as part of the standard deliverable process prior to CCD beginning testing.

Execute Test Plan

Prior to initiating the collaborative functional testing, AssetWorks will validate that the system is ready for testing. This will include verifying that the test users are setup correctly in the system, that all base options are configured in accordance with the requirements, and that the necessary data has been loaded to facilitate the testing process. Once the system is ready for functional testing, AssetWorks will provide guidance and support to CCD staff to load staged data and sample sets of CCD data to facilitate integration and workflow testing. The objective is to be able to run through the various testing scenarios, validate the data and system configuration, identify areas for adjustments, and facilitate retesting.

AssetWorks will support the designated CCD system users through the various testing scenarios, to facilitate an effective test, and to validate and document any adjustments to configuration, or potential missing data elements. This test plan will be executed according to the schedule in the project plan.

As part of the testing effort AssetWorks will guide and support CCD through end-to-end workflow testing. This will include confirming the successful execution of the complete workflows, as defined in the "To Be" business process document and will include configured MAXQ interfaces or notifications. This will include preparing testing scripts for the work flow testing, making updates to the test plan, and providing a testing report for both system testing and UAT, as well as developing a testing issues tracking log to facilitate configuration and data corrections based on the results of the testing, and facilitating retesting until all scenarios pass.

Task Assumption: CCD will execute the testing using the Test Plan provided as part of this WBS activity. It is expected that CCD will repeat the testing process for each of the groups participating in the implementation as defined under WBS 2.0 above. The timing of this testing will be included in the project phasing schedule agreed upon for the overall project implementation.

Document and provide test results

CCD will provide documented test results that include the test criteria and note the outcome of each test using the test plan provided and updated. Instructions and criteria will be included by AssetWorks in the test plan deliverable. AssetWorks and CCD will collaboratively review these results and define next steps. The result of this review of results will produce a document in the form of an issues and actions log, which will facilitate collaboration between AssetWorks and CCD in making any corrections and retesting the scenarios requiring correction.

Responsibilities and Deliverables for System Testing Services

WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
3.4.2		Prepare Integrated Test Plan	<ul style="list-style-type: none"> • Provide standard functional testing plan for review • Work with CCD to update and customize the testing plan including test criteria 	<ul style="list-style-type: none"> • Review and provide input to test plan • Collaborate to update with CCD specific work flow steps and scenarios



WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
			for CCD work flows and testing scenarios.	
3.4.3		Review and Approve Test Plan	<ul style="list-style-type: none"> Deliver final test plan for review 	<ul style="list-style-type: none"> Sign-off on test plan.
	7A	Test Plan and Scenarios		
3.4.4		Prepare for Integrated Testing	<ul style="list-style-type: none"> Provide preliminary training to CCD testing SMEs 	<ul style="list-style-type: none"> Identify location and assets to be used in testing Prepare “cheat sheets” for coding values or other data inputs to be used Identify testing SMEs and prepare for executing the test Participate in preliminary training
3.4.5		Assist in Test Plan Execution	<ul style="list-style-type: none"> Provide guidance and support during the testing process Facilitate troubleshooting Facilitate configuration updates, as needed Collaborate on testing results documentation 	<ul style="list-style-type: none"> Execute the training plan and scenarios Provide feedback on issues and needed changes CCD PM and Implementation Leadership may Approve or deny testing complete and go forward decision for training
	7B	Testing Complete		

Deploy Phase

4.1 Training Preparation and Delivery

Training Preparation

AssetWorks will deliver a Train-the-Trainer style training program to facilitate the knowledge transfer of the solution to CCD and to enable CCD to prepare their user for the production roll-out. The AssetWorks project team will develop and deliver a training program to provide AssetWorks EAM training for various types of CCD users. The training program proposed here is designed to be conducted in a classroom-style setting on-site in CCD’s designated training facility. The trainees will be the designated key users at CCD, who themselves will act as trainers for preparing the end users of the system to use the AssetWorks EAM solution in a production environment. The training will be role-based and will differ for trainees from the various organizational and functional areas. After the



completion of the AssetWorks Train-the-trainer program, each CCD trainees will have the basic skills in the overall use of AssetWorks EAM and strong knowledge of how to use the application in his or her specific job function or area of expertise.

After the initial training, CCD will provide all subsequent user training required in connection with new members entering the user community and on an ongoing basis. All training materials, including presentation materials, delivered to CCD will be delivered as electronic media in Microsoft Word or Microsoft PowerPoint format.

Develop Training Plan

AssetWorks will develop a training plan that describes training that will be delivered. AssetWorks will develop a plan that addresses the following topics:

- Assessment of required levels of training for CCD's current Operations user roles and Trainer roles (see below)
- Agenda and schedule for the individual components of the training sessions
- Discussion of the individual courses to be provided, which user groups each course is suited for, and the prerequisites for each course
- Samples of training media for each type of role described below (e.g., handouts, practice exercises, and screenshots with step-by-step instructions).

Provide EAM Training Materials

Once CCD approves the Training Plan, the AssetWorks project team will provide standard EAM training materials, and provide guidance to CCD staff in preparing them for use with their staff. The materials for the individual role-based training sessions will be provided to CCD in both PDF and Microsoft PowerPoint formats, and will include the standard, best practices work flows for operating the system. Additionally, as part of the integration and enhancement development, training materials for specific work flows will be updated to include the use of the custom developed tools. Once the training sessions are complete, CCD will retain the training materials and will be free to edit, update, and repurpose them for internal CCD use. AssetWorks training materials assume all users are familiar with using an internet browser (Chrome, Edge, Firefox) in a Windows environment; the AssetWorks training will not include any Windows or remedial computer training.

The training will cover asset management functions; work order functions; parts and labor posting functions; and all features, capabilities, and transactions as identified and delivered as part of this SOW and scope of work for this project.. The topics and work flows included in the training will be those finalized by CCD team during the design and configuration activities. Any deviations in the defined and agreed upon work flow may or may not cause delays and added costs to the training. CCD will be notified in advance of any potential costs it may incur prior to providing additional training services due to changes.

All courses will consist of a combination of classroom, virtual, and hands-on instruction. Training will include classroom and hands-on instruction through the use of the actual application as configured and delivered to CCD.

Training Delivery Services

AssetWorks will provide on-site training to CCD (as outlined above) in a classroom environment suitable for training. CCD will be responsible for providing and preparing the training facility. AssetWorks will deliver the following training.



System Administrator Training

AssetWorks will provide System Administrator training for up to 5 users assuming CCD's training facility has a sufficient number of workstations for this training. These trainees will be responsible for supporting the AssetWorks EAM application from a technical or "back office" perspective. The training will cover the following areas of AssetWorks EAM:

IT and System Administrator

Application logging and troubleshooting	Mobile device hardware and software setup
Report and Dashboard Development	System and User Interface Configuration
Set-up Options	Interface troubleshooting
Users and User Groups	Table Management
Screen and Control Rights Setup and Administration	Web portal setup and configuration
Data Loading/Batch Processing	Notification setup and management
GIS/Mapping configuration and management	MAXQ Error Handling/Troubleshooting

Train the Trainer Training

AssetWorks will provide Operational training to CCD trainers. AssetWorks assumes up to 8 trainers/key users for each of the 4 functional areas included in the project (total 32 trainers/key users) will be included in the trainer training. The topics and work flows included in the training will be those finalized by CCD team during the BPA completed under WBS 2.0. CCD should remain especially sensitive to necessary last-minute procedural changes or clarifications based on end user feedback. As noted above, AssetWorks will provide the standard EAM training materials, which will include training exercises resulting from functions and work flows associated with the development and delivery of custom integrations and core software enhancements.

In the sections below a high-level agenda for the training sessions is provided. The training delivered will be documented in the training plan and will include all functions and requirements associated with the implementation defined in the statement of work.

Asset Management

System login	Warranty Management
Multi-Asset Projects and Campaigns	Class/Task information and inspection planning
Asset Acquisition and Disposal	State of Good Repair/Capital Planning functionality
Asset Attribute Updates	Asset Relationship Management
Asset Template setup and use	End of period Processing
Asset inventory management	Asset financial reporting
Asset Management Portal and Filtering	Asset assignments and transfers
Mobile asset management and creation	Managing attachments



Use of selected standard reports	Basic troubleshooting
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Maintenance	
System login	Work order look-up functions
Work Order Creation	Service Request Creation
Work Order Management	Service Request Processing
Work Order Postings	Work Planning Projects
Materials and Parts Functions for Managers	Labor and Time Entry and Management
Commercial Postings	Employee Assignment and Scheduling
Mobile Work Management and Execution	Mobile Asset Management
Use of Selected Standard Reports	Executing Scheduled Maintenance and Inspections

Inventory Management	
System Login	Fulfilling Parts Requests
Parts/materials Management	Inventory Taking, Adjustments, Transfers
Mobile Inventory Management	Mobile Picking and Put Away Process
Purchase Requisitions	Purchase Order Management
Purchase Order Receiving	Parts/Materials Issues and Returns
Mobile Receiving	Transfer Processing and Replenishment
Equipment/Material Check-in and Check-out	Direct Parts/Materials Issues
Commercial Services Procurement	Commercial Services Receiving
Use of Selected Standard Reports	Basic Troubleshooting

CCD will identify at least one “key user” at each group to closely support the cut-over, particularly after the training concludes. These individuals will be responsible for answering initial end user questions and, most importantly, implementing subsequent changes or alterations to the documented procedures. AssetWorks recommends that these “key users” be those that attended the trainer training sessions described above.

Responsibilities and Deliverables for Training Delivery Services

WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
4.1.2		Prepare Training Plan	<ul style="list-style-type: none"> Prepare a training plan and agenda 	<ul style="list-style-type: none"> Review and provide input to training plan



WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
4.1.4		Provide Standard EAM Training Materials	<ul style="list-style-type: none"> Provide standard EAM training materials Review materials with CCD SMEs Update, as needed, for custom integrations and scoped software enhancements and the associated work flows 	<ul style="list-style-type: none"> Review training materials Update, as needed, for special coding values, rules, or other organization policy and procedural situations and needs.
	8A	Training Plan		
4.1.6.1		Provide System Administrator Training	<ul style="list-style-type: none"> Schedule Training Sessions Training sessions for designated system administrators Session will be provided to up to 5 CCD staff designated as system administrators 	<ul style="list-style-type: none"> Designate the administrative SMEs Make training facilities available Participate in training
	8B	System Admin Training		
4.1.6.2		Provide Train-the-Trainer Training	<ul style="list-style-type: none"> Schedule Training Sessions Training sessions for designated training SMEs Session will be provided to up to 8 CCD staff designated as training SME for each functional area. Includes up to a total of 32 trainers/key users 	<ul style="list-style-type: none"> Designate the training SMEs Make training facilities available Participate in training
	8C.1	Train-the-Trainer Training – Transportation Operations		
	8C.2	Train-the-Trainer Training – Street Maintenance Division		
	8C.3	Train-the-Trainer Training - Bridges		
	8C.4	Train-the-Trainer Training – Waste and Stormwater		

4.2 Implementation Support Services

Operational Roll-Out

Prepare for Cut-over

AssetWorks will work with CCD to stage and prepare for the system roll-out/cutover. This includes final validation of system readiness and review of procedures with user personnel. It is anticipated there will be multiple production roll-outs for all of the participating user groups. AssetWorks currently anticipates at least 4, one for each



participating functional area as outlined in WBS 2.0, however, if sub portions of the functional areas are ready sooner, they could go-live in advance of the remainder of the functional area. As part of this effort, AssetWorks will provide a draft production Roll-out Plan to the CCD PM and Implementation Leadership for review. AssetWorks will then work with CCD to finalize a Production Roll-Out Plan to document the specific cut-over steps, transition to operations within the new system, defect escalation procedures, roll-out staffing support from both AssetWorks and CCD resources, and a go-live checklist to verify that all items have been completed and the system is ready for production roll-out.

Cutover support

When CCD commences each phase of live operations using AssetWorks EAM, AssetWorks will be on-site to provide “go live” assistance for CCD maintenance operations. This step is critical to success. AssetWorks staffing will be on-site for the go-live for each of the functional areas to provide any guidance and mentoring of administrative staff. The AssetWorks and CCD team will provide refresher training and help to technicians, supervisors, inventory personnel and back office functions to make sure the transition is as smooth as possible. This on-site support could include data imports, report development, hands-on help for the users, etc.

Following the first week of on-site go live support, AssetWorks will be available for remote support via phone and WebEx sessions. AssetWorks will be available remotely throughout post go-live support on an as needed basis until there are no longer any Severity 1 or Severity 2 errors or defects. AssetWorks Professional services staff availability will be defined and agreed upon in the Production Roll-Out plan. AssetWorks will provide the CCD support resources training until CCD is adequately self-sufficient with the system to be able to operate and administer the system independently, with only very limited or no hands-on support from AssetWorks. This will include the ability to troubleshoot issues, and determine when appropriate to reach out to AssetWorks technical support (Help Desk) staff. Completion of immediate support after resolution of all Severity 1 and Severity 2 errors and defects will be contingent on approval by the CCD PM and Implementation Leadership.

Responsibilities and Deliverables for Operational Roll-Out

WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
4.2.2		Prepare for Cut Over	<ul style="list-style-type: none"> Facilitate final go/no-go decision Provide and review go/no-go checklist Provide guidance on the final data updates for go live readiness 	<ul style="list-style-type: none"> Execute final data updates supporting go live Validate user access and ability to sign into production Complete work staging for go-live, including updating future inspection dues date, inventory quantities, and new or carry-over work orders from legacy systems.
	9A	Production Cut-Over Plan		



WBS #	Milestone #	WBS Activity Name	AW Responsibility	CCD Responsibility
4.2.3		Commence Live Operations	<ul style="list-style-type: none"> Facilitate start of production use 	<ul style="list-style-type: none"> Start using the system in production for operational activities
4.2.4		Provide Remote and On-Site Support	<ul style="list-style-type: none"> Provide on-site go-live support for CCD Conduct mentoring and refresher training, as needed Provide remote follow-up Review and finalize any punch list items and open issues Hand over the delivered and successfully tested interfaces to production and CCD Care team for maintenance Conduct the formal transition meeting 	<ul style="list-style-type: none"> Participate in the production roll-out Review and follow-up of issues and punch list items Operate and provide usage logs for interface sign-off to AssetWorks Provide sign-off on the production system.
	9B.1	Production Cut-Over – Traffic Operations		
	9B.2	Production Cut-Over – Street Maintenance Division		
	9B.3	Production Cut-Over – Bridges		
	9B.4	Production Cut-Over – Waste and Stormwater		

Post Implementation Support

Following the commencement of live operations for each Phase of the roll-out, AssetWorks professional services staff will be available for a period of 30 days to facilitate the transition to the AssetWorks Customer Care team. This support will include troubleshooting of work flow issue, facilitating some additional remote training, and guidance on creating new assets, or executing the system interfaces. Towards the end of this support period, the AssetWorks PM will initiate the formal transition to the AssetWorks customer care team. This will include introductions to Customer Care, and support processes and procedures, transition of custom integration to customer care for on-going maintenance and support, and training on using the help desk ticketing system, as well as validating that the appropriate CCD staff have access to the AssetWorks community site to contract support, obtain materials from the knowledge-base, and can download and review supplemental training materials.

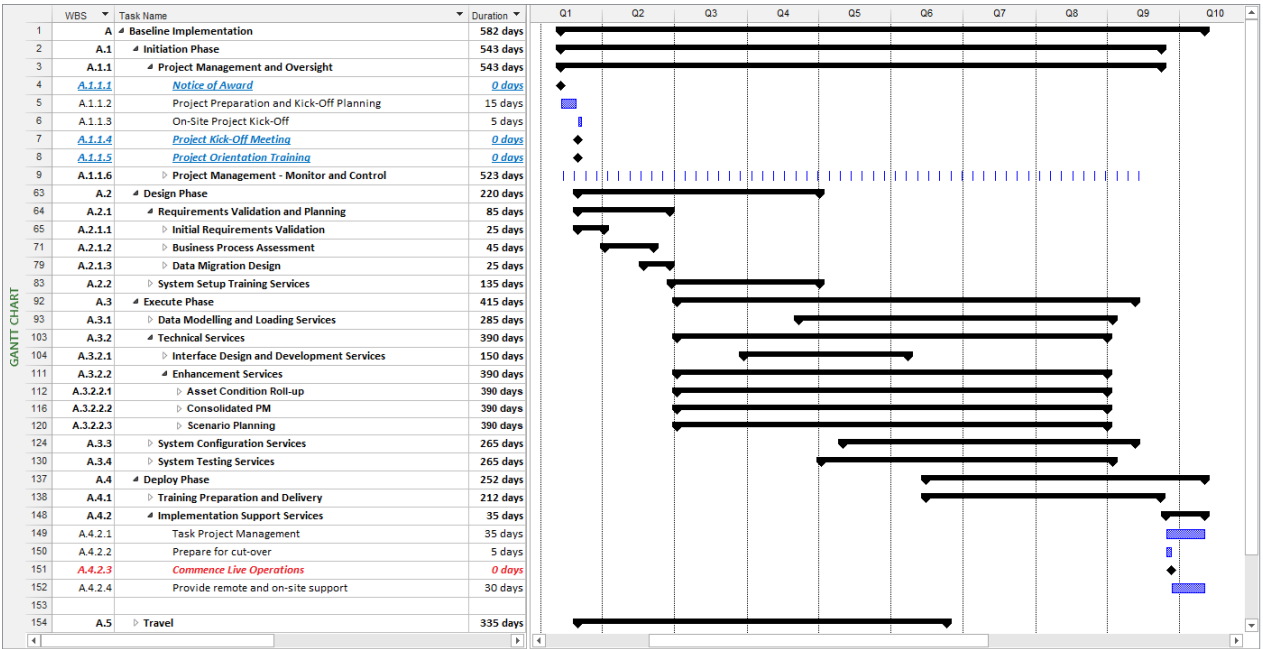


Preliminary Timeline

Overview Schedule

The following graph depicts the proposed estimated timeline for this project. This is based on the requested scope of services, initial discovery discussion with CCD, expectations for readiness of the data, the deployment of the proposed enhancements, and our standard implementation methodology. AssetWorks understand that CCD will prefer to pursue a more aggressive schedule. A shorter project duration is possible, but will require that CCD commit dedicated resources to several of the data clean-up and loading activities. AssetWorks also understands that the detailed requirements will be finalized in the early stages of this project, which may impact the overall project timeline, or priorities for implementation. AssetWorks will make every reasonable effort to accommodate these detailed discovery requirements occurring after the finalization of this document within the framework of the scope of work agreed upon as part of the contract.

The detailed project schedule is provided as an attachment to this SOW. AssetWorks is willing to work with CCD to define a more aggressive schedule as part of eventual contract discussions. AssetWorks will provide an initial copy and all updates to the project plan in both Microsoft Project and Microsoft Excel formats.



Assumptions

The following general assumptions apply to this proposal.

General

- Professional Services will be provided on a fixed fee basis. Services will be billed on a deliverable basis, based on the proposed milestone payment schedule attached to this statement of work (SOW).
- A signed change order and/or other legally approved amendment must be provided from CCD in order to proceed with the billing of additional costs not contained in this scope of work..
- Any onsite services provided are done so as a minimum of three (3) days onsite and require a minimum of eight (8) hours a day to be billed by an AssetWorks' resource or four (4) hours if the resource is available for an additional half day.
- Only those modules identified in the accompanying license agreement are to be implemented and are included in this Statement of Work.
- Optional modules purchased after implementation has begun will require a change order or separate statement of work for services related to installation, configuration and training.
- This Statement of Work does not include any costs associated with third party vendors or software not already provided by AssetWorks that may be needed to complete the implementation.
- AssetWorks is the author, owner, distributor and sole source provider of enterprise asset management software, professional services and maintenance services for the FleetFocus™ and AssetWorks EAM™ family of products which includes EAM, FA, M5, MCMS, M4 and FleetFocus™. Use of the products is subject to the Software License Agreement.
- The AssetWorks EAM Application shall remain SOC compliant. AssetWorks shall provide annual SOC report to CCD TS Security team

Project Delays

- When Professional Service on-site visits, or full day sessions are agreed upon within the framework of executing the project, the staff committed to those scheduled sessions or on-site trips are removed from AssetWorks' capacity and considered book for CCD, and as a result AssetWorks makes financial plans and work assignments based upon the agreed upon schedule associated with the delivery of those activities. It is impossible for AssetWorks to know in advance whether or under what circumstances it will be able to recommit staff to other project activities if CCD does not use them, either as the result of delaying or canceling meetings, tasks or deliverables. In most instances, when CCDs do not use the scheduled time, AssetWorks may be unable to reschedule or reassign staff for those days or services. Even when days or services may be resold, it is costly to re-market the services, and such efforts divert effort to do so. While CCD days have been held out of AssetWorks' capacity planning, AssetWorks may have turned away or delayed the start of other customer work in order to meet AssetWorks' commitment to CCD. For these reasons, AssetWorks and CCD agree that in the event of delay or cancellation of scheduled project tasks and meetings at CCD's request within two weeks (10 working days) of the scheduled sessions or dates, AssetWorks shall be due compensation equal to the contracted amount to deliver the services cancelled including any travel expenses incurred in preparation for the delayed or cancelled services.

CCD Resources

- All functional and operational groups who will be using and/or impacted by the new system should participate in all the sessions relevant to their areas of responsibility which will be conducted once,



recordings will be made available should staff be unavailable. Repeating previously run sessions may require a change order for additional project budget.

- CCD will provide the resources described in this Statement of Work to insure a successful implementation of the products.
- CCD will appoint a single point of contact for the duration of the project. This person should have project management responsibilities and decision-making authority. This person will be the focal point of contact for AssetWorks' CCD Support department.
- All key CCD project team resources will be committed to the project as of the project start date.
- CCD commits to training appropriate functional and technical resources as required.
- CCD is responsible for all manual data entry, which may not be available for batch loading, or may need to be defined for future use.
- CCD will have all of the necessary and appropriate personnel (or designee) at all of the meetings for the purpose of defining the requirements of the system. Critical meetings will be recorded should personnel be unavailable, and shall review meetings, and provide comments / questions within xx timeframe. If additional meetings are required to repeat discussions due to the unavailability of CCD resources, additional cost will be invoiced.
- AssetWorks will provide on-site training to CCD (as outlined above) in a classroom environment suitable for training. AssetWorks recommends class size to not exceed 10 users per individual session to insure proper attention can be given to individual users and maintain the needed pace to ensure training sessions are completed in a timely manner consistent with the training schedule.
- CCD will be responsible for preparing the training facility. The training facility should include hardware comparable to that found in the actual work place. Some end-user training can take directly in the storerooms or on the shop.
- All training sessions will be based on standard application training materials, or additional training materials prepared as part of the delivery of custom integrations and software enhancements. CCD will be responsible for customizing training materials to meet its implementation requirements, as this relates to the use of specific code values (i.e. financial codes, etc for reporting purposes) to meet special procedural or policy requirements of CCD.
- CCD will make appropriate technical resources available to AssetWorks' consultants.
- In the event that CCD schedules on-site services and due to circumstances within CCD's control AssetWorks' scheduled personnel are unable to perform such services, AssetWorks will be entitled to payment for each such scheduled personnel on the basis of an 8-hour day.
- AssetWorks will need assistance from CCD to coordinate training and roll-out schedules, communications with field personnel and setting up training sites.

Infrastructure

- CCD will provide a project work area and appropriate infrastructure or collaboration facilities at the locations designated for on-site working sessions. This would include working and meeting spaces appropriate for the size of the combined CCD/AssetWorks project team for any agreed upon working session..
- AssetWorks' consulting estimates do not include installation and/or configuration of any computer hardware and peripheral equipment.
- CCD will be responsible for installing and configuring computer hardware and peripheral equipment such as printers and bar code equipment (if applicable).
- If CCD hosts the application, CCD will be responsible for establishing access to the EAM™ Application, and DBMS servers, providing all supporting software, hardware, and connectivity for the application server.
- The Web server must use Microsoft IIS.



- Acquisition, installation, testing, support, and tuning of any additional required application software, hardware, RDBMS, other software, peripherals and communications infrastructure will be the responsibility of CCD if CCD is hosting the application.
- CCD will verify that the hardware environment is installed, configured and operating over the network before scheduling the Software Installation if CCD is hosting the application.
- CCD is responsible for providing browser access to the EAM™ application.
- CCD is responsible for providing and maintaining TCP/IP connectivity with sufficient bandwidth from all user workstations to the EAM™ servers.
- System, server, and workstation backups are the responsibility of CCD. This includes the development and execution of the system backups and recovery programs if CCD is hosting the application.
- CCD is permitted to implement a disaster-recovery environment, however unless specifically included in this proposed Statement of Work, AssetWorks is not responsible for the installation, configuration or support of this environment if CCD is hosting the application.
- CCD will implement a single production EAM™ database. A test database instance will also be implemented.
- CCD will implement this solution such that all assets will be in a single production EAM™ database.
- CCD personnel assume the responsibility for applying software patches if CCD is hosting the application.
- The following information technology services are not included in this Statement of Work: network connections; telecommunications network(s); operating system, network and database administration; disaster recovery planning; the acquisition, installation, testing and tuning of any required hardware, operating software, peripherals and communications infrastructure.

Project Management and Risk Factors

- CCD and AssetWorks will agree on scope, services, and deliverables for optional modules and services prior to the Notice to Proceed.
- CCD project manager will be responsible for obtaining any required authorizations, approvals and/or signoffs by CCD related to project deliverables and project progression in a timeframe in alignment with the project work plan. Delays to this process as well as any CCD tasks not completed within the work plan timeframe will be subject to the Change Control process defined under WBS 1.0 process, delayed deadlines, and increased services fees. This excludes lack of approval based on incomplete product delivered and is at the discretion of the CCD PM and Implementation Leadership.
- This Statement of Work does not include the expenses associated with CCD or CCD resources assigned to the project.
- CCD remains responsible for all integration effort not described in this Statement of Work
- The project schedule is contingent upon the timely attainment of several external milestones that are outside the control of AssetWorks. Examples include but are not limited to the acquisition of the requisite software licenses and hardware and the approval of requisite capital appropriation requests as required.
- Circumstances may necessitate changes to the tasks and/or time estimates, at which time AssetWorks and CCD will discuss these changes in good faith at their earliest opportunity.
- This proposed Statement of Work includes implementation support for only those optional modules, interfaces, and modifications listed in the task list. Any change to the proposed Statement of Work, particularly the implementation services, data conversion, interfaces, and application modifications, will be documented and follow the same procedures for new enhancements or change orders.
- Unless otherwise noted, all integration, enhancement and report development effort quoted in this proposed Statement of Work are included as a fixed fee deliverable based on AssetWorks' experience providing similar services for other clients based on our current understanding of CCD's stated



requirements. AssetWorks will develop a detailed Development Specification for all services before proceeding with any development.

- This Statement of Work includes services to determine CCD's requirements and preparing the development specifications and quotes for only those development items identified in this Statement of Work. Any requirement analysis and specification work for additional items not identified in this Statement of Work will require review with the CCD PM and Implementation Leadership team following the Change Control procedures outlined in WBS 1.0.
- Travel expenses will included an as incurred basis and will be billed as incurred against the project. Expenses include actual costs for lodging, air and ground travel and per diem rates for meal expenses (corporate rate/government agreement).
- Travel: On-site engagements will require prior written approval by both AssetWorks and CCD prior to scheduling the time and confirming any travel arrangements.

Technical Services / Interfaces

- All technical services will be performed remotely using web teleconferencing, unless otherwise noted.
- Non-production and production is required to be on a generally available (GA) release and the supported version(s) per assumptions noted above for custom deliverable(s).
- CCD may be required to upgrade, if EAM business logic changes in future releases that impacts the dependencies for the custom deliverable(s).
- If non-hosted CCD is responsible for maintaining AssetWorks' recommended server architecture requirements for optimal system performance.
- CCD is responsible for coordinating and sending requested sample data files, web services schemas, coordinating FTP file transfers and any other technical information and/or files requested by AssetWorks for functional and technical specification(s) creation, development and/or quality assurance purposes.
- In order for AssetWorks to begin development, an approved custom deliverable specification(s) with data mapping to the EAM database must be reviewed, approved and signed by CCD; this includes any iterations after the initial approval.
- Approval of all functional and technical specifications are required by CCD within 15 days of delivery by AssetWorks. Any associated development work will not commence prior to receiving an approved development specification.
- Signed functional and technical specification(s) take precedence on all design and development.
- If a CCD's internal systems (i.e. ERP) require any additional analysis, configuration and/or development to support the proposed custom deliverable(s), AssetWorks assumes CCD will provide internal resources to immediately resolve any work and/or process resolution needed to support the agreed upon project timeline. If AssetWorks is required to assist, a change order will be necessary.
- CCD will make appropriate technical resources available to AssetWorks' consultants.
- CCD will have all of the necessary and appropriate personnel at meetings for the purpose of defining the requirements of the system.
- CCD will appoint a single point of contact for the duration of the project. This person should have project management responsibilities and decision-making authority. This person will be the focal point of contact for AssetWorks' Professional Services and CCD Support team.
- Testing is CCD's responsibility and expected to be completed within 30 days of delivery of the custom deliverable(s) by AssetWorks, unless otherwise noted. If the custom deliverable(s) are a product enhancement, CCD will be required to complete testing in the first available version containing the product enhancement, including an early delivery release if made available.
- AssetWorks assumes CCD utilizes an internal system administrator to maintain all aspects of EAM configuration, user training and system administrator duties as required to support this custom deliverable(s).



- CCD will be responsible for working with the AssetWorks' Professional Services and CCD Support teams to move the custom deliverable(s) into a production environment.
- If this order is abandoned/paused by CCD for any reason mid-effort, CCD will be billed for all of AssetWorks time incurred at the current contracted labor rate.

Logistical and Scheduling Support

AssetWorks will need assistance from CCD to coordinate training and roll-out schedules, communications with field personnel and setting up training sites.



Exhibit B-1 Order Form



ORDER FORM

AssetWorks LLC

998 Old Eagle School Road, Suite 1215
Wayne, PA 19087

Order #: Q-06795-2**Date:** 07/16/2021**Ship To**

Todd M Richardson | Deputy Manager | Operations
City & County of Denver, Department of Transportation & Infrastructure
201 W Colfax Ave., Dept. 608
Denver, Colorado 80202
Phone: 720-913-1776 | Mobile: 303-319-8936
Todd.richardson@denvergov.org

Bill To

City and County of Denver
Asst. Director, Public Works
5440 Roslyn, Building C
Denver, Colorado 80216
United States

Perpetual License Fees

Description	QTY	UNIT PRICE	Line Total
EAM Standard License City Government	1	USD 52,500.00	USD 52,500.00
Reporting Module	1	USD 0.00	USD 0.00
Capital Planning Module	1	USD 0.00	USD 0.00
Esri Integration Module	1	USD 0.00	USD 0.00
Shop Activity Module	1	USD 0.00	USD 0.00
KPI/Dashboards Module	1	USD 0.00	USD 0.00
MAXQueue Integration Module	1	USD 0.00	USD 0.00
Mapping Module	1	USD 0.00	USD 0.00
EAM Connect Module	1	USD 0.00	USD 0.00
Zonar Evir Connector - Credit applied for the originally purchased Zonar Module - Denver now moving forward with Cloud Telematics integration with Samsara	1	USD -4,596.00	USD -4,596.00
Zonar GPS Connector (Odometers) - Credit applied for the originally purchased Zonar Module - Denver now moving forward with Cloud Telematics integration with Samsara	1	USD -4,596.00	USD -4,596.00
Telematics Module - 50% discount because included with EAM	1	USD 7,660.00	USD 7,660.00
Perpetual License Fees Total:			USD 50,968.00

Annual Maintenance Fees

Description	Line Total
Software Maintenance – AssetWorks EAM	USD 51,000.00
Telematics Module Maintenance	USD 3,064.00
Annual Maintenance Fees Total:	USD 54,064.00

AssetWorks EAM Hosting Fees

Description	QTY	Line Monthly Total	Yearly Fee
Hosting Services - In migrating to an EAM licensing structure annual hosting fees will be increased by \$10,000.00	1	USD 833.33	USD 10,000.00

Hosting Fees Total: USD 10,000.00

Subscription Fees for Samsara Cloud Telematics Meter Integration

Description	QTY	Monthly Fee/Unit	Line Monthly Total	Yearly Fee
FleetFocus Telematics Cloud interface adaptor - Samsara	2,000	USD 1.25	USD 2,500.00	USD 30,000.00
Subscription Fees Total:				USD 30,000.00

Note if a vehicle does not pull meter reading data from the Samsara Cloud Integration in a given month the \$1.25 service fee will not be charged. For example, plows parked in the summer and sweepers parks in the winter will not be billed while parked idle.

Samsara Professional Services Fees

Description	Line Total
Configure and Test Telematics Cloud interface adaptor	USD 6,560.00
Samsara Professional Services Fees Total:	USD 6,560.00

MS #	Milestone	Planned Delivery*	Net Milestone Lump Sum	Final Milestone Lump Sum Amount (Including PM)
Base Implementation Services				
	Project Kick-off and Orientation			
1A	Project Kick-Off	2-Aug-21	\$ 4,920.00	\$ 5,893.87
1B	Product Orientation Workshop	3-Aug-21	\$ 2,460.00	\$ 2,946.94
1C	Project Management Plan		\$ 4,920.00	\$ 5,893.87
	Requirements Validation and Planning			
2A	Requirements Workshops		\$ 9,430.00	\$ 11,296.59
2B	Integration Plan		\$ 7,790.00	\$ 9,331.96
2C	Prepare Validation Report		\$ 8,200.00	\$ 9,823.12
2D	Process Workshop Sessions		\$ 18,655.00	\$ 22,347.60
2E	Draft "To Be" Report		\$ 13,735.00	\$ 16,453.73
2F	Conference Room Pilot (CRP)		\$ 14,760.00	\$ 17,681.62
2G	Final Functional Future State Report		\$ 8,200.00	\$ 9,823.12
2H	Data migration plan		\$ 16,400.00	\$ 19,646.24
Total Services Design Phase			\$ 109,470.00	\$ 131,138.65
	Estimated Travel Expenses (Billed as Incurred)		\$ 50,000.00	\$ 50,000.00
Total Design Phase (incl. Travel)			\$ 159,470.00	\$ 181,138.65
Phase 1 - Transportation Operations				
	System Setup Consulting Services			
3A.1	System Setup Training Workshop - Phase 1		\$ 5,330.00	\$ 6,385.03
3B.1	Final data coding values and structures in Test - Phase 1		\$ 4,920.00	\$ 5,893.87
	Data Conversion and Migration Services			
4A.1	Data Loader Training Session - Phase 1		\$ 8,200.00	\$ 9,823.12
4B.1	Data Load Templates Provided - Phase 1		\$ 7,380.00	\$ 8,840.81
4C.1	Asset/Parts Data Loaded in Test - Phase 1		\$ 6,560.00	\$ 7,858.50
	System Configuration Services			
6A.1	Web Portals Configured - Phase 1		\$ 6,560.00	\$ 7,858.50
6B	Ad Hoc Query - Configured and Training - All Phases		\$ 8,200.00	\$ 9,823.12

Exhibit B-1 Order Form

MS #	Milestone	Planned Delivery*	Net Milestone Lump Sum	Final Milestone Lump Sum Amount (Including PM)
6C.1	Mobile/Smart Apps Configured - Phase 1		\$ 7,380.00	\$ 8,840.81
6D.1	GIS/Mapping Configured - Phase 1		\$ 4,920.00	\$ 5,893.87
	System Testing Services			
7A.1	Test Plan and Scenarios - Phase 1		\$ 6,150.00	\$ 7,367.34
7B.1	Testing Complete - Phase 1		\$ 7,380.00	\$ 8,840.81
	Training Preparation			
8A.1	Training Plan and Materials - Phase 1		\$ 8,250.00	\$ 9,883.02
	Training Delivery Services			
8B.1	System Admin Training - Phase 1		\$ 4,280.00	\$ 5,127.19
8C.1	Trainer Training - Phase 1		\$ 9,200.00	\$ 11,021.06
	Post-Implementation Support Services			
9A.1	Production Cut Over - Phase 1	14-Mar-22	\$ 24,190.00	\$ 28,978.20
	Total Services - Phase 1		\$ 118,900.00	\$ 142,435.23
Phase 2 – Street Maintenance				
	System Setup Consulting Services			
3A.2	System Setup Training Workshop - Phase 2		\$ 5,100.00	\$ 6,109.50
3B.2	Final data coding values and structures in Test - Phase 2		\$ 5,970.00	\$ 7,151.71
	Data Conversion and Migration Services			
4A.2	Data Loader Training Session - Phase 2		\$ 7,380.00	\$ 8,840.81
4B.2	Data Load Templates Provided - Phase 2		\$ 5,330.00	\$ 6,385.03
4C.2	Asset/Parts Data Loaded in Test - Phase 2		\$ 4,920.00	\$ 5,893.87
	System Configuration Services			
6A.2	Web Portals Configured - Phase 2		\$ 4,100.00	\$ 4,911.56
6C.2	Mobile/Smart Apps Configured - Phase 2		\$ 4,100.00	\$ 4,911.56
6D.2	GIS/Mapping Configured - Phase 2		\$ 4,100.00	\$ 4,911.56
	System Testing Services			
7A.2	Test Plan and Scenarios - Phase 2		\$ 7,610.00	\$ 9,116.33
7B.2	Testing Complete - Phase 2		\$ 9,200.00	\$ 11,021.06
	Training Preparation			
8A.2	Training Plan and Materials - Phase 2		\$ 5,790.00	\$ 6,936.08
	Training Delivery Services			
8B.2	System Admin Training - Phase 2		\$ 4,280.00	\$ 5,127.19
8C.2	Trainer Training - Phase 2		\$ 9,200.00	\$ 11,021.06
	Post-Implementation Support Services			
9A.2	Production Cut Over - Phase 2	13-Jun-22	\$ 18,450.00	\$ 22,102.02
	Total Services - Phase 2		\$ 95,530.00	\$ 114,439.34

Milestone Payment Schedule - Implementation Services

MS #	Milestone	Planned Delivery*	Net Milestone Lump Sum	Final Milestone Lump Sum Amount (Including PM)
Phase 3 – Bridge Maintenance				
	System Setup Consulting Services			
3A.3	System Setup Training Workshop - Phase 3		\$ 4,330.00	\$ 5,187.09
3B.3	Final data coding values and structures in Test - Phase 3		\$ 5,920.00	\$ 7,091.81
	Data Conversion and Migration Services			
4A.3	Data Loader Training Session - Phase 3		\$ 6,560.00	\$ 7,858.50
4B.3	Data Load Templates Provided - Phase 3		\$ 4,330.00	\$ 5,187.09
4C.3	Asset/Parts Data Loaded in Test - Phase 3		\$ 5,920.00	\$ 7,091.81
	System Configuration Services			
6A.3	Web Portals Configured - Phase 3		\$ 3,920.00	\$ 4,695.93
6C.3	Mobile/Smart Apps Configured - Phase 3		\$ 3,780.00	\$ 4,528.22
6D.3	GIS/Mapping Configured - Phase 3		\$ 3,780.00	\$ 4,528.22

MS #	Milestone	Planned Delivery*	Net Milestone Lump Sum	Final Milestone Lump Sum Amount (Including PM)
	System Testing Services			
7A.3	Test Plan and Scenarios - Phase 3		\$ 7,610.00	\$ 9,116.33
7B.3	Testing Complete - Phase 3		\$ 9,200.00	\$ 11,021.06
	Training Preparation			
8A.3	Training Plan and Materials - Phase 3		\$ 6,610.00	\$ 7,918.39
	Training Delivery Services			
8B.3	System Admin Training - Phase 3		\$ 4,280.00	\$ 5,127.19
8C.3	Trainer Training - Phase 3		\$ 9,200.00	\$ 11,021.06
	Post-Implementation Support Services			
9A.3	Production Cut Over - Phase 3	5-Dec-22	\$ 17,630.00	\$ 21,119.71
	Total Services - Phase 3		\$ 93,070.00	\$ 111,492.41
Phase 4 – Waste and Storm Water				
	System Setup Consulting Services			
3A.4	System Setup Training Workshop - Phase 4		\$ 5,100.00	\$ 6,109.50
3B.4	Final data coding values and structures in Test - Phase 4		\$ 7,610.00	\$ 9,116.33
	Data Conversion and Migration Services			
4A.4	Data Loader Training Session - Phase 4		\$ 6,560.00	\$ 7,858.50
4B.4	Data Load Templates Provided - Phase 4		\$ 4,330.00	\$ 5,187.09
4C.4	Asset/Parts Data Loaded in Test - Phase 4		\$ 5,920.00	\$ 7,091.81
	System Configuration Services			
6A.4	Web Portals Configured - Phase 4		\$ 3,920.00	\$ 4,695.93
6C.4	Mobile/Smart Apps Configured - Phase 4		\$ 3,780.00	\$ 4,528.22
6D.4	GIS/Mapping Configured - Phase 4		\$ 3,780.00	\$ 4,528.22
	System Testing Services			
7A.4	Test Plan and Scenarios - Phase 4		\$ 9,250.00	\$ 11,080.96
7B.4	Testing Complete - Phase 4		\$ 11,250.00	\$ 13,476.84
	Training Preparation			
8A.4	Training Plan and Materials - Phase 4		\$ 7,430.00	\$ 8,900.70
	Training Delivery Services			
8B.4	System Admin Training - Phase 4		\$ 4,280.00	\$ 5,127.19
8C.4	Trainer Training - Phase 4		\$ 9,200.00	\$ 11,021.06
	Post-Implementation Support Services			
9A.4	Production Cut Over - Phase 4	28-Apr-23	\$ 18,450.00	\$ 22,102.02
	Total Services - Phase 3		\$ 100,860.00	\$ 120,824.37
	Total Services All Phases		\$ 517,830.00	\$ 620,330.00
	Interface Design and Development Services			
5A	Aurigo - MasterWorks Interface - Final Specification Delivered		\$ 9,963.00	\$ 11,603.00
5B	Aurigo - MasterWorks Interface - Deployed to Test		\$ 12,177.00	\$ 13,817.00
5C	Workday HR/Employee Integration - Final Specification Delivered		\$ 9,225.00	\$ 10,865.00
5D	Workday HR/Employee Integration Interface - Deployed to Test		\$ 11,275.00	\$ 12,915.00
5E	CCTV Inspection Interface - Final Specification Delivered		\$ 15,867.00	\$ 17,507.00
5F	CCTV Inspection Interface - Deployed to Test		\$ 19,393.00	\$ 21,033.00
5G	Accela - Permitting Interface - Final Specification Delivered		\$ 11,070.00	\$ 12,710.00
5H	Accela - Permitting Interface - Deployed to Test		\$ 13,530.00	\$ 15,170.00
5I	Salesforce - 311 Citizen Request Interface - Final Specification Delivered		\$ 9,225.00	\$ 10,865.00
5J	Salesforce - 311 Citizen Request Interface - Deployed to Test		\$ 11,275.00	\$ 12,915.00
	Total Integration Services		\$ 123,000.00	\$ 139,400.00
	Enhancement Services			
E1	Asset Condition Roll-up			
E1.A	Asset Condition Roll-Up - Specifications	1-Dec-21	\$ 20,500.00	\$ 20,500.00
E1.B	Asset Condition Roll-Up - Beta Review #1		\$ 21,525.00	\$ 21,525.00

Exhibit B-1 Order Form

MS #	Milestone	Planned Delivery*	Net Milestone Lump Sum	Final Milestone Lump Sum Amount (Including PM)
E1.C	Asset Condition Roll-Up - Beta Review #2		\$ 21,525.00	\$ 21,525.00
E1.D	Asset Condition Roll-Up - Beta Review #3		\$ 21,525.00	\$ 21,525.00
E1.E	Asset Condition Roll-Up - Production Deployment	28-Oct-22	\$ 21,525.00	\$ 21,525.00
E2	Consolidated PM			
E2.A	Consolidated PM - Specifications	1-Jun-22	\$ 20,500.00	\$ 20,500.00
E2.B	Consolidated PM - Beta Review #1		\$ 26,445.00	\$ 26,445.00
E2.C	Consolidated PM - Beta Review #2		\$ 26,445.00	\$ 26,445.00
E2.D	Consolidated PM - Beta Review #3		\$ 26,445.00	\$ 26,445.00
E2.E	Consolidated PM - Production Deployment	28-Apr-23	\$ 26,445.00	\$ 26,445.00
E3	Scenario Planning			
E3.A	Scenario Planning - Specifications	1-Dec-22	\$ 20,500.00	\$ 20,500.00
E3.B	Scenario Planning - Beta Review #1		\$ 23,985.00	\$ 23,985.00
E3.C	Scenario Planning - Beta Review #2		\$ 23,985.00	\$ 23,985.00
E3.D	Scenario Planning - Beta Review #3		\$ 23,985.00	\$ 23,985.00
E3.E	Scenario Planning - Production Deployment	27-Oct-23	\$ 23,985.00	\$ 23,985.00
	Total Budget Enhancement Services		\$ 349,320.00	\$ 349,320.00
	Sum Total of Project Milestones			\$ 1,109,050.00
	Estimated Travel Expenses (Billed as Incurred)			\$ 50,000.00
	Proposed Total Project Budget (incl. Travel)			\$ 1,159,050.00
	* To be determined at time of project kick-off			

Grand Total: USD 1,310,642.00

Optional Additional Services

Description	QTY	UNIT PRICE	Line Total
Budget for Potential Changes to Fleet Integration (TBD)	200	USD 205.00	USD 41,000.00
Custom Report Development Services (TBD)	250	USD 205.00	USD 51,250.00
Optional Additional Services Total:			USD 92,250.00

Requirements

Exhibit E-1 Requirements Matrix									
ID	Requirement Type	Requirement Name	Requirement Description	MoSCoW Value	Requirement Compliance	Requirement Compliance Description	Requirement Compliance Value	Product/Module	Vendor Response Comments
1	Functional	Use Case Name, User Story, Standard Requirement Name, etc.	Description of the business need - This can be a high-level Use Case/Package with a focus on the key feature/capability set.						
2	Asset Tracking Scope			Must Have					
2.1	Asset Tracking	Asset management business processes	This section contains the full list of current assets within the city that may use the asset management functionality outlined in this document. Any solution should be able to manage these business process areas, as well as the assets typically managed within them.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	AssetWorks EAM provides built in configuration options to control workflows. This includes but is not limited to making fields required, setting drop down choice lists, user access/permissions, and portal configuration.
2.1.1	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	Easements	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.2	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	Casings	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.3	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	Cleanouts	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.4	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	Fittings	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.5	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	Inlets	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.6	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	Mains	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.7	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	Manholes	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.8	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	Outfalls	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.9	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	Pipes	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.10	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	Service Lines	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.11	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	Storm Structures	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.12	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	Retention/Detention Basins	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.13	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	Green Infrastructure Facilities	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.14	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	Water Quality Facilities	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.15	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	Storm sampling	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Test results may be defined by asset type and set with pass/fail, numeric, alphanumeric, date, and custom choice list entries. Pre-defined failure thresholds may be set to drive auto-generated follow up tasks. All test results are reportable.
2.1.16	Asset Tracking	Storm Sewer Components - Wastewater Infrastructure	BMP Inspections and Maintenance	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	AssetWorks EAM’s extensive configurability of preventative maintenance (PM), inspection, and condition-based maintenance schedules ensures any custom business rules may be applied. Schedules can be uniquely defined for a given asset, applied to a class of assets, or both. PM, inspection, and condition schedules can be based on dates, custom calendars, (days, weeks, month, season), meter (flow, miles, hours, kilowatts), or a combination of both. Notifications and PM/Inspection reports can also be sent via email and text message to alert the responsible parties when a PM or inspection is due.
2.1.17	Asset Tracking	Sanitary Sewer Components - Wastewater Infrastructure	Easements	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.18	Asset Tracking	Sanitary Sewer Components - Wastewater Infrastructure	Casings	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.
2.1.19	Asset Tracking	Sanitary Sewer Components - Wastewater Infrastructure	Cleanouts	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited assets of any type are brought over through the configurable GIS integration. Assets are given standard templates to define life cycle maintenance, checklists, procedure, unique ID format, attributes, test results, and more.

[illegible]

[illegible]

ID	Requirement Type	Requirement Name	Requirement Description	MoSCoW Value	Requirement Compliance	Requirement Compliance Description	Requirement Compliance Value	Product/Module	Vendor Response Comments
3	Asset Tracking			Must Have					
3.1	Asset Tracking Functionality	Asset Tracking - Primary Function	Asset tracking refers to the solution being used by the organization to monitor the assets it owns to track and analyze issues such as physical location, maintenance requirements, depreciation, performance, and eventual disposal of the asset.	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	AssetWorks EAM provides comprehensive asset tracking and management for the entire life cycle of any asset. This includes but is not limited to location (point, linear, and boundary assets), maintenance requirements, depreciation, performance assessment with user defined scoring/rating, and life cycle codes and disposal tracking
3.1.1	Asset Tracking Functionality	Asset Workflow Development	The development of processes within the system that can be used to track an asset through construction and implementation to a managed asset and automate as many of the process steps as possible.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	AssetWorks EAM contains inherent configuration to drive workflow and automation of process. This includes but is not limited to processes for: - Creation of assets - Service request routing and prioritization - Work order assignment, required parts/materials/equipment, completion, and approval - Capital Planning project approvals
3.1.2	Asset Tracking Functionality	Level of Service Maintenance	A key aspect of asset management is planning to match the level of service that assets provide to customer expectations. It provides the balance between the cost to deliver and the level required. Specific levels of service include cost, efficiency, quality, quantity, reliability, safety and responsiveness.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	All data is reportable for tracking performance. This includes analytics for criteria such as costs, reported issues, time to respond/down time, probability of failure, manual and calculated condition scores, and more.
3.1.3	Asset Tracking Functionality	Lifecycle Management & History	References the series of stages involved in the management of an asset. It starts with the planning stages when the need for an asset is identified and continues all the way through its useful life and eventual disposal.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	Life cycle codes can be defined and applied to assets to track the stage of their life cycle. This can drive workflow and reporting functions.
3.1.4	Asset Tracking Functionality	Condition Assessments	Involves monitoring assets periodically, and using the data collected from those inspections to determine the condition of each asset. The analysis of inspection data may show that an asset needs preventive maintenance in order to ensure that the asset meets the expected useful life.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	The Asset Performance Assessment portal provides the ability to track asset condition based on manual and calculated scores. Performance graphs can be viewed to see scoring against user defined asset type deterioration curves. Historical and projected costs and condition may also be viewed. Condition score thresholds may be set and alert designated users when this threshold is reached. Pre-defined tasks can be auto-generated based on current condition and assigned from this portal. Upon completion, the condition score adjusts automatically. Users may also add assets to Capital projects for repair or replacement, budgets and funding, and scheduling.
4	Inventory			Must Have					
4.1	Inventory Management Functionality	Inventory Tracking - Primary Functionality	Inventory management is the way the organization manages the supplies, materials, and asset registers required to perform maintenance on the infrastructure systems and maintain the necessary supplies and materials inventory to perform the work.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	AssetWorks EAM includes fully integrated enterprise inventory management capabilities. Standard functionality includes unlimited inventory locations, purchasing, requisitioning, RFP/RFQ responses, inventory counts (ABC codes, random, cycle, etc.), stock promotion, not from inventory items, pricing (average price, LIFO, FIFO), replenishment (Min-Max, EOQ), part/material requests, part/material transfers, purchase/issue factors, binning, serialization, cross references, and much more.
4.1.1	Inventory Management Functionality	Asset Inventory (data collection)	The way the organization captures, lists, and provides details of the assets it owns.	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	All asset data is searchable and reportable to track inventory details. Any data required to be captured is configured through the asset type templates to drive workflow for information required when maintenance is performed.
4.1.2	Inventory Management Functionality	Supply Inventory/Management	The way the organization captures, lists, and provides details of the supplies needed to maintain or replace the assets it owns. (Ex: sign poles, bolts to connect signs to poles)	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	All asset data is searchable and reportable to track inventory details. Any data required to be captured is configured through the asset type templates to drive workflow for information required when maintenance is performed.
4.1.3	Inventory Management Functionality	Materials Inventory/Management	The way the organization captures, lists, and provides details of the materials needed to maintain or replace the assets it owns. (Ex: asphalt to pave streets)	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	All data is reportable and searchable including all parts/materials inventory information.
4.1.4	Inventory Management Functionality	Ordering/Replenishment/Receiving	The way the organization manages the processes for replacing inventory as it is depleted and managing the process of restocking supplies and materials.	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	Work management and part/material management is tightly integrated throughout the application, so parts/materials requested are automatically routed to the appropriate parts/materials manager. When the request is fulfilled, requestors are in turn automatically informed their items are ready for pickup. When parts/materials fall below their reorder point users are notified in real-time. Inventory managers may run replenishment for entire inventory locations, buy vendor, or by inventory categories. Anything at or below min values can be added in mass to requisitions or purchase orders. Receiving can also be completed in mass and all parts/materials stay connected to the requesting technician/crew, work order, and more.
5	Work Order Management			Must Have					
5.1	Work Order Management Functionality	Work Order Management - Primary Function	Work order management is the systematic approach of processing and completing maintenance work orders in a timely manner in order to minimize asset downtime. Work order completion depends on the availability of other maintenance resources such as assets, parts, people, and money.	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	AssetWorks EAM is delivered with comprehensive Work Order Management functionality and workflows. This includes but is not limited to: - Tracking of all costs: Labor (individual and crew), Parts/Materials, Equipment Usage, and Vendor Invoices - Work assignment to vendors, crews, and individuals in any combination and complexity - Mobile app for field techs to work disconnected - Work order status to track delay and accurate completion.
5.1.1	Work Order Management Functionality	Work Status Tracking	Work orders are tracked through the system from cradle to grave to ensure completion of necessary maintenance work.	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	Fully Supported
5.1.2	Work Order Management Functionality	Scheduling	The system is used to schedule work orders in the most time and cost-efficient manner.	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	Work orders can be scheduled and auto-generated based on pre-defined preventive maintenance criteria. Authorized users may plan work as required through the out of box calendar by managing work daily, weekly, and monthly for all staff by permissioned area of responsibility.
5.1.3	Work Order Management Functionality	Labor/Work Assignments	Work orders are assigned in the system to the appropriate staff for completion.	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	Fully Supported
5.1.4	Work Order Management Functionality	Equipment Assignments	Work orders are assigned the necessary equipment needed for completion and assigned staff will have records for what equipment to deploy on a maintenance project.	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	Fully Supported
5.1.5	Work Order Management Functionality	Supplies/Materials Issuance	Work orders are issued the appropriate supplies and materials which are subsequently subtracted from supply and material inventories and flagged for replenishment as needed.	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	Fully Supported

Requirements

ID	Requirement Type	Requirement Name	Requirement Description	MuSoW Value	Requirement Compliance	Requirement Compliance Description	Requirement Compliance Value	Product/Module	Vendor Response Comments
6	Planning			Must Have					
6.1	Planning Functionality	Planning - Primary Function	Asset management plans form the cornerstone of an effective asset management system. They provide the roadmap for achieving value from physical assets by optimizing cost, risk and performance across the asset lifecycle. Asset management plans define the implementation activities necessary to realize an organization's asset management objectives which translate to the strategic intent.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	Asset Performance and Capital Planning portals provide the ability to track asset performance and move assets into Capital Projects that fall under a larger Capital Plan. Plans can track budgets, funding sources, and projects short and long term (30 years). Functionality includes but is not limited to scoring and ranking projects, project approval workflow, schedule timelines, goal and objective tracking, attachments, and more.
6.1.1	Planning Functionality	Future Maintenance Planning	Future maintenance planning is a term used to account for future expenses that an organization expects to incur in order to maintain its infrastructure assets. This includes the funds necessary to renew/repair, or replace an asset in order to continue to function as needed.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	Estimated replacement cost can be tracked and used to make repair and replace decisions. Asset Performance Assessment portal can provide these projections of cost and scoring against historical costs and condition.
6.1.2	Planning Functionality	Asset Deterioration Modeling	Deterioration modeling is the process of modeling and predicting the physical condition of structures or infrastructure. Deterioration modeling is instrumental to infrastructure asset management and are the basis for maintenance and rehabilitation decision-making.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	Deterioration curves are user defined and applied by asset type. These curves are applied against the performance charts which show historical condition, minimum threshold, in service date, procurement date, and replace by date.
6.1.3	Planning Functionality	Level of Service Maintenance	A key aspect of asset management planning is to match the level of service that assets provide to customer expectations. Focusing on Level of Service maintenance can help create efficiencies in repair and replacement time and costs rather than conducting repairs and replacements based on just age or location.	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	AssetWorks EAM provides Cost Analysis reporting out of the box to make planning decisions for any asset.
6.1.4	Planning Functionality	Cross-asset Analysis	The ability to compare costs, conditions, schedules, staffing requirements, and supply/materials needs to create maintenance and operations plans across the organization.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	AssetWorks EAM provides Cost Analysis reporting out of the box to make planning decisions for any asset. Any reports required not provided out of box can be created through our Ad Hoc reporting tool. All data is reportable and not restricted by AssetWorks.
6.1.5	Planning Functionality	Preventative Maintenance	Maintenance that is regularly performed on a piece of infrastructure or equipment to lessen the likelihood of a failure. It is performed so that the asset is still working so that it does not break down unexpectedly. This can result in cost savings by identifying expected failure timelines and avoiding complete replacements when possible.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	Asset Performance Assessment portal provides the ability to track asset performance and apply recommended pre-defined tasks to improve condition upon completion. All cost for these improvements are tracked and reportable.
7	Budget Scenario Analysis		At this level you could have a refinement of the above, a Use Case, a User Story, a "the system shall" or whatever works best.	Must Have					
7.1	Budget Scenario Analysis Functionality	Budget Scenario Analysis - Primary Function	Budget scenario analysis is a what-if analysis in which an asset model's output is calculated across several different future outcomes. Scenario analysis is most commonly used in budgeting processes to estimate the expected value of an investment in multiple situations typically based on deterioration modeling and available funding amounts.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	The Capital Planning portal allows short and long term (30 years) planning of budgets and funding sources. Scenarios can be manually created and adjusted by permissioned users to review what-if analysis.
7.1.1	Budget Scenario Analysis Functionality	Cost Forecasting	Creating future cost plans based on available asset information and deterioration models to understand potential budget needs to maintain an ideal level of service.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	Preventive Maintenance Forecasting is available through the Asset Management portal of the application. Projected number of services, labor hours, labor cost, and parts/materials cost can be viewed for user-defined future time periods.
7.1.2	Budget Scenario Analysis Functionality	Automated Investment Planning	The asset management system has automated tools to understand how much budget to invest and where to focus maintenance work to maintain an ideal level of service, as well as creating plans to most efficiently utilize available funding amounts.	Must Have	Cannot Meet	The product cannot meet the requirement "Out-of-the-Box", "With Configuration", "With Custom Programming" or with a "Future Release".	1	N/A	Capital Planning tools provide the ability to manually manage budgets and run cost analysis reports to make decisions, but is not an automated tool or process.
7.1.3	Budget Scenario Analysis Functionality	Condition Forecasting	The asset management system utilizes deterioration models to develop maintenance and operations plans that will help maintain an ideal level of service across the managed infrastructure system.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	Deterioration curves are user-defined and applied by like asset type.
8	Reporting		At this level you could have a refinement of the above, a Use Case, a User Story, a "the system shall" or whatever works best.	Must Have					
8.1	Reporting Functionality	Reporting - Primary Function	Asset Management Systems provide reports to aid in tracking and reconciling asset transactions, capital acquisition planning, depreciation, activity, budget and accounting entries, physical inventory, and asset disposal and retirements. The reports produced by the system can be used to track production and cost metrics for all assets to better understand how well maintenance and operations staff and processes are performing and to help identify where changes may need to be made.	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	AssetWorks EAM utilizes Crystal Reports as its main reporting tool, which provides over 350 out of box reports that are delivered through AssetWorks EAM's web portal. All out-of-box reports may be modified and any number of custom reports can be created. Reports may be scheduled, emailed, and exported to many industry-standard formats, such as docx, xlsx, pdf, txt, csv, xml, etc. Report favorites may be created and saved by users that allow access to commonly-referenced data from anywhere within the system. Any reports not contained out of the box can be created or modified using Crystal reports tool and/or the Ad Hoc reporting tool. AssetWorks EAM's dashboard module also provides gauges and charts that graphically communicate any key performance indicators. Warning and alert ranges may be set with drill-down capability, and access to gauges and charts may be granularly controlled through access rights. Charts and graphs may also be added to any report as required through the ad hoc reporting tool. Reports may also be embedded on any portal screen of a user's workflow for auto-update and display of multiple reports in a single view.
8.1.1	Reporting Functionality	Production Reporting	The development of reports to track production of staff and work order efficiencies.	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	Fully Supported
8.1.2	Reporting Functionality	Costs Reporting	The development of reports to track costs across a program.	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	Fully Supported
8.1.3	Reporting Functionality	Ad hoc Reporting	The ability to conduct reporting from specific pages, self service, or other out of the box reporting.	Should Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	Fully Supported
8.1.4	Reporting Functionality	Custom Reporting	Describe the capabilities of the application to develop custom reporting.	Should Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	AssetWorks EAM incorporates an Ad-Hoc Query tool into its solution. This allows end users without Crystal Reports experience or access to the development software to create reports directly within the program. Ad-Hoc Query reports may be saved, shared, exported, and are viewable directly within user Portals, providing real time access to data uniquely important to each user. All database tables, including user-defined attribute fields, are reportable and AssetWorks does not restrict the data.

Requirements

ID	Requirement Type	Requirement Name	Requirement Description	MoSCoW Value	Requirement Compliance	Requirement Compliance Description	Requirement Compliance Value	Product/Module	Vendor Response Comments
9	Business Intelligence & Analytics		At this level you could have a refinement of the above, a Use Case, a User Story, a "the system shall" or whatever works best.	Must Have					
9.1	Business Intelligence & Analytics Functionality	Business Intelligence & Analytics - Primary Function	Asset management systems store data that can be analyzed for business intelligence and analytics and used to create actionable insights that inform the organization strategic decisions and can lead to improvements to the costs and productivity of assets and maintenance operations. Asset management systems don't necessarily have this as an integrated capability or tool, but there are ways to utilize the data to perform this function.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	All data is reportable and can be used through out of the box reporting, any custom report building tool, and user-defined KPIs (key performance indicators). KPIs can be set to drive notifications on pre-set thresholds to make data proactive. All report data can be shown in charts and gauges as required.
9.1.1	Business Intelligence & Analytics Functionality	Analytics Capabilities	Describe the application's analytics capabilities.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	All out of the box and custom reporting provides analytics capabilities. This also includes the Asset Performance Assessment portal for tracking additional analytics on cost, condition, and deterioration/expected life.
9.1.2	Business Intelligence & Analytics Functionality	Self-service Analytics	Describe the application's self-service analytics capabilities.	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	AssetWorks EAM utilizes Crystal Reports as its main reporting tool, which provides over 350 out of box reports that are delivered through AssetWorks EAM's web portal. All out-of-box reports may be modified and any number of custom reports can be created. Reports may be scheduled, emailed, and exported to many industry standard formats, such as docx, xls, pdf, txt, csv, xml, etc. Report favorites may be created and saved by users that allow access to commonly-referenced data from anywhere within the system .
9.1.3	Business Intelligence & Analytics Functionality	Dashboarding	Describe the application's dashboarding capabilities.	Should Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	AssetWorks EAM's dashboard module also provides gauges and charts that graphically communicate any key performance indicators. Warning and alert ranges may be set with drill-down capability, and access to gauges and charts may be granularly controlled through access rights. Charts and graphs may also be added to any report as required through the ad hoc reporting tool. Reports may also be embedded on any portal screen of a user's workflow for auto-update and display of multiple reports in a single view.
9.1.4	Business Intelligence & Analytics Functionality	Other BI & Analytics Capabilities	Describe the application's other BI & analytics capabilities.	Should Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	All analytics are accomplished through the reporting offering. AssetWorks EAM does not provide BI capabilities.
10	Integrations*			Should Have					
10.1	Pipe Tech	CCTV for Sewer/Storm water	The solution can meet the requirement only by modifying the product's source code (changing or adding new code) to enable it to do what it was not originally able to do.	Should Have	With Custom Programming	The solution can meet the requirement only by modifying the product's source code (changing or adding new code) to enable it to do what it was not originally able to do.	2	MaxQueue Integration Tool	Integration with such systems can be achieved utilizing MAXQueue, AssetWorks' integration solution. AssetWorks EAM can integrate with any third-party system that supports open standard protocols, such as web services (REST or SOAP), XML, HTTP, ODBC, SCADA, Insurances, .fls, .flat files, etc.
10.2	GIS	ESRI	Push/pull data for each asset to/from GIS layers as updates are completed in both systems	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box"	4	AssetWorks EAM - Standard Functionality	Fully Supported
10.3	Workday -HR	Resources for scheduling, work orders, etc	Push/pull personnel data between the two systems	Must Have	With Custom Programming	The solution can meet the requirement only by modifying the product's source code (changing or adding new code) to enable it to do what it was not originally able to do.	2	MaxQueue Integration Tool	Integration with such systems can be achieved utilizing MAXQueue, AssetWorks' integration solution. AssetWorks EAM can integrate with any third-party system that supports open standard protocols, such as web services (REST or SOAP), XML, HTTP, ODBC, SCADA, Insurances, .fls, .flat files, etc.
10.4	Workday - Finance	Financial system of record	Push/pull purchasing/billing data between the two systems	Must Have	With Custom Programming	The solution can meet the requirement only by modifying the product's source code (changing or adding new code) to enable it to do what it was not originally able to do.	2	MaxQueue Integration Tool	Integration with such systems can be achieved utilizing MAXQueue, AssetWorks' integration solution. AssetWorks EAM can integrate with any third-party system that supports open standard protocols, such as web services (REST or SOAP), XML, HTTP, ODBC, SCADA, Insurances, .fls, .flat files, etc.
10.5	Salesforce	Work requests, customer complaints	Pulls consolidated locate data and assigns work/assets as necessary.	Must Have	With Custom Programming	The solution can meet the requirement only by modifying the product's source code (changing or adding new code) to enable it to do what it was not originally able to do.	2	MaxQueue Integration Tool	Integration with such systems can be achieved utilizing MAXQueue, AssetWorks' integration solution. AssetWorks EAM can integrate with any third-party system that supports open standard protocols, such as web services (REST or SOAP), XML, HTTP, ODBC, SCADA, Insurances, .fls, .flat files, etc.
10.6	Aurigo	Project Management System	Integrates with work orders and asset workflow processes.	Must Have	With Custom Programming	The solution can meet the requirement only by modifying the product's source code (changing or adding new code) to enable it to do what it was not originally able to do.	2	MaxQueue Integration Tool	Integration with such systems can be achieved utilizing MAXQueue, AssetWorks' integration solution. AssetWorks EAM can integrate with any third-party system that supports open standard protocols, such as web services (REST or SOAP), XML, HTTP, ODBC, SCADA, Insurances, .fls, .flat files, etc.
10.7	Accela	Permitting and Licensing System (Future State Integration)	Pulls permitting data for project coordination (road closures, capital improvement projects, etc)	Should Have	With Custom Programming	The solution can meet the requirement only by modifying the product's source code (changing or adding new code) to enable it to do what it was not originally able to do.	2	MaxQueue Integration Tool	Integration with such systems can be achieved utilizing MAXQueue, AssetWorks' integration solution. AssetWorks EAM can integrate with any third-party system that supports open standard protocols, such as web services (REST or SOAP), XML, HTTP, ODBC, SCADA, Insurances, .fls, .flat files, etc.
10.8	FuelForce	Fuel Management	Pulls data for fuel management	Should Have	With Custom Programming	The solution can meet the requirement only by modifying the product's source code (changing or adding new code) to enable it to do what it was not originally able to do.	2	MaxQueue Integration Tool or FuelFocus module	Integration with such systems can be achieved utilizing MAXQueue, AssetWorks' integration solution. AssetWorks EAM can integrate with any third-party system that supports open standard protocols, such as web services (REST or SOAP), XML, HTTP, ODBC, SCADA, Insurances, .fls, .flat files, etc. It is important to note, AssetWorks is the only asset management application to offer its own fuel management system, FuelFocus. Fuel transactions enter the application real time, no integration required, and provide more comprehensive control over your fuel management.
10.9	Other Asset Management Applications	Fleet Management/Capital Asset Management/Facilities Management	There are other asset management applications across the city. Please identify if this application has the ability integrate with other asset management tools. Also, please specify if there are specific AM applications it can not integrate.	Should Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM, FleetFocus, and Capital Asset Management (CAM) modules - Standard Functionality	The City of Denver already owns the AssetWorks FleetFocus module as well as the Capital Asset Management (CAM) module, no additional integration required. In regards to facilities, assets of any type can be managed and permissioned accordingly to the appropriate users/workflows through AssetWorks EAM application being proposed.
10.10	Samsara	Video/location tracking (in-vehicle)		Should Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	MaxQueue Integration Tool	An out-of-box integration that leverages AssetWorks' SaaS based Cloud Telematics platform is available today. The service provides location details, diagnostic trouble codes, and meter updates in near real-time directly from Samsara. A URL link can be accessible from within AssetWorks EAM's asset record that automatically opens Samsara's tool whereby such videos can be viewed. If there is a specific need to view video directly within AssetWorks EAM this would require a programming disabament .
10.11	Asset Update	Register Asset	Push/pull data for capital asset management.	Should Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks Capital Asset Management (CAM)	The AssetWorks CAM module is already being implemented for the City of Denver. Asset data is already integrated between the Fleet and CAM system in a bi-directional connection. If additional functionalities or other asset types are required to be integrated with another solution, a custom integration would be needed.
10.12	Active Directory	user and operator access management	Pulls CDD user access credentials	Should Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	AssetWorks EAM supports 7 different methods of SSO, including Active Directory. If integration with AD is required for the purposes of creating, modifying, removing user IDs and details; then a custom integration would be required.

ID	Requirement Type	Requirement Name	Requirement Description	MoSoW Value	Requirement Compliance	Requirement Compliance Description	Requirement Compliance Value	Product/Module	Vendor Response Comments
11	Mobile*			Must Have					
11.1	Mobile	Asset management functionality available on mobile devices including laptops, smart phones, and tablets	Mobile requirements would facilitate Asset Management activities in the field. It would help DOTI teams add and update asset data in the field, manage work orders and work requests, and the other core activities outlined in this document.	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM Connect	AssetWorks offers the EAM Connect mobile app which is available on iOS, Android, and Microsoft devices. This mobile app can work off line and auto-sync with the database when back in a connected environment. Functions provided include but are not limited to Asset Management, Service Request Management, Work Order Management, Time Management, Parts/Materials Management, and more.
12	Technical Requirements	Performance Efficiency	This characteristic represents the performance relative to the amount of resources used under stated conditions. This characteristic is composed of the following sub-characteristics: Time behavior: Degree to which the response and processing times and throughput rates of a product or system, when performing its functions, meet requirements. Resource utilization: Degree to which the amounts and types of resources used by a product or system, when performing its functions, meet requirements. Capacity: Degree to which the maximum limits of a product or system parameter meet requirements.	Must Have					
12.1	Technical Requirement	Number of Users	1000 concurrent users (typically 300-500)	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	Fully Supported
12.2	Technical Requirement	Configuration Requests	How are administrative tasks handled? Does it allow for self service configuration?	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	Fully Supported. Admin tasks are all self service and support can be contacted only if assistance is needed. As part of the project training and existing support documentation, admin users are trained to be empowered to make independent changes.
12.3	Technical Requirement	Historical Data	Amount of historical data to import and store.	Must Have	With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product's source code – so that it functions in a way that meets the City's specific business needs.	3	AssetWorks EAM - Standard Functionality	Unlimited historical data can be imported into the application. History can include cost summary, detailed work order costs, attributes, and more.
12.4	Technical Requirement	Support Model	How will DOTI/TS request support	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	Customers may contact the Support Center via telephone, email, or online Community site. All submissions are assigned a tracking number by the AssetWorks CRM, ZenDesk, to allow customers to track the progress of reported issues. AssetWorks has a Community site that not only provides support access, but access to a library of training documentation, webinars, videos, tips and tricks articles, and more.
12.5	Technical Requirement	Data Storage	Is the system cloud hosted or on prem?	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	Customers can host on premise or be hosted through the AssetWorks SSAE18 SOC2 certified/ISO27001 compliant Data Center in Pennsylvania. Please note, the current AssetWorks FleetFocus module is already hosted for the City of Denver in the AssetWorks data center.
12.6	Technical Requirement	Cloud Based System - Data Access	If the system is cloud hosted, what are the data access options?	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	If reporting through the web portal, all information is real time. Customers also have ODBC access to the reporting database. The DB is refreshed nightly so the data may be up to 24 hours old.
12.7	Technical Requirement	Fail Over Strategy	If the system goes down, what is the fail over strategy?	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	AssetWorks EAM supports a Disaster Recovery site for fail-over without the expense of additional application or third-party licenses. While not a transparent fail-over and excluding transactions "in-flight", the EAM Disaster Recovery environment can be configured to direct a secondary URL to an alternate database instance that has been replicated or "hot-standby" in the alternate site. Optional fee-based assistance in configuring your DR is available from AssetWorks. Disaster Recovery is available to all hosted customers. This service involves backing up and recovering the customer database and attachments to the Disaster Recovery Site (DRS) as well as providing the EAM application in a configured Disaster Recovery Site. <ul style="list-style-type: none"> AssetWorks contracts with an offsite, secure facility to store the latest version of database backup files and attachments. AssetWorks contracts with a provider to have an off-site server standing ready to restore our backups. In the event of an incident, latest off-site database archives are stored at off-site DRS facility. The EAM application server software is maintained as 'current' in the DRS to be compatible with the working version in the Data Center. The EAM database server configuration (Innames, websites, etc.) is also kept current in the DRS to be compatible with the working version in the Data Center. Any attachments on the application server will be restored on the DRS application servers. DNS changes would make the EAM DRS application available through the customers URL. RTO (Recovery Time Objective) is a target of 48 hours with a maximum of 4 days. RPO (Recovery Point Objective) is under one minute. Optional Enhanced Disaster Recovery For customers for whom the RTO of four (4) days is insufficient, a quote can be
12.8	Technical Requirement	Training Options	What options does the vendor provide for training?	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	Implementation training can be provided onsite, online, or a combination of both. Training can be done in a train the trainer fashion or end users trained directly.
12.9	Technical Requirement	Installation Information	Are the various aspects of this application all done in one install or are there multiple components to install and license?	Must Have	Out-of-the-Box	The solution meets the requirement as is, "out-of-the-box" functionality with no configuration or custom programming/coding.	4	AssetWorks EAM - Standard Functionality	Since the City of Denver already owns the AssetWorks FleetFocus module, a license key would only need to be entered to activate the EAM functionality. The only install requirements would be any integrations required for the EAM application.

RequirementCompliance	Description	ScoreValue
Cannot Meet	The product cannot meet the requirement “Out-of-the-Box”, “With Configuration”, “With Custom Programming” or with a “Future Release”.	1
Future Release	The current version of the solution cannot meet the requirement “Out of the Box” or “With Configuration” but will be able to with a scheduled, future release of the product.	2
Out-of-the-Box	The solution meets the requirement as is, “out-of-the-box” functionality with no configuration or custom programming/coding.	4
With Configuration	The solution can meet the requirement by arranging the functional parameters that are already inherent in the product – and not by changing the product’s source code – so that it functions in a way that meets the City’s specific business needs.	3
With Custom Programming	The solution can meet the requirement only by modifying the product’s source code (changing or adding new code) to enable it to do what it was not originally able to do.	2

Prioritization Type	Prioritization Description
Must Have	Requirements labeled as "Must Have" are critical to the current delivery timebox in order for it to be a success. If even one "Must Have" requirement is not included, the project delivery should be considered a failure (note: requirements can be downgraded from "Must Have", by agreement with all relevant stakeholders; for example, when new requirements are deemed more important).
Should Have	Requirements labeled as "Should Have" are important but not necessary for delivery in the current delivery timebox. While "Should Have" requirements can be as important as "Must Have", they are often not as time-critical or there may be another way to satisfy the requirement, so that it can be held back until a future delivery timebox.
Could Have	Requirements labeled as "Could Have" are desirable but not necessary, and could improve user experience or customer satisfaction for little development cost. These will typically be included if time and resources permit.
Won't Have	Requirements labeled as "Won't Have" have been agreed by stakeholders as the least-critical, lowest-payback items, or not appropriate at that time. As a result, "Won't Have" requirements are not planned into the schedule for the next delivery timebox. "Won't Have" requirements are either dropped or reconsidered for inclusion in a later timebox. (Note: occasionally the term Would like to have is used; however, that usage is incorrect, as this last priority is clearly stating something is outside the scope of delivery).