NAPA SANITATION DISTRICT

TIMMONS GROUP - TASK ORDER No. 01
Phase 1 Asset Management Program - CMMS

Date: _____

Issued under Professional Services Agreement dated _____.

To: Timmons Group

Project Description:

Provide CMMS implementation and software consistent with the asset management program Phase 1 task.

Description of Scope of Services to be performed by Consultant under this Task Order:

See Attachment 'A' – Scope of Services

Description of Services to be Provided by District:	See Attachment 'A' –Scope of Services
Deliverables:	See Attachment 'A' –Scope of Services
Consultant Project Manager:	Lauren Sullivan
Consultant Quality Control Manager:	Lou Garcia, PMP
Schedule to Perform Services:	See Attachment 'B' - Schedule
Time & Materials Not-to-Exceed Cost Limit:	$317,882.50
	See Attachment 'B' –Fee Schedule

APPROVALS:

TIMMONS GROUP

By: _____ _____
Authorized Representative Date

NAPA SANITATION DISTRICT

By: _____ _____
Purchasing Agent Date

NSD Account No.: _____

ATTACHMENT A:

Scope of Services:

Task 1: Project Management

Shortly after Timmons Group receives the notice to proceed, Timmons Group will prepare an initial Project Management Plan (PMP) document, and begin initial data gathering to prepare for the kickoff meeting. Timmons Group will also hold a webinar meeting with the NapaSan Project Manager and NapaSan/Napa County IT & GIS staff to discuss the proposed solutions Timmons Group will be implementing and their impacts to the NapaSan and Napa County existing computing environment. This "primes the pump" for the kickoff meeting and configuration workshops and ensures there will be no IT or GIS related bottlenecks related to hardware or software purchases. This will include a detailed review of hardware/software procurement requests (full specifications review) by NapaSan prior to release to Napa County and/or vendors.

Our project manager will employ a variety of controls and management tools designed to successfully complete this project in a timely manner while keeping NapaSan informed of our progress throughout the duration of the project. The scope of this project will require our team to work with many different NapaSan staff members on a number of project tasks. This task will remain active throughout all phases of the project.

Task 1: NapaSan Responsibilities:

- *NapaSan will review the Project Management Plan and ensure it meets requirements.*
- *NapaSan's project manager can assume a need of approximately 4-8 hours per week during project duration*
- *Key personnel for each functional group can assume a need for 2 hours for project management plan review and 2 hours per week during project duration for communication, status meetings, etc.*

Task 1: Deliverables:

- *The Timmons Group Project Manager will draft and deliver a Project Management Plan (PMP) for an initial review by NapaSan's Project Manager and key staff, as deemed appropriate. The draft plan will be provided in advance of the project kickoff meeting. The project management plan is a dynamic (living) document that will be managed over the life of the project.*
- *Monthly Project Status Reports*
- *A project collaboration portal will be setup for the duration of the project and for support after Go-live.*

Task 1: Assumptions:

- *NapaSan will review all documentation in a timely manner.*

Task 1: Estimated Timeframe:

- *Project Management activities will occur throughout the duration of the project*

Task 2: Implementation Planning

The goal of this task and its subtasks is to develop a System Design and Configuration (SD&C) Plan that consolidates the gathered data with workflows, data migration requirements, and interface requirements that will be identified and modeled during a series of configuration workshops.

IT System Review

Our implementation team will meet with the NapaSan's project management team and NapaSan and Napa County IT & GIS staff to discuss hardware and environment requirements for the Cityworks implementation. During this meeting, various system architectures and minimum requirements will be explored to ensure a stable implementation for NapaSan. The goal is to ensure hardware is in place and that all related system and security policies are understood prior to initial software configuration.

The implementation team will document the Core System Design Plan components required to support the Cityworks implementation. The Core System Design Plan is developed in preparation for the configuration and implementation of Cityworks. This plan will include the following:

- **Network Requirements**
- **Hardware Requirements**
- **Peripheral Requirements**
- **Software Applications**
- **Internal Security**
- **DMZ**

Task 2.1: NapaSan Responsibilities:

- *NapaSan project manager assistance in scheduling IT review meeting.*
- *NapaSan Information System stakeholder attendance/participation in meeting.*

Task 2.1: Deliverables:

- *Core System Plan for Hardware, Software, and network configuration*

Task 2.1: Assumptions:

- *NapaSan will review and comment on all documentation in a timely manner.*

Task 2.1: Estimated Timeframe:

- *IT Review meeting and task deliverable are estimated to take 2-3 weeks to complete depending on NapaSan and Napa County availability*

GIS System Review

Our implementation team will meet with NapaSan's project management team, and Napa County IT & GIS staff to discuss the Esri GIS requirements for the Cityworks implementation. During this meeting, minimum GIS requirements will be explored to ensure a stable implementation for NapaSan. The goal is to ensure the GIS is in place and that all related system and security policies are understood prior to initial software configuration. In addition the GIS Model will require review and possible modification by NapaSan (via Napa County). Our implementation team will work with NapaSan to identify any shortcomings with the existing NapaSan GIS data, datamodel and Esri licensing. It will be the responsibility of NapaSan to meet and address all identified shortcomings.

Task 2.2: NapaSan Responsibilities:

- *NapaSan project manager assistance in scheduling GIS review meeting.*
- *NapaSan GIS stakeholder attendance/participation in meeting.*

Task 2.2: Deliverables:

- *Core System Plan for GIS*

Task 2.2: Assumptions:

- *NapaSan will review and comment on all documentation in a timely manner.*

Task 2.2: Estimated Timeframe:

- *GIS Review meeting and task deliverable are estimated to take 2-3 weeks to complete depending on NapaSan availability*

The Cityworks Configuration Document contains eleven main configuration categories. Each is identified below:

- **Domain Security –** a security structure and method of organization. The rest of the manual builds on this section; it should be done first.
- **Employee Hierarchy –** A list of all employees with login and domain information.
- **Work Orders –** Lists of all the primary activities each department handles.
- **Tasks –** Lists of all the tasks associated with the work orders.
- **Materials Hierarchy** – A list and organizational method for your work order materials.
- **Equipment Hierarchy** – A list and organizational method for your work order equipment.
- **Service Requests** – Details about all the service requests or calls that may come in.
- **Project Hierarchy** – Define any ongoing municipal and capital improvement projects.
- **Contractors List** – Details about contractors used for work activities.
- **Inspections** – A list of inspections completed against assets along with the information captured during the inspection.
- **Storeroom Configuration** – Details concerning the storeroom names, stock on hand and security.

Our team's Configuration Manager, will work closely with the NapaSan Project Manager to ensure that NapaSan understands the configuration documentation and data to be gathered. Our configuration team will take information provided by NapaSan along with the Esri geodatabase and configure the Cityworks "sandbox" installation that will be used during the kickoff meeting and configuration workshops.

Task 2.3: NapaSan Responsibility:

- *Configuration Document Review Meeting.*
- *Review and provide data.*

Task 2.3: Deliverables:

- *Configuration document with spreadsheets initially filled out from data supplied by NapaSan.*

Task 2.3: Assumptions:

- *NapaSan will provide data as identified in the Configuration Document and supporting spreadsheets.*
- *NapaSan will provide to Timmons Group an updated geodatabase of all assets covered within the scope of this project.*

Task 2.3: Estimated Timeframe:

- *Configuration Document completion is estimated to take 4-6 weeks to complete*

Task 3: Install Cityworks Server

Timmons Group will install the core Cityworks software in the NapaSan development environment (at Napa County). The intent of this installation is to meet the initial Cityworks implementation requirements which include initial system configuration and configuration customization. Timmons Group will work directly with the NapaSan Project Manager to verify that all core system components are installed and appropriately configured. Our implementation team will facilitate Cityworks software installation, set-up, and initial configuration. It is understood that there will be coordination effort required with Napa county during this and other tasks regarding system access, login credentials, etc.

The purpose of installing this software at an early stage in the project is two-fold: It establishes the core system that will later be configured and tested, and is the ideal platform for familiarizing NapaSan staff with the software as a sandbox for your use. From experience, Timmons Group has determined that it is important for potential end users to see the software prior to discussions about functional needs so that they have a basic understanding of the software's capabilities and limitations. This server will be linked with a copy of the NapaSan Esri GIS geodatabase. Timmons Group will generate an Installation Certification for NapaSan to sign off signifying this installation has occurred and is functioning within the NapaSan development environment.

Task 3: NapaSan Responsibility:

- *Provide a copy of NapaSan Esri geodatabase*
- *NapaSan's GIS resource*

Task 3: Deliverables:

- *The core Cityworks Server AMS software installed on NapaSan's development environment*
- *Installation Certification*

Task 3: Assumptions:

- *The NapaSan IT will have a development environment setup for Timmons Group to install Cityworks within*

Task 3: Estimated Timeframe:

- *The initial installation of Cityworks is estimated to require 2-3 weeks once the NapaSan's GIS data is received*

Task 4: Project Kickoff Meeting

Project team members and participating NapaSan Functional Group staff will participate in a Project Kickoff Meeting to be held for the purpose of introducing the project participants, to establish the roles and responsibilities of all Project Participants, validate NapaSan's goals and objectives, establish the lines of communication to be employed throughout the duration of the project, and to answer any questions NapaSan staff may have. The kickoff meeting shall be one half day in duration.

Task 4: NapaSan Responsibility:

- *NapaSan project manager assistance in scheduling pre-kickoff & kickoff meeting.*
- *NapaSan Information System stakeholder attendance/participation in pre-kickoff meeting.*
- *NapaSan key stakeholder attendance/participation in kickoff meeting.*

Task 4: Deliverables:

- *Project presentation and meeting minutes.*

Task 4: Assumptions:

- *NapaSan will provide a conference room appropriately sized for the number of participants.*

Task 4: Estimated Timeframe:

- *Project Kick-off meeting should occur approximately 4 weeks after the project has been initiated*

Task 5: Workshops

Our implementation team will conduct a series of workshops. These workshop meetings will focus on the following primary areas:

1) Asset Management requirements
    - best practices
    - condition scoring
    - criticality
    - asset lifecycle management
    - Risk assessment & risk management
    - Costs

2) Gather configuration data and workflows with the Functional Groups for:
    - asset categories
    - work order and inspection workflows
        i. employees
        ii. equipment
        iii. materials
        iv. prioritization
        v. dispatching
        vi. notifications
        vii. data to be collected
        viii. inspection criteria
    - Interfaces/integration
        i. Functional requirements
        ii. User stories
        iii. methodology
    - reporting
        i. Data required
        ii. Format
        iii. methodology
    - data migration identified in the RFP

The two days of workshops will be broken up as follows:

Day	Period	Who
Tuesday	Morning	Project kick-off, all stakeholders attend – not a workshop
Tuesday	Afternoon	Recycled water distribution/Biosolids
Wednesday	Morning	Wastewater collection
Wednesday	Afternoon	Wastewater treatment

These workshops are designed to establish and assess the Business Requirements, User Requirements, and Functional Requirements that must be considered when developing the Software Design and Configuration Plan (SD&C) as well as to design the Cityworks configuration and database necessary for implementation, the integrations and data conversion. It is expected that NapaSan will provide the facilities for the on-site workshops and coordinate staff attendance for all workshops.

For the first 30 minutes of the workshop our implementation team will conduct a brief software knowledge transfer session. The session will give the workshop attendees an opportunity to review and understand the software, potential impacts and changes in their daily business processes, and the purpose of adopting the new tools. It has been our experience that successful adoption of Cityworks is supported by continued, repeated exposure of the software during the workshops and review meetings. Timmons Group strongly believe that all levels of end users of the system need representation within these meetings.

During the workshops, our implementation team will analyze the various technological, operational, and organizational elements of NapaSan business. This will be an essential procedure in order to ensure the planned Cityworks implementation and expected system interfaces are capable of delivering the data needed to support the numerous complex operations and maintenance activities undertaken by the various departments. Timmons Group understands that NapaSan has already documented some of your workflows and that our effort will concentrate around ensuring Cityworks

is utilized to its full potential and that Timmons Group consider/review with NapaSan potential workflow edits as well as to document for the first time other workflows, to accomplish this.

In support of these efforts, our implementation team will analyze with each Functional Group the following critical elements:

- **Business Drivers** – The core functions that will benefit from the implementation of the Cityworks solution. These may include inventory, custom billing, time tracking, engineering planning and design, construction inspection and administration, operations and maintenance, inspections, regulatory compliance, customer service, disaster preparedness and emergency response, executive decision processes, etc.

- **Workflows** – Current departmental/Functional Group (internal and external) business processes and work flows that will either contribute to, or be replaced by, the planned Cityworks implementation. Key workflows that should be analyzed include, but are not limited to, inventory / data capture and maintenance, data distribution, data consumption, system planning and analysis, customer inquiry, reporting, etc.

- **Systems and Applications** – Information technology and process automation tools currently deployed and maintained by the City or Functional Group should be investigated and analyzed in terms of their ability to support the increased network traffic, data loads, and application maintenance requirements introduced by the planned Cityworks program. Additionally, existing business applications such as network modeling, mobile computing, customer relationship management, etc., should be investigated to determine the best manner by which to integrate with the planned Cityworks system.

- **Data** – Existing data sets (spatial and tabular) and reports maintained for the purpose of supporting the daily operation and maintenance of the departments and their associated processes must be inventoried and analyzed for the purpose of supporting the development of any required data conversion/migration/development plans.

- **Best Practices** – Established asset management best practices, as they relate to the NapaSan or Functional Group's current operational mandates, contrasted with where the various departments currently fall within the spectrum, should be established and benchmarked for the purpose of establishing the required system implementation path needed to guide NapaSan to its ultimate Cityworks deployment and adoption goals and objectives.

These core elements will provide our implementation team and the NapaSan with an understanding of the needs and challenges the departments will face as they move to implement Cityworks. The initial business process analysis provides our implementation team with a detailed look into the everyday processes marshaled by NapaSan staff. A primary objective of this task is for our implementation team to review and understand how Napasan conducts business and manages its assets. The ultimate goal is to provide knowledge to support and enable our implementation team to properly address the technological impacts of the system deployment and NapaSan in order to understand the technological impacts and the non-technological impacts related to business processes and workflows.

Task 5 : <u>NapaSan Responsibility:</u>

- *NapaSan will be responsible for assisting our implementation team's Project Manager with the development of a comprehensive agenda based on department and key staff. It will also be necessary for the participants in the workshops to review the SD&C Plan drafts and to provide data and discuss workflows identified in the workshops (Task 6).*
- *NapaSan's project manager assistance in scheduling workshops.*
- *NapaSan key stakeholder for each Functional Group attendance/participation in workshop*

Task 5: <u>Deliverables:</u>

- *Workshop meeting minutes.*

Task 5 : <u>Assumptions:</u>

- *NapaSan will provide a conference room appropriately sized for the number of participants. Critical NapaSan staff will attend workshops as defined by the configuration workshop agenda.*

Task 5 : <u>Estimated Timeframe:</u>

- *Functional Group workshops will occur immediately following the project kick-off and will follow the table detailed within Task 5.*

Interfaces with Other Systems

During the configuration workshops, Timmons Group will identify the optional task interface requirements between each system identified in the RFP for integration with Cityworks (Task 8). Cityworks customers are free to use the Cityworks data structures to build interfaces to other databases such as Customer Information Systems, Financials Information Systems, Human Resource Management Systems, fleet management, and related business applications. The Cityworks licensing policy does not prohibit this in any way.

Access and utilization of this data in Cityworks is unencumbered for the client's internal usage for the following uses:

- Data conversion and data migration into or out of Cityworks.
- Internal application development for add-ons to Cityworks or for an application that is complementary to Cityworks, as long as the application is not a reverse engineering of Cityworks
- The development and maintenance interface from Cityworks to citizen web pages for information and service request systems. The licensee has access to the complete documentation of all Cityworks data structures.

Task 6: System Design and Configuration (SD&C) Plan

Once all required information regarding the current work order management, service request, and inspection processes are collected and organized, our implementation team will work together to analyze and document the current status of the primary components of the business process. Specifically, these components will be analyzed:

- **Current IT Systems and Applications –** This includes relevant computer, network and peripheral infrastructure that the Cityworks system would utilize. This also includes any existing software applications that the new system might need information from, or need to provide information to (e.g., financial, assessment, codes) and security requirements**.**
- **Current Data Sets –** Focus on data and best practices for Cityworks. Specifically, this would include the work order, service request, and inspection documentation and data. The Esri geodatabase that will be mapped to Cityworks Timmons Group expect limited if any, modification will be necessary.
- **Current Workflows –** Define and model Work orders, Service Requests, Inspections, Interface Communication, and migration of existing data leveraging Cityworks and our team's best practices.
- **Required Outputs –** The required outputs of the current business process will be reviewed. Outputs can take many forms, and may include: reports, form letters, e-mails, export files, and receipts.
- **Required System Interfaces –** The RFP identifies the need for the Cityworks system to interface with Esri GIS, and optional various other systems. Our project team has reviewed the provided information and has provided details of our proposed integrations within Task 8.

Following the configuration workshops, our implementation team will develop a report that documents the "as-is" situation and puts forth the recommended, or "to-be" (future state), workflows of the new Cityworks system. The recommended changes will strive to enhance the efficiency of required tasks and follow industry best practices, as well as to enhance the satisfaction of the citizens/businesses being served. The resulting Software Design and Configuration (SD&C) plan will be the "floor plan" for the configuration of the Cityworks system.

Task 6: NapaSan Responsibility:

- *Review of draft SD&C's.*

Task 6: Deliverables:

- *SD&C Plan drafts*

Task 6: Assumptions:

- *NapaSan will review all documentation in a timely manner.*

Task 6: Estimated Timeframe:

- *The SDC plan will require approximately 8-12 weeks to complete.*

Task 7: Cityworks AMS Configuration

The goal of this task is to configure Cityworks based on the SD&C Plan and deploy in the NapaSan Test environment for review prior to final implementation. The implementation team will take the information gathered and documented and configure the Cityworks database. The configuration of Cityworks will be based on the Cityworks Configuration Document and the SD&C Plan developed from the onsite workshops.

Services for this task will include, but are not limited to:

- Work order or request types
- Work tasks for each work order type
- Employees and labor classifications in that department
- Inventory (material) types
- Major equipment types
- Existing datasets used or slated to be used in the work order or request process
- Samples of service request and work order printout forms
- System Administration
- Login, concepts, data model, viewing
- Print Templates
- Creating and managing call center activities
- Advanced aspects of call center
- Creating and managing problem hierarchy
- General Configuration Issues

Task7: NAPASAN Responsibility:

- *NapaSan project manager and key stakeholders for each Function Group, Weekly Progress Meetings*

Task 7: Deliverables:

- *Updated Cityworks Configuration Document and SD&C Plan.*
- *Configured software (Cityworks) deployed within NapaSan's Test environment*

Task 7: Assumptions:

- *Cityworks configuration will implemented in Timmons Group cloud environment. Key NapaSan staff will have full access to this environment for training and review.*

Task 7: Estimated Timeframe:

- *The configuration of Cityworks per the SD&C Plan will require approximately 8-12 weeks*

Task 8: Enterprise System Integrations (Interfaces)

NapaSan has identified 2 (two) existing systems deemed to be "critical" (as well as Esri's GIS) and three others deemed as being "desired" that are to be integrated with the new system and our recommended solution, Cityworks Server AMS. The "Critical" integrations being SCADA and CCTV, the optional integrations being Trakit, USA Earthnet 811 Utility and Linko. The concept of the enterprise system is to create interface points for systems to share appropriate information with other systems. Our team has extensive experience configuring software and systems leveraging Cityworks API's that include Service Request, Work Order, Inspections and metrics, Cityworks SDK, and existing interfaces for numerous customer billing, SCADA, Financial, Fleet Management, Billing, AVL, UDF, leak detection, etc. systems.

Timmons Group has developed and utilizes a Modified Agile methodology to successfully implement many heterogeneous systems integrations/interfaces. Our methodology is comprised of five (5) primary steps. The steps include Planning, Build, Training, Production Deployment, and Post Production System Review. These steps ensure that Timmons Group include everyone and every system of record in the development of detailed requirements for the design of the interface(s). Once the interfaces are developed, a rigorous testing plan will be executed. Upon successful completion of this User Acceptance Testing (UAT), the interfaces are ready for deployment. However, prior to the final production deployment, user training is performed for those impacted directly by the project.

- **Planning** – Our planning is comprised of a workshop(s) where Timmons Group engage our clients and iteratively work through the reasons for the integration, what data needs to flow back and forth (or sometimes in one direction), and how best from a technical perspective of how to achieve this integration (developing requirements). Timmons Group will then develop to these requirements, use cases/stories and design the necessary workflows that depict the transfer of data between systems. The workshop will typically result in the need to engage the target system vendor, either to procure items such as a database design/schema diagram up to and including engaging their assistance in designing and developing the integration itself. Some of this vendor interaction may

have already been established for items such as CCTV, Pavement Management, etc. via a formal or informal business relationship with Cityworks. If it has not, our proposal will reflect the appropriate level of effort required in our estimation to achieving the necessary planning required to move to the next step, building the integration.

- **Build** – In the Build phase of our integration process Timmons Group will develop sprints that are approximately 1 to 2 weeks in duration that iteratively reflect the use cases/stories and methodology developed during the previous Planning step. During these sprints our team will develop a *potentially deliverable component* of the integration. This may be something as basic as moving one data item back and forth successfully. Working within this accelerated timeframe, the team will be able to build only the most essential functionality. This methodology encourages the integration team (including client stakeholders) to prioritize the most essential features, focus on short-term goals, and gives our clients a tangible, empirically based view of progress. Because each integration may require multiple sprints, each iteration of work builds on the previous (incremental), often replacing/discarding some of the previous work as more is learned (iterative). During sprint execution the team develops code and automated tests simultaneously using techniques such as Test Driven Development (TDD), pair programming and continuous integration. Utilizing an Agile approach minimizes handoffs and phases as well as testing. Because the testing of the integration is integrated within our development methodology Timmons Group need only provide formal testing in regards to an overall system and integration test within the development environment. Once the interfaces are developed, a testing plan will be executed. Upon successful completion of this User Acceptance Testing (UAT), the interfaces are ready for deployment. However, prior to the final production deployment, user training is performed for those impacted directly by the project.

- **Training** – Our team then works with the appropriate stakeholders to train them both at the end user level and also to train one or more stakeholders in how the integration was developed and the management requirements to keep the integration working correctly.

- **Production Deployment** – After the integration has been developed (and tested throughout the development) Timmons Group move on to deploying the integration into your production environment.

- **Post Production System Review** – Once the integration is in production Timmons Group will work as a team with our client stakeholders to verify that the integration was successful against the requirements defined during the Planning step. Any identified problems will be addressed and corrected.

NapaSan has requested the creation of interfaces between Cityworks and the following:

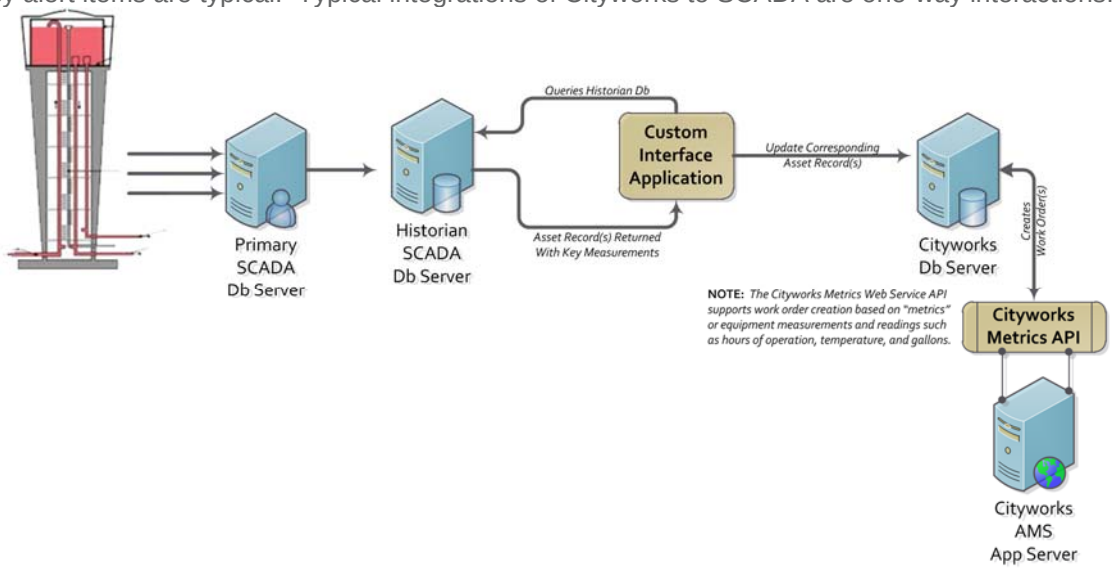
No.	System	Description	Data	Technology	Interface
Critical Systems for integration					
1	**Esri ArcGIS v.10.4**	Geographic Information System	Parcels, Streets, Infrastructure, images, etc.	MS-SQL Server and Web Services	Network
2	**x**	SCADA data historian	Monitoring data		Cityworks API's and/or OIS API's and or web services

3	CCTV				
Desired Systems for Integration					
4	**Trakit**	Manages all permitting, planning, licensing and inspections	Coordinates of permits, licenses, inspections, code enforcement to display on map	SQL Server; ArcGIS	Custom-built database views between Enterprise Geodatabase & Trakit SQL Database
5	**USA EarthNet 811 Utility**	Utility locate mapping requests	Service Requests and data back to public	MS-SQL Server and Web Services	Cityworks Service Request API
6	**Linko**	Compliance Tacking, FOG program and Hauled Waste Tracking	Coordinates of Linko Activities to Display on the Map	SQL Server; ArcGIS	Linko SQL Database to ArcGIS Datatype (SDE, Feature Class, etc.)

The concept of the enterprise system is to create interface points for users to share appropriate information with other users, without having the overhead of all the software packages for each application. Our team has extensive experience configuring software and systems leveraging Cityworks API's that include Service Request, Work Order, Inspections and Metrics API's, Cityworks SDK, and existing interfaces for Granite XP.

1) **GIS (Esri)** – There is no integration necessary as Cityworks® Server AMS directly read/write to the Esri geodatabase. Our team also expects a minimal amount of manipulation to the existing District geodatabase as the RFP states they will be doing the data manipulation work from various sources into Esri.

2) **SCADA -** Timmons Group has integrated with a number of SCADA systems such as Wonderware, HSQ, Citec and Data Flow Systems. The configuration workshops will identify the service request, work order, and inspection triggers and communication conduits between the two softwares, and will work with the historian server and integrate using the Cityworks Metrics API. The Timmons Team proposes to use a Service-Oriented Architecture (SOA) approach to integrate Cityworks with the existing SACADA application. Utilizing this approach services talk directly to other services and exchange data based on a loosely coupled concept. A set of orchestration tools connect the services and monitor the data exchanges. A typical Cityworks and SCADA integration will see a few fields of data collected by SCADA sent to Cityworks to generate work orders, items such as run time thresholds or emergency alert items are typical. Typical integrations of Cityworks to SCADA are one-way interactions.



a) Timmons Group will design and deliver the integration to perform and or address the following:
   i. Alarm history
   ii. Run times
   iii. Operation cycles
   iv. Vibration

b) Deliverables
   i. One up to 8 hour in duration, on-site workshop during Planning step per SCADA integration
   ii. 8 hours of remote meeting time to refine Planning step requirements per SCADA integration
   iii. Integration design document, one per SCADA integration
   iv. Necessary sprints required to develop the integration per SCADA integration
   v. User Acceptance Testing plan reflective of Planning step requirements per SCADA integration
   vi. End user training per SCADA integration
   vii. Integration management training per SCADA integration
   viii. Deployment to production environment per SCADA integration
   ix. Post production review/mitigation per SCADA integration

c) Assumptions
   i. All development work to occur within client provided development environment unless specifically deemed otherwise
   ii. Client to broker communication, design efforts, etc. with target integration software system (non Cityworks side)
   iii. The Integration Design developed during the Planning step will have 1 (one) 5 business day in duration review period by the client
   iv. Client will sign off on integration requirements at the conclusion of the Planning step
   v. User Acceptance Testing will be reflective of the agreed upon Planning step documentation
   vi. End user training will be reflective of the user requirements as defined by the Planning step only
   vii. Integration management training will be limited to the knowledge necessary to ensure the proper configuration of the designed integration, not for programming, executing modifications, etc.
   viii. Post Production review mitigation will be limited to
      1. Those items within direct control by the Timmons Group
      2. Those items reflective of a failure to achieve the agreed upon requirements as defied by the Planning

3) **CCTV -** Timmons Group has integrated multiple PACP compliant CCTV software packages with a number of Cityworks implementation clients. The configuration workshops will identify the necessary data linkages between CCTV and Cityworks. The existing Cityworks Interface will be utilized for the integration. The Cityworks CCTV Interface links directly to the PACP-compliant (Pipeline Assessment and Certification Program) closed circuit television (CCTV) inspection system. The interface is a bidirectional application allowing users to pass data from the Cityworks database to a PACP database and back again

   a. Timmons Group will design and deliver the integration to perform and or address the following:
      i. Cross Reference Key: CCTV uses a unique identifier (ID) for each asset. The CMMS will cross reference the asset registry tag numbering system ID with the CCTV ID to allow the CMMS to view related asset data.
      ii. Work Request: Initiate work requests for noted issues identified by CCTV inspection.
   b. Deliverables
      i. One up to 8 hours in duration, WebX based workshop during Planning step
      ii. 16 hours of remote meeting time to refine Planning step requirements
      iii. Integration design document
      iv. Necessary sprints required to develop the integration
      v. User Acceptance Testing plan reflective of Planning step requirements
      vi. End user training (4 hours via WebX)
      vii. Integration management training (4 hours via WebX)
      viii. Deployment to production environment
      ix. Post production review/mitigation
   c. Assumptions
      i. All development work to occur within client provided development environment unless specifically deemed otherwise
      ii. Client to broker communication, design efforts, etc. with target integration software system (non Cityworks side)
      iii. The Integration Design developed during the Planning step will have 1 (one) 5 business day in duration review period by the client
      iv. Client will sign off on integration requirements at the conclusion of the Planning step
      v. User Acceptance Testing will be reflective of the agreed upon Planning step documentation
      vi. End user training will be reflective of the user requirements as defined by the Planning step only

vii. Integration management training will be limited to the knowledge necessary to ensure the proper configuration of the designed integration, not for programming, executing modifications, etc.
viii. Post Production review mitigation will be limited to
1. Those items within direct control by the Timmons Group
2. Those items reflective of a failure to achieve the agreed upon requirements as defied by the Planning step

4) **Trakit** - Timmons Group has worked extensively with several community development software systems and their ability to integrate data with the Cityworks environment varies widely, as well as the methodology to perform the integration. The configuration workshops will identify the communication conduits between the two systems either through the Cityworks API, web services and/or batch processes.
a. Timmons Group will design and deliver the integration to perform and or address the following:
i. Display permitting, planning projects, licensing and inspection activities in the Cityworks mapping application
b. Deliverables
i. One planning meeting via WebEx, up to 2 hours in duration
ii. Time to refine requirements, design views, and plan access the Trakit, Cityworks, and GIS systems,
iii. Integration design document
iv. Testing of functionality according to specification
v. Demonstration of functionality before deployment
vi. Integration management training
vii. Deployment to production environment
viii. Post production review/mitigation
c. Assumptions
i. GIS is capable of supporting desired functionality
ii. All development work to occur within client provided development environment unless specifically deemed otherwise
iii. Client to broker communication, design efforts, etc. with target integration software system (non Cityworks side)
iv. The Integration Design developed during the Planning step will have 1 (one) 5 business day in duration review period by the client
v. Client will sign off on integration requirements at the conclusion of the Planning step
vi. Integration management training will be limited to the knowledge necessary to ensure the proper configuration of the designed integration, not for programming, executing modifications, etc.
vii. Post Production review mitigation will be limited to
1. Those items within direct control by the Timmons Group
2. Those items reflective of a failure to achieve the agreed upon requirements as defied by the Planning step

5) **USA EarthNet 811 Utility -** Timmons Group has worked with numerous utility locate request systems in the past. The Cityworks API's will be utilized to pull the appropriate information from USA EarthNet 811 Utility and send this information into Cityworks where it will be utilized to create service requests. If the API is not an option Timmons Group have integrated other 811 systems via a preformatted email.
a) Timmons Group will design and deliver the integration to perform and or address the following:
i. Service Request data received from USA EarthNet 811 Utility will auto populate the necessary data fields within Cityworks service request templates
b) Deliverables
i. One up to 4 hours in duration, WebX based workshop during Planning step
ii. 16 hours of remote meeting time to refine Planning step requirements
iii. Integration design document
iv. Necessary sprints required to develop the integration
v. User Acceptance Testing plan reflective of Planning step requirements
vi. End user training (4 hours via WebX)
vii. Integration management training (4 hours via WebX)
viii. Deployment to production environment
ix. Post production review/mitigation

c) Assumptions
   i. All development work to occur within client provided development environment unless specifically deemed otherwise
   ii. Client to broker communication, design efforts, etc. with target integration software system (non Cityworks side)
   iii. The Integration Design developed during the Planning step will have 1 (one) 5 business day in duration review period by the client
   iv. Client will sign off on integration requirements at the conclusion of the Planning step
   v. User Acceptance Testing will be reflective of the agreed upon Planning step documentation
   vi. End user training will be reflective of the user requirements as defined by the Planning step only
   vii. Integration management training will be limited to the knowledge necessary to ensure the proper configuration of the designed integration, not for programming, executing modifications, etc.
   viii. Post Production review mitigation will be limited to
      1. Those items within direct control by the Timmons Group
      2. Those items reflective of a failure to achieve the agreed upon requirements as defied by the Planning step

6) Linko - Timmons Group will take desired information, gathered from workshops to develop specific user functional needs/requirements, from Linko and develop the integration to display the desired information on a Map in Cityworks. This integration will utilize developed SQL code and ESRI geoprocessing tools to import delimited point values:

a. Update a layer in GIS that is fed into Cityworks to show Linko work activities as points on a Map Cross Reference Key: CIS issues a unique identifier for each asset. The CMMS will cross reference the NapaSan asset registry tag numbering system ID with the Service Suite ID to allow the interface of each system to view related asset data managed by each system.
   i. New Service: The CMMS will require interface with Service Suite to open a form to complete when new service installation is performed. The form will interface the tables and fields of CMMS and Service Suite to allow NapaSan to complete the form and update each system's database.
   ii. Work Request: Initiate work requests for customer complaints.

b. Deliverables:
   i. One up to 8 hour in duration, on-site workshop during Planning step
   ii. 40 hours of remote meeting time to refine Planning step requirements
   iii. Integration design document
   iv. Necessary sprints required to develop the integration
   v. User Acceptance Testing plan reflective of Planning step requirements
   vi. End user training
   vii. Integration management training
   viii. Deployment to production environment
   ix. Post production review/mitigation

a) Assumptions
   i. Timmons will only be developing points for display on a map. The user will not be able to interact with inspection results or work activities from Linko. To view these activities, the user will have to login to Linko and view the information.
   ii. GIS is capable of supporting desired functionality
   iii. All development work to occur within client provided development environment unless specifically deemed otherwise
   iv. Client to broker communication, design efforts, etc. with target integration software system (non Cityworks side)
   v. The Integration Design developed during the Planning step will have 1 (one) 5 business day in duration review period by the client
   vi. Client will sign off on integration requirements at the conclusion of the Planning step
   vii. User Acceptance Testing will be reflective of the agreed upon Planning step documentation
   viii. End user training will be reflective of the user requirements as defined by the Planning step only

ix. Integration management training will be limited to the knowledge necessary to ensure the proper configuration of the designed integration, not for programming, executing modifications, etc.

x. Post Production review mitigation will be limited to
   1. Those items within direct control by the Timmons Group
   2. Those items reflective of a failure to achieve the agreed upon requirements as defied by the Planning step

Task 8: NapaSan Responsibility:

- *Gather information for integration needs requirements.*
- *Additional meetings as required*

Task 8: Deliverables:

- *Workflow Diagram and Application Design Documents*
- *Configure integration to Esri GIS*
- *Tested Interfaces*

Task 8: Assumptions:

- *NapaSan will provide a conference room appropriately sized for the number of participants and review all documentation in a timely manner.*

Task 8: Estimated Timeframe:

- *The completion of the integrations to Cityworks will require approximately 6-10 weeks per integration*

Task 9: Data Migration/Conversion

One of the key objectives of the NapaSan is to migrate the legacy data from existing systems, to Cityworks. The existing systems are Hansen, MP2 and a MS-Access database. Inherent to that process is establishing a strategy to deal with the data that is being managed in what will become a legacy system. This task specifically addresses the datasets and systems that are slated for conversion into the proposed Cityworks solution.

Data Migration Approach

The legacy datasets and systems targeted for conversion possibly span multiple database schemas, database versions and even database formats, which implies that each will be handled in a unique way. While this is true in many ways, the fundamental approach to successfully migrating data from one system to the other is, in fact, the same.

Coordination

As is evident by this proposal, the migration effort is just one facet of the system implementation and cannot be undertaken independently. The foundation of the proposed Cityworks solution needs to be in place in order for the data migration to be performed, but even then the conversion may drive specific configuration items and changes. Coordination and communication between the project team members will be an ongoing element of the conversion process that starts with project kickoff and terminates with a successful migration of all data into the production environment.

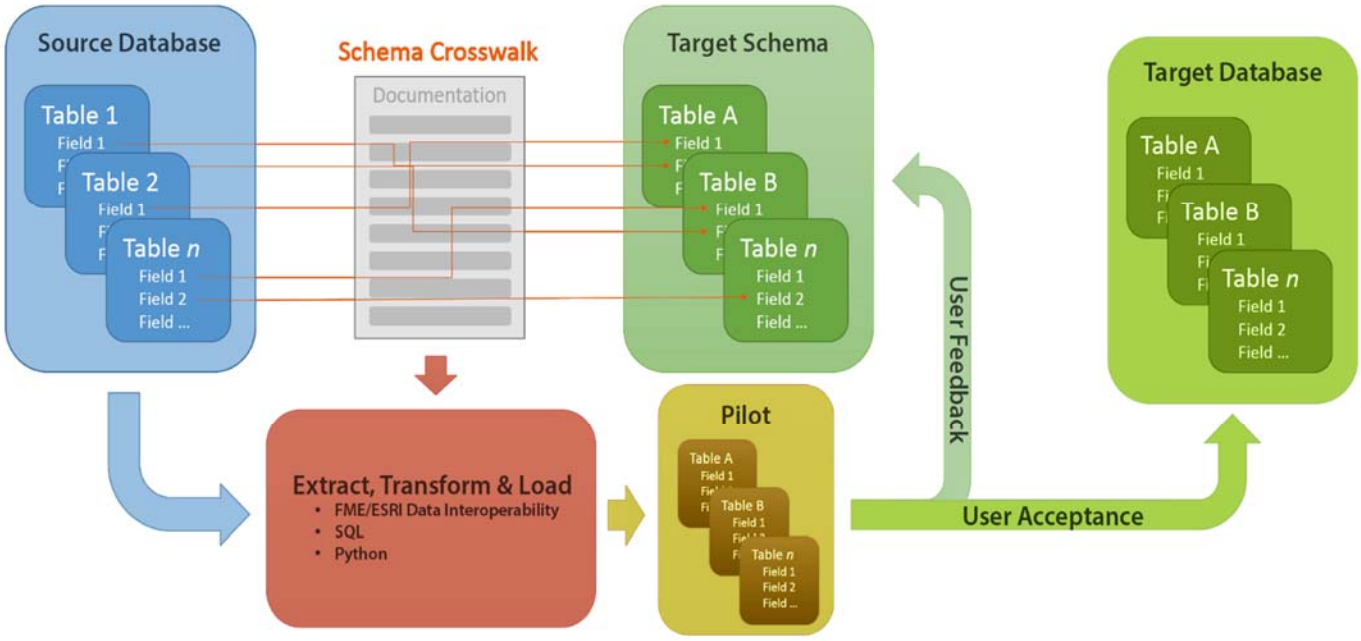
Orientation Workshop

The conversion process of each legacy system will include a workshop wherein the proposed project team will meet with appropriate NapaSan staff to review the specific implementations. The discussions will allow the project team to gain an understanding of how the applications are being used, what data has been recorded. At the same time, details associated with the data required as part of the conversion process will be reviewed, documented and approved.

During the workshops, the project team will also initiate the process of gaining access to the underlying database and will work with NapaSan staff to gather any available documentation (i.e., system specifications, entity relationship diagrams, etc.) specific to the software and specific versions being reviewed. This information will help to streamline the subsequent navigation and interpretation that will be necessary to perform the migration.

Database Schema Crosswalk

Perhaps the most critical task in a data conversion effort is performing a crosswalk of the source and target schemas to identify and document how various objects between the two systems are related, resulting in a documented "data map" that will guide the migration process.



While some of the source systems are well known commercial software packages, the software companies do not typically make database diagrams and workflows publicly available. Data structure even within commercial systems can vary across versions and, more importantly, each implementation can be setup differently based on workflow or data requirements. More data and custom solutions may have an even wider range or completely unknown schema. As such, the discussions and documentation resulting from the workshops will be critical to the completion of a highly detailed system crosswalk. Throughout the process, additional NapaSan input or clarification may be solicited as needed and is vital to ensuring that the resulting data mapping will reflect an accurate foundation for all subsequent activities.

Translation Scripting

Following the schema crosswalks, the project team will develop a series of processes to facilitate the actual migration of the source system data into Cityworks. Depending on the complexity and volume of the source data, the process may be a mix of manual and a scripted solution, but will be established in a manner to ensure repeatability. The scripted solutions will be tailored to each specific data conversion effort and may range from native SQL Server scripts to third party migration tools, but will ultimately follow a pattern referred to as extract, transform and load (ETL). The ETL approach is common within the GIS industry, but applies much more generically to moving data between systems. The ETL process will be designed as a one-time process that will result in data migrated into a development Cityworks database.

> *NOTE: (1) The project team will be performing a data translation, but will not be completing any data generation as part of this process. (2) While the scripts are being developed and data is being translated into development, NAPASAN departments can use the source systems as always. At the time the data is ready for production conversion, the source systems will need to be taken offline or transitioned into a read only state.*

Multi-Staged Execution

Once the scripts are developed, the project team will test our methodology through a 3 stage process. This process is designed so that after the first data migration run (Draft) Timmons Group will meet with the NapaSan to review the data, note issues and errors, edit our scrips and process, and then repeat the process. The 3 stages will be:

1) *Draft Data Migration*
2) *Pre-Final Data Migration*
3) *Final Data Migration*

Although the details underlying each conversion may vary substantially, automation is assumed based on the volume indicated by the NapaSan within the RFP. As part of the process, the project team will be analyzing and evaluating the

output to identify potential anomalies that are not sufficiently systematic to be detected or trapped by the scripts. The approach to addressing those anomalies will be documented and discussed with the NapaSan.

Validation & Quality Control
With the conversion process completed against a subset of the data, the project team will perform a series of validation and quality control processes to verify a successful migration. This task will largely focus on back-end analytics that compare data in both the source and target systems, but will also consist of front-end testing prior to release to the NapaSan for testing. Results from this quality control process will be documented and shared with the NapaSan.

Acceptance Testing
In contrast with the validation and quality control phase, which is based on a review by the project team, the acceptance testing phase offers NapaSan staff the opportunity to review the data within the context of the proposed Cityworks system in contrast with the information contained in the source systems. The acceptance testing places more emphasis on the front-end testing, wherein users will interact with, interrogate and visualize data through the Cityworks interface. Feedback will be incorporated into a revision process that will guide modifications to the scripts and processes that initially drove the conversion.

Upon completion of the testing process and acceptance by the NapaSan, the project team will prepare for the production conversion, which will coincide with the release of the proposed system and the retirement of the legacy solutions.

Production Conversion
The production conversion effort will encompass the migration of the full data sets from each of the source systems into Cityworks. The processes established through the crosswalk and encapsulated in the refined translation scripts will be executed as part of the production release management process. The conversion team will coordinate with the NapaSan to transition the source systems into a static state to ensure that no further data entry occurs that could result in data loss. The automated aspects of the conversion will be applied followed by any documented manual processes that are required to address data anomalies.

The production conversion will wrap-up with a coordinated, but truncated, validation sufficient to verify a successful data migration. Based on the preceding step-wise approach with multiple points of quality control and an ongoing feedback loop, the final conversion process is anticipated to adhere to the expectations of the project team and the NapaSan and will result in a more consolidated system with centralized access to a wealth of historic information.

Task 9: NapaSan Responsibility:
- *Gather information for data migration requirements*
- *Additional meetings as required*

Task 9: Deliverables:
- *Orientation Workshop*
- *Database Crosswalk Schema Document/Data Conversion Plan*
- *Migrated Data*

Task 9: Assumptions:
- *Existing data is attached or references a uniquely identified asset, this can be referenced to a unique asset within GIS*
- *NapaSan will provide a conference room appropriately sized for the number of participants and review all documentation in a timely manner.*

Task 9: Estimated Timeframe:
- *The conversion of the legacy data will require approximately 8-12 weeks*

Task 10: Configuration Review Meetings

The implementation team will conduct multiple (see schedule) webinar review workshops of the Cityworks configuration to gather feedback from the Functional Groups. Review workshops will cover the administrative configuration, system tools (service requests, work orders, and inspections), data loading/data migration, and interface.

Task 10: NapaSan Responsibility:
- *Configuration Review Meetings.*

Task 10: Deliverables:
- *Configuration meeting minutes and updated Cityworks Configuration Document and SD&C Plan.*

Phase 1, Task 10: Assumptions:

- *NapaSan will ensure attendance by staff and provide review comments in a timely manner.*

Phase 1, Task 10: – Estimated Timeframe:

- *The Configuration Review meetings will require approximately 1 day per review*

Task 11: Install Cityworks Server

Our implementation team will work with NapaSan/Napa County IT staff to install and configure the Cityworks software on the production environment and migrate the Cityworks configuration from the development environment. Our implementation team will work directly with the NapaSan's Project Manager to verify that all core system components (servers, clients, RDBMS, networking devices, and supporting software programs) are installed and appropriately configured. Our implementation staff will facilitate Cityworks software installation, set-up, and configuration.

Task 11: NapaSan Responsibility:

- *Executed agreement for Timmons Group hosting services for Cityworks installation and configuration.*
- *NapaSan Information Systems resources as required for software installation*

Task 11: Deliverables:

- *Cityworks configuration files migrated from the Timmons Group development environment.*

Task 11: Assumptions:

- *NapaSan IT Department will ensure that software, hardware, and network connectivity meets Cityworks implementation specifications as specified in the Core System Design Plan.*
- *NapaSan IT staff will be available to assist our implementation team during Cityworks installation.*

Task 11: Estimated Timeframe:

- *The installation of Cityworks in the NapaSan's Test environment will require approximately 1 week*

Task 12: Develop Acceptance Criteria

The implementation team will work with NapaSan to develop Acceptance Criteria. Acceptance Criteria objectives shall remain consistent with the application functionality detailed in the System Design and Configuration Plan and Application Design Document (for enterprise interfaces).

Task 12: NapaSan Responsibility:

- *Review and comment on Acceptance Criteria.*

Task 12: Deliverables:

- *Acceptance Criteria.*

Task 12: Assumptions:

- *NapaSan will review all documentation in a timely manner.*

Task 12: Estimated Timeframe:

- *The development of the Acceptance Criteria will require 1 week*

Task 13: Report Development

During our workshops and review meetings with each Functional Group, Timmons Group will identify the reports that are critical to NapaSan operations and leverage existing reports when it makes sense or create new reports as necessary. Our implementation team will use a four-step approach to meet NapaSan immediate reporting needs and ensure NapaSan will be self-sufficient to create your own reports in the future.

1. **Catalog Existing Reports –** Our configuration team will work with the NapaSan to identify and catalog and prioritize all reports.
2. **Create Identified Reports** – Our implementation team has experience creating both Crystal and SQL reports and will develop and modify reports as necessary.
3. **Ad-Hoc and Crystal Server Report Training** – Our implementation team will train the designated NapaSan report writers on:
    - how to best leverage the MyCityworks website
    - Developing Ad-Hoc reports
    - The process of developing additional Crystal reports (not Crystal Reports training). This will be as part of the Admin training.

4. **Report Training Support –** Our implementation team will train NapaSan staff on creating reports for Cityworks as well as support hours for creating additional reports after Go Live.

Task 13: NapaSan Responsibility:

- *NapaSan will be responsible for assisting our implementation team with the generation of a comprehensive catalog of existing reports.*
- *Review of reports once designed and configured*

Task 13: Deliverables:

- *Modification and development of reports based on a total budgeted allotment of 64 total hours.*

Task 13: Assumptions:

- *NapaSan will designate a report writer/s who will work with our implementation team to generate the catalogued list of reports, review reports developed by our implementation team, and be trained on ad-hoc and leveraging Crystal for Cityworks report creation (not Crystal Reports training).*
- *Timmons Group has applied 64 hours to accomplish the creation of new reports as information provided to make a definitive LOE calculation is not possible at this time.*

Task 13: Estimated Timeframe:

- *The development of reports will require approximately 8-10 weeks*

Task 14: Onsite Training

During each onsite meeting (kickoff, workshops, configuration review, etc.) our implementation team will consistently expose NapaSan staff to Cityworks and basic workflows within the software. This incremental training augments the training performed after final configuration. Our implementation team, in conjunction with NapaSan's Project Manager and key stake holders, will devise a training plan specific to your environment and data. The approach to developing this plan is detailed below.

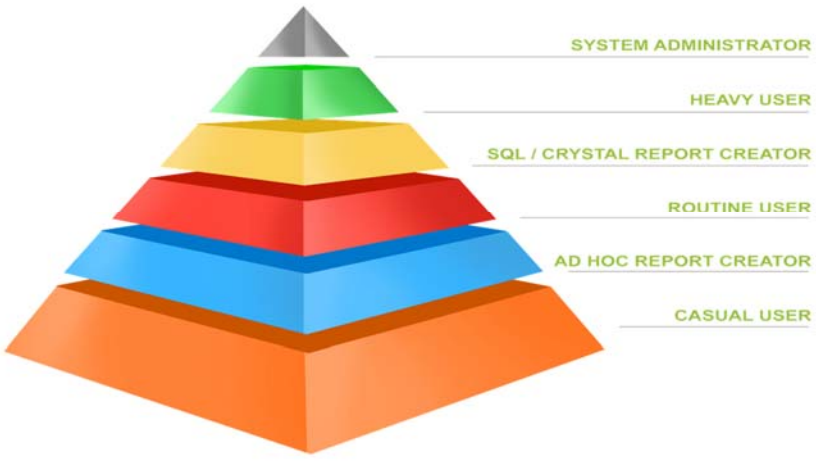
Our training plans are unique to each Cityworks implementation client and are designed around each client's unique configuration. During each onsite meeting (kickoff, workshops, configuration review, etc.) our Team intentionally exposes NapaSan staff to Cityworks and basic workflows within the software. This does not replace but augments the training performed after final configuration.

Our implementation team, in conjunction with NapaSan's Project Manager and key stake holders, will devise a training plan specific to NapaSan's environment and data. A pro-active training plan will ensure that NapaSan staff is equipped to undertake the system utilization and maintenance tasks immediately upon receipt of the system.

The training plan will include:

- Product training curriculum descriptions
- Listing of instructors
- Training Materials
- NapaSan responsibilities
- Schedule

This training plan will be used as a guide—but may be modified when necessary to support the goals and techniques of your staff resources.



Cityworks training is modular. Students attend those sections that are relevant to the type of work that they are performing. All courses include relevant materials and sample data. NapaSan

will need to identify who will be trained based upon the criteria and needs that will have been identified during the Configuration Workshops.

Training will be developed for the following user types (along with the Casual User and Report training identified earlier in the proposal):

- Routine User – Staff who will have the ability to update a request/work order after the crew has completed their work
- Heavy User – Staff who will create work orders, schedule work orders, create PM's, maintain the parts, create reports and generally will have the ability to use the whole system based on their security level
- System Administrator – Staff who have full system access and be responsible for the daily operations and maintenance of the Cityworks environment

It is assumed that NapaSan will provide the training facility including computers and a high-resolution computer screen projector. Coming into training, the users will need to possess basic functional knowledge of Personal Computers and Windows.

Training Module	Course Description	Duration	User Group Level	Course Prerequisites
Introduction to Cityworks	Cityworks® Introduction. Course is designed to give an overview of Cityworks functionality from an end user's point of view. Users will learn basic operations within ArcMap, the Cityworks toolbar and functions, along with the creation of Service Requests and Event Layers.	Ongoing during Workshops and Configuration Reviews	Casual Group Users	N/A
Cityworks Report Creating and Writing	Cityworks® Reporting with Crystal. Expose students to the Cityworks Report Engine to produce concise summary reports including Ad Hoc Reports, Predefined Reports, and Budget Reports. Cover Crystal Reports basics; becoming familiar with the tool bars and basic functionality. Students will work hands-on to create basic Crystal reports.	4 hours each class	Ad Hoc Report Creator and Crystal Report Writer	N/A
Service Requests	Cityworks® Service Requests Creating and processing Service Requests. Adding labor, submitting, searching, canceling, closing, combining, geo-locating and reports. Associating to projects and work orders.	4 hours each class	Routine and Heavy Users	Intro to Cityworks
Work Orders	Cityworks® Work Orders Creating and processing Work Orders and Tasks. Adding labor, material, and equipment. Submitting, searching, canceling, closing, scheduling, repeating, geo-locating and reports. Associating to projects and service requests.	8 hours each class	Routine and Heavy Users	Intro to Cityworks
Designer and System Administration	Cityworks® Designer and System Administration Covers system and database administration issues such as software installation, user accounts, security, code table creation, work order and service request templates and resource (labor, material, equipment) hierarchies, table creation, and permits. Includes a review for GIS personnel as well; covers items needed to successfully manage the setup and maintenance of the GIS for Cityworks® use.	8 hours each class	System Administrators	ArcGIS & Intro to Cityworks

Our implementation team assumes that NapaSan will be able to provide the necessary training facilities to conduct onsite training. Cityworks training is modular. Students attend those sections that are relevant to the type of work that they are performing. All courses include relevant materials and sample data. Our implementation team will provide training based on the requirements set forth in the training plan. NapaSan will need to identify who will be trained based upon the criteria and needs that will have been identified by this point.

Task 14: <u>NapaSan Responsibility:</u>

- *Assist in development and review of a training plan .*
- *IT Staff & identified Administrator Training*
- *Attend training*

Task 14: <u>Deliverables:</u>

- *Training Plan and Training Documentation*
- *Conduct Administrator Training*
- *Conduct End-user Training per Training Plan*

Task 14: <u>Assumptions:</u>

- *NapaSan will provide a conference or training room appropriately sized for the number of participants.*
- *NapaSan will ensure attendance by identified staff.*
- *NapaSan staff attending training should have basic functional knowledge of computers and the windows operating system.*

Task 14: Estimated Timeframe:

- *Training will require approximately 2-3 weeks*

Task 15: Acceptance Testing

Prior to Go-live there will be a thirty (30) day acceptance testing period (the acceptance period is flexible based on input from the City's Project Manager). During this period NapaSan will test the Cityworks implementation and identify issues and opportunities. The Testing Plan to be developed and managed by GHD will frame and guide NapaSan through the testing process. Timmons Group will mitigate edits and/or changes to the Cityworks Server AMS configuration as deemed necessary by the testing.

Task 15: NapaSan Responsibility:

- *NapaSan Project Manager will work with staff to implement the Testing Plan .*

Task 15: Deliverables:

- *Testing Remediation.*

Task 15: Assumptions:

- *NapaSan will be prepared to work through the Testing Plan and complete within a thirty (30) day period.*

Task 15: Estimated Timeframe:

- *The configuration remediation will requires approximately 2-4 weeks*

Task 16: Final Product Configuration

Our implementation team will conduct the final product configuration based on the System Design and Configuration Plan and Testing and results of the acceptance testing. Our implementation team will provide documentation for the key aspects of this project and Cityworks components. Proposed documentation is summarized below:

- **Cityworks Configuration Document** – Early on, our configuration team with NapaSan input, will develop a Cityworks Configuration document that is maintained through the life of the project.
- **Project Management Plan** – Our Team will develop and maintain a project plan that includes the scope of project services (and any changes), budget, schedule, risk management and communication approach.
- **Cityworks® Server Software** – Azteca Systems, Inc. provides standard documentation for the latest product release. Separate documentation is provided for system administration and end users.
- **SD&C Plan** – Timmons Group will provide a copy of the plan resulting from the review, analysis and documentation of the organization and its current workflows, data sets, IT system and applications, system interface needs, output requirements, and public access and service request needs.
- **System Integration and Data Conversion specific documentation.**
- **Training Materials** – Timmons Group will provide a copy of the training plan and all training documents used during casual user, routine user, heavy user, ad-hoc reporting, management, and system administrator training.
- **Testing and Acceptance Plan** – Timmons Group will prepare and deliver a copy of the test plan and test results report to be used for system certification and acceptance by NapaSan.

Task 16 : NapaSan Responsibility:

- *Final review and acceptance of configuration (40 FTE hours)*

Task 16: Deliverables:

- *All project documentation developed to date.*

Task 16: Assumptions:

- *NapaSan will receive all documentation in digital format.*

Task 16: Estimated Timeframe:

- *The final configuration of Cityworks per the SD&C Plan will require approximately 3-6 weeks*

Task 17: Go-Live and Project Close Out

Having successfully completed all system upgrades, testing/acceptance procedures, production environment initialization, and Go-Live preparation tasks specified above, the system is deemed prepared for Go-Live. Once end-user access has been configured/re-directed to the newly initialized production environment, the system is deemed to be in "Live" status. NapaSan Cityworks users will now be executing work management tasks in a live configured Cityworks production environment. After sixty (60) consecutive days of initialization of the production environment, NapaSan shall generate a certificate signifying the Cityworks application functionality and database configuration is operational in a "Live" production capacity. NapaSan's Project Manager shall sign said "Go-live Certificate" and submit it to Timmons Group.

In addition Timmons Group will deploy the most recent version of Cityworks available at time of Go-Live, unless there is a technical reason resulting from known reasons not to deploy most recent and/or implementation items dependent on a fixed version during the project. Timmons Group will apply all upgrades and software patches to the production version of Cityworks at the time of Go-Live.

The following will be deliverables of this task:

1) Go-Live and Stabilization Plan – detailed task plan including a readiness checklist and resource assignments to support moving the Cityworks software from test to production environments.
2) Technical Operations manual – detailed task plan including a readiness checklist and resource assignments to support moving the Cityworks software from test to production environments, including a data load, conversion plan and a contingency plan in the event that Go Live should fail
3) End User Manual – online or hard copy documentation that supports NapaSan specific use of the software and provides guidance for maintenance and configuration activities

Task 17: NapaSan Responsibility:

- *Identify any issues in system and work with configuration team to modify as necessary.*

Task 17: Deliverables:

- *Last minute configuration and document modifications.*
- *Go-Live & Stabilization Plan*
- *Technical Operations Manual*
- *End user manual*
- *Configured licensed Cityworks software in Production Use*

Task 17: Assumptions:

- *Work through the project portal to resolve and issues.*

Task 17: Estimated Timeframe:

- *Go-Live and project close-out will require approximately 2-3 weeks*

Task 18: Post Go-Live Support

On-Site Coaching

Our team will provide three days (24 hours) of on-site assistance for the users in their day-to-day activities in using the Cityworks software. Once the software is on-line, the configuration staff will be on-site to assist users as they encounter day-to-day transactions. The purpose for this is to work with users on an individual basis as they use Cityworks in their daily duties to discover and resolve configuration problems, training lapses or other issues that are keeping users from getting the most from the software.

Ad-Hoc Support (Stabilization Services)

Once the system has been rolled out and is being used, our team will provide 80 hours of remote and on-site ad-hoc support to address any configuration, implementation, or software installation matters that may arise. For example, these might include the redesign of printout forms or changes in the content of the work management portion of the Cityworks® Server AMS database. NapaSan will have one year to utilize the remote support by department or functional group for the services provided.

Task 18: NapaSan Responsibility:

- *Identify any additional functionality, reports, etc. desired and communicate this to the Timmons Group*

Task 18: Deliverables:

- *24 hours of on-site coaching for functional groups*
- *80 hours of Ad-hoc support for functional groups*

Task 18: Assumptions:

- *Work through the Timmons Group PM for ad-hoc support.*

Task 18: Estimated Timeframe:

- *Go-Live is one week*
- *Ad-hoc is TBD*

Year #1 Software

Timmons Group will deliver and install the Cityworks Server AMS software per the tasks above. Year #1 software payment will be due upon project initiation between NapaSan and Timmons Group. Software to be delivered and installed will be subject to the quote from Cityworks as well as subject to the licensing agreement to be signed between NapaSan & Cityworks (Azteca Systems, LLC).

ATTACHEMENT B:

Cost A : Software		
#	**Description**	**Price**
	Provide Software Maintenance contract for 5 years, renewable after that term in annual increments:	
	Year #1 (33% discount) – payable to Timmons Group	**$ 40,000.00**
	Year #2 (33% discount)	$ 40,000.00
	Year #3 (17% discount)	$ 50,000.00
	Year #4	$ 60,000.00
	Year #5	$ 60,000.00
Cost B : Software Implementation Services		
1	**Configure software system**	**$ 131,792.50**
	Task 1- Project Management	*$ 17,570.00*
	Task 2 - Implementation Planning	*$ 8,440.00*
	Task 3 - Install Cityworks Server (development environment)	*$ 11,520.00*
	Task 4 - Project Kickoff Meeting	*$ 4,700.00*
	Task 5 - Workshops	*$ 12,370.00*
	Task 6 - System Design & Configuration Plan	*$ 23,697.50*
	Task 7 - Cityworks AMS Configuration	*$ 19,640.00*
	Task 10 - Configuration Review Meetings	*$ 5,280.00*
	Task 11 - Install Cityworks Server (production environment)	*$ 4,440.00*
	Task 16 - Final Production Configuration	*$ 3,120.00*
	Task 17 - GoLive & Project Close-out	*$ 9,735.00*
	Task 18 - Post GoLive support	*$ 11,280.00*
2	**Task 8 Enterprise System Integrations - Integrate software with:**	**$ 55, 920.00**
	Esri (no cost)	*$ -*
	Trakit	*$ 9,240.00*
	GraniteNet CCTV	*$ 11,670.00*
	USA EarthNet	*$ 10,850.00*
	Linko	*$ 7,950.00*
	Wonderware InTouch 2014R2 SCADA	*$ 16,210.00*
3	**System Testing**	**$ 3,530.00**
	Task 12 - Acceptance Criteria	*$ 705.00*
	Task 15 – Testing Remediation	*$ 2,825.00*
4	**Task 13 – Report Development - Reporting**	**$ 11,040.00**
5	**Task 14 – Onsite Training - Provide end-user Training**	**$ 14,565.00**
	Task 14 – Onsite Training - Provide Admin Training	**$ 5,170.00**
6	**Data Migration/Conversion**	**$ 55,865.00**
	Task 9 - Data Migration/Conversion - Hansen	*$ 19,995.00*
	Task 9 - Data Migration/Conversion - MP2	*$ 21,235.00*
	Task 9 - Data Migration/Conversion - MS Access	*$ 14,635.00*
	Total Implementation Services & First year Software Cost	**$ 317,882.50**

Proposed schedule: