STATEMENT OF WORK

Monterey County, CA – Inform CAD/ Inform Mobile

Version 3.0

Document Control

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November 13, 2015	1.0	Initial Project Draft	TriTech
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1 OVERVIEW

1.1 Statement of Work

In accordance with the terms and conditions of the System Purchase Agreement (the "Agreement") between TriTech Software Systems (TriTech) and will be providing to Monterey County, California ("Client"), this Statement of Work (SOW) defines the services and deliverables that TriTech will be providing under the Agreement.

This project description includes the services and Deliverables specified by the Purchase Agreement, including if applicable, TriTech Software and services, Subcontractor activities, Third Party products and services for the implementation of the System and Subsystems specified in the Purchase Agreement (collectively the "Project").

Statement(s) of Work for applicable TriTech Subcontractor(s) are presented in Appendix E - Subcontractor(s) Statement(s) of Work.

In some cases, the framework of Deliverables documented by this SOW for this Project is further defined through additional documents such as: Operational Scenario Documents (OSD); Interface Requirements Documents (IRD); User and Administrator Documentation and Training Materials.

The number and type of software licenses, products, or services provided by TriTech or its Subcontractors are specifically listed in the Purchase Agreement and any reference within this document as well as Subcontractors' SOWs (if applicable) does not imply or convey a software, license, or services that are not explicitly listed in the Purchase Agreement.

1.2 Project Implementation Definitions

Unless otherwise defined herein, capitalized terms within this document have the meanings described in the Definitions section of the Purchase Agreement and where applicable Software Support Agreement.

The following terms are used in this document. Since these terms may be used differently in other settings, these definitions are provided for clarity.

- Project Schedule means the schedule providing dates and timeframes for completion of tasks and Deliverables during the course of this Project. The Project Schedule is subject to change at the mutual agreement of TriTech and the Client as further described in this SOW.

- Project Management Plan means collectively the Communications Management Plan; Risk Management Plan; and Change Management Plan that provide the criteria for managing those tasks within the Project.

- The OSD provides an operational description of a capability or feature within the applicable TriTech solution in sufficient detail that both Client and TriTech team mutually agree to the expected deliverable. The OSD provides the "what", "how," and the information flow (including data flow and data elements, when appropriate) of the capability or feature. The OSD does not provide the technical or internal design of how TriTech's Development team will accomplish the requested feature. An OSD will be provided for each contracted product customization to be developed. Once approved by the Client, the OSD becomes the basis for TriTech's development. Once approved, any further changes requested by the Client to the OSD and/or design may incur additional costs to the Client.

- Standard Interface Requirement Document (IRD) defines the functionality of the Standard Interfaces. These documents are standard, published TriTech documents, and are not specific to a Client.

1.3 System Acceptance Process

TriTech has created a standard Acceptance Test methodology which is designed to allow our clients to thoroughly evaluate and verify the functionality, performance, and reliability of TriTech System and Subsystems. These procedures include several steps that are described in later sections of this SOW. Upon successful completion of these procedures the system is deemed Accepted.

1.3.1 Functional Acceptance Testing

Functional Acceptance Testing (FAT) is conducted on each of the Subsystems prior to conducting the User Training on these applications and staging them for Go Live. The focus of these tests to verify that each Subsystem meets the functions as described in TriTech's standard FAT documents, which have been created based on TriTech's standard product specifications.

The Functional Acceptance Tests are performed based upon standard TriTech FAT documents that have a standard content and format. These standard FAT documents will be submitted to the Client for review prior to testing.

During the scheduled FAT and according to the FAT documents, TriTech and Client project personnel will work to identify any errors where the Subsystem does not conform materially to the FAT documents. Any such errors will be documented by TriTech on the FAT exceptions list. Errors listed on the FAT exception list will be classified as follows:

1) <u>Pre-Go Live Issues</u>: Issues in the Subsystem that prevent the Client from performing normal daily and monthly operations and therefore must be corrected prior to Go Live. TriTech and the Client will jointly assess the issues and ultimately the Client shall determine the operational impact and the criticality of the identified issue.

2)

<u>Post Go Live Issues</u>: Issues identified in the FAT testing that do not prevent the Client from performing normal daily and monthly processes and therefore can be corrected after the Subsystem Go Live. These issues will not be used as part of the criteria for Acceptance.

In the event that the Client chooses not to follow the Acceptance Test processes defined in the Statement of Work, the Client's cutover to live production status (i.e., productive use) of any TriTech supplied Subsystem constitutes the Client's acceptance of the Subsystem.

1.3.2 Integration Testing

Once the FAT is successfully concluded for all subsystems that are scheduled to go live together and in preparation for Go Live, TriTech and the Client will conduct a one day Integration Test. Typically Inform CAD, Inform Mobile, and CAD interfaces Go Live together.

The Integration Testing for CAD and its Subsystems will be conducted based on a number of scenarios that test the call flow from the call creation to disposition in CAD. These scenarios include Mobile and Interfaces that can be tested in the pre-production environment and are scheduled to go live at the same time. A small group of the Client staff (at least 1-2 dispatchers and at least 1-2 Mobile field users) will participate in this test with TriTech. TriTech will work with the Client to define a set of test scenarios that test the CAD system based on the Client's practices. It is recommended that the Client utilize sample CAD calls from their legacy system.

Integration Test scenarios must be signed off prior to commencement of Integration Testing. At the successful completion of Integration Testing, without any issues that prevent the System to be taken Live, the Client shall provide written approval that the System is ready for Go Live.

1.4 General Client Responsibilities

In addition to those Client responsibilities stated elsewhere in this SOW, the Client is responsible for:

1) Electrical facilities (e.g., outlets, generator and other electrical infrastructure facilities) required for this project, including necessary maintenance.

2) Cabling (e.g., power, network, interface and other electrical and data transmission lines) required for this project, including necessary maintenance.

3) Network/communications connections (e.g., LAN/WAN, commercial wireless, telephone, VPN, and other voice/data connections), or ongoing network/communications charges associated with installation, operation or support of the proposed system including the establishment and maintenance of security accounts.

4) Configuration and/or programming of network routers, switches and bridges – this includes providing information to TriTech staff on any firewalls within the overall network that the system will operate and necessary port access for the system to operate in accordance with TriTech documentation.

5) The installation, configuration, maintenance (including patch management and upgrades of Microsoft software required by the System (With the exception of the installation services that has been contracted through TriTech).

6) The installation of servers into racks and the connection of such servers to network switches.

7) The assignment of machine names and IP addresses for servers to be utilized by the System. This includes joining the servers to the network and the assignment of security accounts as specified by TriTech documentation.

8) Any hardware and third party software or services necessary for implementing the System that is not listed in the Purchase Agreement as a TriTech Deliverable (not listed as a line item in the Price and Payment section of the Purchase Agreement). This includes workstations, server hardware, network equipment, telephone or TDD equipment, performance test software, Microsoft licenses, Disaster Recovery Software, and services required to extract legacy data and convert into acceptable data formats.

9) Configuration, maintenance, testing, and supporting the Third Party Systems that the Client operates and which will be interfaced with as a part of this project. Specifically, the Client operates and supports the Telestaff system, Fire Station Alerting system, Firehouse RMS system, ESO system, Emergency Reporting Systems, incumbent 911 system, ProQA EMS, TracNet system, Push to Talk via Harris console, AMR, First Watch. . The Client is responsible for maintaining and supporting these systems in good working order. The Client is responsible for providing Application Programming Interface (API) documentation to these systems that document the integration process for the level of interface integration defined by TriTech's response to the RFP, as described by TriTech responses to the RFP as well as Interface IRD and approved OSDs. The Client is also responsible for any cost associated with the development, or configuration of the Third Party System Vendor side of the Interfaces.

10) Consoles, furniture or fixtures as well as any modifications to install equipment used for Systems or Subsystems specified by the Purchase Agreement into existing consoles, furniture, vehicles or existing facilities. Installation of Workstations into consoles, furniture, vehicles or like items, is the responsibility of the Client.

11) Active participation of the appropriate personnel with the necessary background knowledge and availability in the Project implementation meetings and working sessions during the course of the Project. Examples of such implementation sessions are System Orientation, DOLF, Acceptance

Testing, Training, regular Project meetings, discussion regarding Interfaces, system installation planning, and the like.

12) The provision of Code Files and GIS data as requested by TriTech staff. This information must be provided on a timely basis in order to meet the project timelines. This information will be provided in a format requested by TriTech staff in accordance with TriTech Documentation.

13) The timely review and approval of Functional Acceptance Testing (FAT) documents, OSDs, IRDs, Task Completion Reports (TCR) and/or other project documentation as further defined in this SOW.

14) Provide a facility with the required computer and audio-visual equipment for training.

15) Timely completion of acceptance testing for each of the TriTech Subsystems.

16) TriTech pricing for this Project assumes that all Client supplied products and services required to support the project will be delivered according to this agreed to Statement of Work, based upon a mutually agreed upon project schedule. This timeline will require a commitment by Client staff to attend project meetings, attend training, and execute action items in a timely fashion. Should the Client find that it is unable to support the agreed to schedule, TriTech reserves the right to execute a mutually agreed to Project Change Order. The Change Order will make the necessary modifications to schedule and/or scope of the project and, if applicable, allow TriTech to recoup any additional costs which may be incurred by TriTech as a result of Client delays.

17) The Client is responsible for providing remote connectivity to TriTech for the purpose of installation, configuration, testing, and troubleshooting of TriTech's applications at the Client site. TriTech's approved remote connectivity methods are described in the System Planning Document.

18) Connect and configure any Third Party hardware (such as Bar Code Scanners, Bar Code Printers, Biometric Fingerprint Scanners, and Signature Pads) to Client workstations, if these services are not explicitly sold in the System Purchase Agreement.

1.5 Project Exclusions

1) TriTech Software Systems provides software applications that it develops. These applications are sold as and are considered to be "Commercial Off the Shelf" (COTS) software packages. The functionality of these products will be based on TriTech's current design and functionality of these COTS products, unless otherwise indicated in the Purchase Agreement, or if applicable, TriTech's responses to the RFP.

2) Work, software, services, hardware, Systems, Subsystems, product/software modifications, or any other deliverables not explicitly stated in the Purchase Agreement will not be included in the Project.

3) Any modification to TriTech standard products or customizations to such products that are not explicitly stated in the Purchase Agreement are excluded from the scope of this Project.

4) Changes in scope will only be executed through a mutually agreed upon Change Management Process, as described in the Project Management Plan.

5) TriTech is not responsible for the deficiencies in the Client's internal or contracted network to support remote Inform CAD, or other subsystem workstations.

6) TriTech is not responsible for the deficiencies in a Client's internal or contracted network to support some of the extended features of Inform Mobile and Inform Field Based Reporting products due to bandwidth or limitations in wireless coverage.

7) TriTech is not responsible for the removal of the old (legacy) equipment, hardware, furniture, consoles, cabling, as part of the Project implementation unless specifically stated in the Purchase Agreement and this SOW.

2 PROJECT DELIVERABLES

2.1 Overview of Project Deliverables

This project will provide a combination of software and services that comprise the System for use by the Client's Public Safety Organization(s). The individual Subsystems to be provided comprise the overall System. The Purchase Agreement specifies the software licenses included in this Project by the quantity and environment in which licensed. This includes all Server and User Licenses, Standard and Custom Interfaces, as well as other TriTech tools and utilities.

The Purchase Agreement for this project incorporates the following major Subsystems [edit to match the Purchase Agreement]:

1) Inform CAD (Production, Test/ Training)

2) Inform Mobile (Production,, Test/Training)

3) TriTech.com IQ Search subscription

4) TriTech.com Analytics subscription

5) Inform CAD Browser

6) Inform CAD GISLink

7) Inform CAD Archive and Reporting Server

8)

9) Inform Me.

10) System Interfaces as listed in the Appendices to this SOW

Implementation of different components of the System is performed in a series of interrelated processes. Some processes can be performed concurrently while others are sequential in nature. TriTech has implemented process gates to ensure successful completion of tasks in the optimal order before a subsequent activity begins.

The only reference for the number and type of software licenses is the Purchase Agreement. Any reference within this document to services associated with a specific software product does not imply or convey a software license for products that are not listed in the Purchase Agreement.

2.1.1.1 Standard TriTech Software Deliverables

The functionality provided by Standard TriTech Software Products, including Interfaces (the core TriTech Software and Interfaces without any Modifications) is defined by TriTech Standard documentation such as User and Administration Guides for TriTech's major Subsystems such as Inform CAD, Inform Mobile, Inform CAD Browser, TriTech.com IQ, TriTech.com Analytics, Inform CAD GISLink and other Standard Software products. Standard Interface Requirement Documents (IRD) define the functionality of the Standard Interfaces. These documents are standard, published TriTech documents, and are not specific to a Client.

Standard TriTech Interface Software to be delivered through this Project is identified as software licenses in the Purchase Agreement. The functionality provided by Standard TriTech Interface Software is defined by TriTech IRDs.

Any Modification to the functionality of Standard TriTech Software within the System, or Subsystems, shall follow the Change Management Process as described in Section 5.2, Change Management Process. The

scope of the Modification will be described in an OSD. Release of all Modifications to TriTech's Standard Interfaces will follow Subsystem release cycles (i.e., Inform CAD, Inform Mobile, and the like).

2.1.1.2 Contracted Modifications to Standard TriTech Software Products

Any Modifications to Standard TriTech Software Products including Inform CAD, Inform Mobile, TriTech.com IQ, TriTech.com Analytics, Inform CAD GISLink, and Standard System Interfaces that are to be delivered through this Project are listed in the Purchase Agreement. The functional scope of any Modification procured through the Purchase Agreement will be summarized in this Statement of Work and defined by an OSD for all items listed under Appendix B - Contracted Modifications to Standard TriTech Software Products for Inform CAD, Inform Mobile, and other major TriTech Subsystems; and under Appendix C - Standard TriTech Interfaces, for modifications to Standard Interfaces. Any and all modifications or enhancements that are not explicitly listed in the Purchase Agreement or TriTech's responses to the RFP are not within the scope of this Project.

Any changes in the requirements documented in the System OSDs, post approval of the OSDs are subject to formal Change Order.

> **Note**: All enhancements and modifications to any of TriTech's Standard products (including the Standard Interfaces) will only be released with a major version of the applicable subsystem (i.e., Inform CAD, Inform Mobile, and the like) based upon the relevance and dependency to these products.

> **Note**: Software versioning is the process of assigning either unique version names or unique version numbers to unique states of computer software while a **service pack or patch** is a piece of **software** designed to fix problems with, or update a computer program or its supporting data. This includes fixing security vulnerabilities and other bugs.

2.1.1.3 Contracted Custom Interface Software

Custom Interfaces to be created by TriTech are identified as individual software licenses in the Purchase Agreement. A high level description of the intended functionality and scope is attached as part of Appendix D - Custom TriTech Interfaces to this SOW. The detailed functional scope of any custom Interface procured through the Purchase Agreement will be defined by an OSD, which will be developed and delivered to the Client during the project.

Any changes in the requirements documented in the System OSDs, post approval of the OSDs are subject to formal Change Order.

3 TRITECH PROJECT ROLES AND RESPONSIBILITY

3.1 Overview

TriTech will appoint a team of specialized personnel that will implement the Project under the direction of TriTech's Project Manager. The team will be multi-disciplinary and the team members may specialize in different products or Subsystems. Team members may be engaged in different phases of the Project as necessary and in some cases are involved in the Project for a limited timeframe. Any personnel changes by TriTech will be discussed with and agreed upon by the Client in advance. Such agreement will not be

unreasonably withheld. TriTech will work with the Client to assure that the assigned personnel do have the required capabilities and competencies to successfully complete the project.

The descriptions of personnel roles noted below provide an overview of typical Project team members. Other personnel may be involved under the direction of the TriTech Project Manager in order to complete the requirements of the Project.

3.2 TriTech Project Manager

TriTech has appointed a TriTech Project Manager as the principal TriTech contact who will be responsible for managing TriTech's responsibilities related to the implementation of the Project, as described in this SOW and within the scope of the Purchase Agreement. The Project Manager is also responsible for managing the Deliverables for TriTech's subcontractors.

Each of TriTech's Subcontractors may appoint a Project Manager to manage their portion of the Project Deliverables and activities. However, the TriTech Project Manager will have the overall responsibility for coordinating all activities and supervising the progress of each sub-Project. The TriTech Project Manager will manage all communications between the Client and each of TriTech's Subcontractors. TriTech's Project Manager is responsible for Project scheduling and management of TriTech Project personnel and subcontractor/supplier resources.

The Project Manager utilizes a standardized methodology for project implementation, project management, and risk identification and management. TriTech's Project Manager is responsible for Project scheduling and management of TriTech Project personnel and applicable Subcontractor/supplier resources, budget management, identification and management of Project risks, and communication with the Client's Project team. The TriTech Project Manager will be responsible for the collaborative coordination of Client resources in an effort to ensure that avoidable Project delays will be minimized.

The Project Manager is involved in the Project beginning with the SOW development and continuing through post Go Live Project closure activities. The Project Manager will be an active participant in many of the milestone events through the course of the Project including System Orientation, DOLF, and Go Live. The Project Manager will organize a bi-weekly Project status call with the Client and necessary Project team members. Additionally, the Project Manager will provide the Client with a written Project status report on a monthly basis, as further defined in this SOW.

3.3 Systems Engineer

The Systems Engineer is responsible for two primary functions, within the scope of the Project: 1) configuration of Standard TriTech Interfaces (including configuration documentation); and 2) development of software requirements documentation for Custom Interfaces. The Systems Engineer will additionally participate in testing of each of these Subsystems. In some cases, Development Engineers may perform the role of the Systems Engineer for specialized interfaces.

3.4 Inform CAD Business Analyst

The Inform CAD Business Analyst is responsible for the configuration of the CAD based on the Client's system requirements, business rules, configuration data, and reporting needs. The Business Analyst will provide consultation services to the Client with regard to the configuration and operation of CAD. The Inform CAD Business Analyst is also responsible for conducting the CAD System Orientation, Demonstration of Licensed Functionality (DOLF), performing the Acceptance Testing and providing consulting support throughout the Project implementation life cycle.

After the completion of the DOLF session, ownership for continued Code File configuration and maintenance transfers to the Client. At this stage, the Business Analyst will serve as a consultant for the

Client's further configuration of the Client's CAD system until the Client's System is in live operation. These activities are described in later sections of this SOW.

The Business Analyst will be an active participant in many of the milestone events through the course of the Project and will participate in bi-weekly Project status calls, as needed.

3.5 Inform Mobile Business Analyst

The Inform Mobile Business Analyst is responsible for the configuration of the Inform Mobile based on the Client's system requirements and the dispatch and field users' operations. The Business Analyst will provide consultation services to the Client with regard to the configuration and operation of Inform Mobile. These consultation services includes working with the Client team to determine and define the Inform Mobile baseline configurations. The Inform Mobile Business Analyst is also responsible for conducting the Inform Mobile System Orientation, performing the Acceptance Testing, delivery of Train the Trainer and Inform Mobile Administration Class, as well as providing consulting support throughout the Project implementation life cycle.

3.6 GIS Analyst

As part of the implementation team, TriTech utilizes a GIS Analyst that specializes in geographical Information technology. The GIS Analyst is responsible for: 1) performing an analysis and preparing a report regarding the Client's GIS source data including street centerline data, routability, and response area polygon data based on TriTech specified requirements for Inform CAD, Inform Mobile; 2) consultation services regarding converting the GIS source data for use in Inform CAD, Inform Mobile; 3) providing training for applicable TriTech GIS tools; and 4) preparing the one-time GIS data import for Inform CAD and Inform Mobile.

These GIS activities are intended to provide information that will allow the Client to optimize the accuracy and quality of Client GIS data during Project implementation.

3.7 Training Specialist

Training for TriTech applications is provided by TriTech Training Specialists. Training staff for other products and functions will vary by the type of product and training proposed.

This process is described in greater detail in the training sections of this document, related to each of these products.

3.8 Client Installation Services Team

TriTech's Client Installation Services (CIS) team is responsible for installation and integration of TriTech Software onto the system hardware that is identified for this Project. This team works closely with the Client's staff to coordinate IP and network addressing, security accounts, network connections, and remote access to the System.

This process is described in greater detail in Section 7.2, System Installation of the SOW.

3.9 Technical Services Group

Customer service functions and technical support for the Client's System during the Project is coordinated by the TriTech Project Manager. After Go Live, TriTech's Technical Services Group is responsible for providing on-going support for the Client's System as defined in the Purchase Agreement and the Software Support Agreement.

3.10 Account Executive

The Account Executive is an important resource to the Client throughout the life of their System. The Account Executive will be the primary contact and liaison for non-technical support issues, system changes and billing questions. They provide support for general customer service requests, manage requests for new software and services, and provide assistance with planning technology upgrades post System Go Live.

Having the Account Executive participate as a key Project member provides an enhanced level of continuity for the Client as they continue their relationship with TriTech.

4 RECOMMENDED CLIENT ROLES AND RESPONSIBILITIES

4.1 Overview

Implementation of the Subsystems in a manner that meets the Client's operational needs requires collaboration with the Client's team. In general, the Client's Project team should include staff experienced in the operation and administration of the Client's current public safety technology systems as applicable to the scope of this project. Such teams may include representatives from the Inform CAD, and Inform Mobile users and stakeholders. These "subject matter experts" need to be engaged through the course of the Project from initiation until live operations, and may be involved in the support and maintenance of the System and Subsystems after Go Live.

These recommendations do not speak to specific positions. Rather, this information defines specific responsibilities and estimated time commitment. The Client may elect to create individual positions, combine responsibilities, and/or assign responsibilities within their current organizational structure. The Client needs to periodically assess its staffing needs based on changes in the Client's operational use of this technology.

Often, there is overlap with these core responsibilities - therefore, the team can generally be kept to a small group, dependent upon the complexity of the system being implemented and the number of Subsystems.

In addition, it is recommended that the Client, early within the implementation process, identify those persons that will be responsible for the ongoing maintenance of the Client's System to include the technical and business processes. The application Administrators (Inform CAD, and Inform Mobile,), as well as the System Administrator, are very key to the success of the Project. It is paramount that the Client develops this team during the implementation process so that the Client successfully achieves a degree of self-reliance with the understanding of each of the Systems in addition to the generalized technical responsibilities.

4.2 Project Manager

The Client's Project Manager is the principal Client contact who will manage a team of Client Project personnel. The Client's Project Manager manages and coordinates Client's resources responsible for completing assigned Project tasks and activities.

Activities include facilitating Project Schedules and meetings, timely approval and processing of invoices, review and approval of Task Completion Reports ("TCRs"), Project management plans, applicable configuration sheets, OSDs and IRDs, approval of the Project documentation and FAT, and management of the Client's staff. Additionally the Client's Project Manager is responsible for coordinating the efforts, activities, and communications between TriTech and third party vendors that are not TriTech Subcontractors, as well as any deliverables from these vendors to the Project.

4.3 System Administrator

The Client's System Administrator is the individual primarily responsible for managing the technical back-end of the System including Windows, SQL Server, network, hardware, data back-ups and log management. This individual is the primary technical point of contact representing the Client.

As identified in the Purchase Agreement and the Software Support Agreement, following the initial system installation, administration, and support for hardware (including the software operating system) and network components are the responsibility of the Client. The Client needs to plan for support and maintenance

through the development of Client resources, other departments within the Client's organization, or by contracting for such services. The Client should establish procedures for managing warranty service of hardware.

Activities for this position include 1) management of Microsoft Windows Operating System including patches and service packs; 2) management of Microsoft SQL Server including patches and service packs; 3) implementation of software prerequisites (in accordance with TriTech Documentation) on computers as needed for current operations and System upgrades; 4) monitoring, management and maintenance of the Client's network including LANs, WANs, wireless networks, security accounts and support connectivity (in accordance with TriTech Documentation); and 5) hardware maintenance and troubleshooting; file and data back-ups and software and error log management.

Time commitment will vary with the number of computers on the system, the complexity of the network (including the use of a WAN) and the number of personnel to be managed in network access. If the System LAN is connected to the Client's administrative LAN/WAN[1], coordination will be important to avoid problems with the Client's network traffic. Personnel involved in System Administration should attend the applicable TriTech System Administrator Course(s). Where a large team is involved, a core team should attend a System Administrator Course and then the Client's System Administration team should conduct a smaller version of the training for local staff.

4.4 Inform CAD Administrator

The Client's Inform CAD Administrator is the individual primarily responsible for managing the Inform CAD application software settings to ensure efficient operation. This individual is the primary CAD configuration point of contact representing the Client.

Activities include TriTech software setup, assignment, and management of TriTech Software modular security, maintenance of the Code Files, evaluation and implementation of version updates, reporting, prioritization, and management of support issues.

Within the Multi-Agency environment, separate CAD administration staff may be required to manage the components used by each operation - under the direction of an overall System-Wide CAD Administrator. Any personnel involved in CAD administration should participate in the DOLF session so they are prepared to maintain the CAD Code Files post DOLF. The CAD Administrator should additionally attend Inform CAD User Training.

4.5 Inform Mobile Administrator

The Client Inform Mobile Administrator must possess a set of skills necessary to support the Client's implementation of the Mobile System. The Inform Mobile Administrator will be responsible setting up and maintaining the users, and vehicles as well as minor configuration changes to the Inform Mobile product. The desired administrator should possess a working knowledge of:

HTML/XML, CSS, and JavaScript.

SQL, especially views, stored procedures, and database schema.

Standard GPS protocol (TAIP and NMEA).

The Inform Mobile Administrator should attend the Inform Mobile Train-the-Trainer course and the Inform Mobile Administration course.

This individual should work closely with the System Administrator in order to manage file and data back-ups and System administration of the hardware and network.

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[1] TriTech recommends a dedicated LAN for CAD as documented in the System Planning Document.

4.6 GIS Analyst

The GIS Analyst is responsible for the mapping components required for Inform CAD, and Inform Mobile. Activities include providing the initial GIS files for use within Inform CAD, and Inform Mobile. The GIS Analyst will be responsible for updating the Inform CAD and Inform Mobile Streets data using GIS Link.

During scheduled activities, the Client should have a fully dedicated person or persons. Post implementation workload will be based upon the number and type of GIS data edits that will be necessary for the local operations. This person should participate in portions of the System Orientations and DOLF. Additionally, this person (or group of people) should attend GISLink training.

4.7 Inform CAD/Mobile Users/Supervisors

Input from the Users/Supervisors is important to ensure that the configuration settings approved by the Client's team will be perceived as usable by users of the each of the Subsystems. These Users/Supervisors should participate in meetings defining and evaluating the requirements and configuration of their respective products, such as System Orientation and Administration Training.

It is recommended that the CAD Supervisors attend Inform CAD User Training, including the session designated for the Supervisors. It is recommended that Mobile Supervisors attend Inform Mobile Train the Trainer class.

During scheduled activities, the Client should have a fully dedicated person or persons. Post implementation should be maintenance only. These personnel should attend the applicable User trainings.

4.8 Subject Matter Experts

Input from subject matter experts in all applicable areas (Inform CAD, Inform Mobile, and each of the Interfaces and external Systems that integrate with TriTech Systems) is essential to successful implementation of the system. The subject matter expert(s) in each area are the individuals who are knowledgeable about the current operational and technical specifications of the system, the data flow between and among different applications, and any limitations associated with each application.

For Standard and Custom Interfaces, subject matter experts may be from the Client Agency, and third party vendors. If the vendors are not TriTech Subcontractors, the Client will be responsible for engaging them in necessary discussions and documentation of the requirements.

The Client should involve a fully dedicated person or persons during the scheduled activities, such as requirements analysis, demonstration of the applications (if applicable), review of requirements documentation, the testing process, and other events that are described in later sections of this SOW. Post implementation, the involvement of the subject matter experts should be limited to maintenance only.

4.9 Application Trainers

A team of trainers is needed for training the Client staff on TriTech Software on an on-going basis. Trainers will be responsible for reading TriTech Software release notes and maintaining an understanding of new and existing features.

It shall be required that CAD trainers attend Inform CAD User Training, and Train the Trainer session. It shall be required that Mobile trainers attend Inform Mobile Train the Trainer class.

The Client should involve a fully dedicated person or persons during scheduled activities such as training sessions. Post implementation, the involvement of the application trainers should be limited to maintenance only. These personnel should attend the applicable product specific training courses.

5 PROJECT CONTROLLING PROCESSES

5.1 Overview

Project Controlling Processes are established early in the Project life cycle during the Planning Phase and described within the Project Management plans. Project Control is the process that includes completing regularly scheduled Project progress meetings and the use of regularly delivered Project progress reports, as well as implementing the processes needed for Communication Management, Risk Management, and Change Management. The process begins during the initiation process and concludes at the end of the Project.

The establishment of defined processes for Client communication (contact persons and reporting methods) provides a basis for effective and regular communication. This supports the previously noted processes necessary for successful Project outcome.

As part of the Controlling Processes, TriTech utilizes a series of measurements and management reviews to mitigate the effect of these variances. Checkpoints or milestones are planned into each phase of the Project to measure performance and determine if the Project is ready for the next phase.

Checkpoints are key tasks that act as gates to the next phase of a project. A delay in a milestone may cause a delay in starting or completing subsequent tasks; in effect creating a risk to the overall Project. Therefore, TriTech's Project staff closely monitors checkpoint tasks and milestones and promptly notifies the Project Manager of any delay or failure with a milestone task. Milestone delays on the part of either party will trigger an overall review of Project activities so that risks can be assessed and properly managed. In the event that either party becomes aware of a delay, notification shall be provided to the other party as soon as reasonably possible.

Evaluation of overall Project status at each checkpoint is essential to ensure that the Project is effectively progressing toward completion and that new risks are not being introduced. In many cases, Project activities leading to a checkpoint are interrelated to later scheduled tasks. Success at checkpoints diminishes the risk to the Project going forward.

Incomplete actions at a checkpoint may prompt delays and a rescheduling of the Project. For example, delays in completing or approving Custom Interface OSDs will delay the start and completion of the Interface development work, which may ultimately have an impact on the projected Go Live date. Depending upon the importance of the Deliverable, these kinds of delays can have a cascading effect upon the Project Schedule including training and Go Live Task Completion Reports

As part of the Project controlling process, upon completion of significant milestones and or tasks, TriTech will submit a Task Completion Report ("TCR") to the Client. The TCR serves as a formal tool for the purpose of verifying with the Client that the work has been performed, services rendered, and products delivered according to the requirements specified within the SOW and/or related documents.

TCRs are presented to the Client by TriTech's Project Manager for signature. Some TCRs may trigger a Project payment, in accordance with the payment terms within the Purchase Agreement. Upon execution of a TCR that is tied to a Project payment milestone, the Client will receive an invoice from TriTech's accounting department which must be paid based on the terms and conditions of the Purchase Agreement.

As the Prime Contractor, TriTech is responsible for processing TCRs for all Subcontractor activities, under the Contract.

The TCR will include the following information:

1. Description of Work performed and products delivered.
2. Comments noting any special circumstances.

3. Product/Service deliverables listing the contract line items that are being recognized as delivered and will be invoiced.
4. Related Payment Terms in accordance with the Purchase Agreement, for contract line items that will be invoiced relative to the TCR.

5.1.1 TriTech Responsibilities

a) TriTech will prepare and submit TCRs for Client's signature upon completion of the applicable task.

b) The TCR will cite the appropriate SOW reference.

c) TCRs that trigger a payment will include the payment amount in accordance with the Purchase Agreement payment schedule.

5.1.2 Client Responsibilities

a) Client will review and approve TCRs within a five (5) business day period from the time of receipt less any challenges to the validity of the report.

b) In the event that Client disagrees with a TCR, Client shall submit to TriTech a written explanation detailing why the Client believes that the subject of the TCR and/or tasks have not been completed in accordance with the Purchase Agreement or this SOW. Such notification from the Client shall be provided to the TriTech Project Manager within five (5) business days of receipt of the TCR.

5.2 Change Management Process

Either party can request changes to the scope of the project at any time. Since a change may affect the price, project deliverables, this SOW, the supporting project schedule, and/or the terms of the Purchase Agreement for this SOW, both parties must approve each change in writing and agree on the impact each change may have on the Purchase Agreement and related attachments.

The purpose of the Change Management Process is to manage any significant changes to the Project as described in this SOW or related documents as referenced within the SOW. These changes may include, but are not limited to a modification to Project scope, Standard or Custom products' functionality, TriTech and Client's identified roles and responsibilities, Project payment terms, and modifications to the scope or delivery location of services within the Project. All significant changes must be documented through the Change Management Process. The type of documentation needed will depend on the nature and significance of the change.

A Project Change Order will be the vehicle for communicating and approval of the changes. Whether initiated by the Client or TriTech, all Change Orders will be documented by the TriTech Project Manager. The Change Order shall describe the requested change, the party requesting the change, and the effect the change will have on the project, including the price, project deliverables, this SOW, the supporting project schedule, and/or the terms of the Purchase Agreement for this SOW.

All Change Orders must go through the TriTech's internal approval process before they can be presented to the Client for review and approval. Once the Change Order is generated, the Client Project Manager and TriTech Project Manager will review the proposed change and communicate as necessary to answer any questions, and/or work to resolve any issues preventing acceptance of the Change Order by both parties. Upon the approval by both parties the Change Order will be authorized for implementation.

The creation of some Change Orders may, depending upon the scope of the requested change, require fees in order for TriTech to properly investigate and scope the requested change. An example of this situation may include investigating the development of a custom interface and creating a detailed OSD prior to the Clients decision regarding the purchase of the interface. If additional fees are required by TriTech to create a Change Order, those fees will be identified and communicated to the Client Project Manager prior to

TriTech's investigation of the requested change. In such situations, TriTech will only proceed with the investigation required to create the Change Order if the Client has agreed to pay the additional fees associated with creation of the Change Order.

Additional deliverables or Project deletions in terms of Software and services will require a mutually agreed upon Change Order. It must be noted that the later in the Project that a change is requested, the greater the likely impact in terms of costs, risks, and timescale. It is recommended that the Client not delay any review activity as it is a best practice to discover potential changes as early as possible. In some cases, it may be more appropriate to plan modifications for post Go Live delivery.

5.2.1   TriTech Responsibilities

a) Change Orders will be prepared for submission to the Client when required.

b) Where Project changes require Engineering-level modifications, TriTech will perform requirements capture necessary to prepare required documentation including a high level description of the change for Client review and approval.

c) Where Project changes require Engineering-level modifications, Client will be informed of the delivery mechanism (version and schedule).

5.2.2   Client Responsibilities

a) When applicable, the Client will identify the services or deliverables that will be subject to a Change Order, per the Purchase Agreement between both parties.

b) When applicable, the Client will identify changes to features or functionality related to CAD, Mobile, Interfaces or any other Subsystems that will require a change order. This process may also include participation with the requirements process.

c) Client will approve and process Change Orders as in a timely manner.

5.3 Project Reporting

TriTech will provide Monthly Status Reports advising the Client Project Manager and key Client Project Stakeholders of the progress and status of project activities. This report will include the significant accomplishments, planned activities, issues, and potential risks associated with TriTech and TriTech's Subcontractors' Deliverables. The Project Status Reports will include the following:

a) Accomplishments during the Reporting Period.

b) Planned upcoming activities.

c) Issues.

d) Risks.

e) Key Action Items.

In addition, the TriTech Project Manager will hold bi-weekly status meetings/conference calls to update the Client on the status of the Project and key action items and deliverables.

During the course of the Project, one or more Project journals will be created to document Project issues and action items. These journals are generally product specific and are used by the Project Manager and other team members to facilitate successful Project completion. Project journals are reviewed with the Client during bi-weekly Project status calls and on an as needed basis through the course of the Project. The Project Manager is responsible for periodically providing copies of updated journals.

TriTech will provide an updated Project Schedule advising the Client Project Manager of the progress of project activities. The Project Schedule may be lacking the detailed tasks for the Client team, and the Client may add such tasks, owners, and durations to the Project in collaboration with TriTech Project Manager. The Project Schedule will consist of the following:

a) Major Tasks.

b) Task Responsibility.

c) Task Duration.

d) Major Milestones.

e) Tasks Completed.

f) Tasks in Progress.

5.3.1   TriTech Responsibilities

a) Provide a written report of Project status once a month.

b) Track issues and action items to closure through product specific journals. The Client will be periodically provided with updated copies of the journal.

c) Conduct status meetings/conference calls every two weeks.

d) Maintain an up-to-date Project Schedule.

5.3.2   Client Responsibilities

a) Review the written report of Project status and provide feedback within five (5) business days in order to ensure that the documentation is correct.

b) Participate in Project status meetings.

c) Ensure participation of personnel in tasks and meetings.

5.4 Document Review

In the course of the Project, TriTech will deliver several documents to the Client for review. These documents will include but are not limited to the Acceptance Test Procedure, Project Schedule, DOLF report, OSD, and Interface Requirement Documents for the Project. Approved documents are returned to the TriTech Project Manager. For paper documents, the TriTech Project Manager will retain the original copy and will provide an unbound copy suitable for reproduction. For soft copy documents, the TriTech Project Manager will retain a copy and provide Client with a copy.

Should the Client find any document unacceptable, the Client must provide specific reasons in writing to the TriTech Project Manager. TriTech can then assess any required corrective measures and make revisions or modifications to provide acceptable documents within a mutually satisfactory timeframe.

Status Reports are not subject to approval.

In order to ensure compliance with the Project Implementation Schedule, the Client is responsible for the review of such documents and providing any comments to TriTech within five (5) business days.

5.4.1.1 Documents Subject to Client Approval

a) Change Orders

b) Operational Scenario Documents (OSD)

c) Application Configuration Sheet

d) Functional Acceptance Test Procedure documents

e) Task Completion Reports

5.4.1.2 Documents Subject to Client Review not Requiring Approval

a) Project Schedule

Note: The Project Schedule and any changes hereto are to be mutually agreed upon between the Client and TriTech.

b) Project Status Reports

c) DOLF Reports for Inform CAD

d) Project Journals

e) Interface Requirements Documents (IRD)

5.4.2 TriTech Responsibilities

a) Distribute the documents to the Client.

b) Coordinate the process to consolidate comments and edit documents.

c) Manage the signoff process for applicable documents and the distribution of originals to the Client and TriTech for filing.

5.4.3 Client Responsibilities

a) Review the documents presented and provide the appropriate information back to TriTech within five (5) business days for configuration sheets, Change Orders and/or Sales Orders.

b) Review the documents presented and provide the appropriate information back to TriTech within ten (10) business days for requirements documents defined above. Unless unanticipated changes to the Project Schedule would warrant a shortened turn around.

5.5 Third Party Management

TriTech will be responsible for the management of third parties that have been identified as Subcontractors or executed Change Orders to the Purchase Agreement. The identified TriTech Subcontractors under the Contract are the following:

- Athena Advanced Networks
- Deccan

As part of the Subcontractor agreement, all communications between those third parties and the Client will be managed by TriTech. Any communication directly between the Client and third parties that may require or imply the promise of a material change in scope or responsibilities will not be acknowledged by TriTech unless an appropriate Change Order has been prepared.

Conversely, the Client will be responsible for the management of third parties that TriTech is not responsible for. The Client will be responsible for the facilitation of discussions and the acquisition of materials from those third parties that are necessary for the configuration and development of the Client's System.

5.5.1 TriTech Responsibilities

a) Assume responsibility for third parties that are the responsibility of TriTech within the terms of the Purchase Agreement between TriTech and the Client.

b) Process any Change Orders that may arise from a material change in scope where third parties are concerned.

c) Inform the Client when configuration and or programming will require interaction and/or documentation from a third party which is not the responsibility of TriTech under the Purchase Agreement between TriTech and the Client.

5.5.2   Client Responsibilities

a) Work directly through TriTech with regard to third parties that are the responsibility of TriTech.

b) Review, sign and process any Change Orders that may arise from a material change in scope where third parties are concerned.

c) Facilitate interaction between TriTech and third parties not the responsibility of TriTech to include conference calls, answers to questions and documentation as requested.

6 PROJECT INITIATION AND PLANNING

6.1 Overview

Project Initiation and Planning involves gathering the necessary Project specific information in order to produce a Project Management Plan and a Project Schedule. In short, Project Planning consists of those processes designated to establish when and how the Project will be implemented while further elaborating on Project Deliverables. Most of the information exchange between the Client and TriTech during this process is at a high level and consists of interaction between both Project Managers and a small group of Project stakeholders.

Major Deliverables for the Project Planning phase are the specific Project Management Plans, and a baseline Project Schedule.

The project must be managed in a manner that will allow for the adjusting the Project Management Plan and Project Schedule to address the circumstances that affect a project during Project Execution. As a result of these changes during the Project life cycle, Project Planning will overlap each subsequent process during the Project. Typically, Project Planning tasks will decrease in frequency as checkpoints are successfully completed and as the Project nears Go Live and Project completion.

> **Note**: The Project Schedule is a living document, subject to change during the course of the Project due to several factors such as change in Project scope, scheduling conflicts, delay in approving project documents, resource availability, etc. All changes to the Project Schedule will be discussed between both parties and will be incorporated within a published schedule upon approval from the Client and TriTech.

6.1.1 TriTech Responsibilities

a) Assign a Project Manager to the Project to participate in Initiation phase activities.

b) Produce required documentation to support Initiation activities (such as Standard IRDs, System Planning Document, etc.)

c) Review and finalize the SOW with the Client.

d) Identify and engage the TriTech Project team responsible for carrying out Project Execution.

e) In collaboration with the Client, develop the Project Management Plan (includes the Communication Management Plan, Risk Management Plan, and Change Management Plan).

f) Baseline the Project Schedule.

g) Prepare and submit the TCRs for Client acceptance of the Project Management Plan as defined above.

h) Develop and submit invoice for payment due at execution of the Purchase Agreement.

6.1.1.1 Client Responsibilities

a) Assign a Project Manager for the Project to participate in Initiation phase activities.

b) Identify and engage the Client's Project team.

c) Review and comment on the TriTech Project Management Plan and the Project Schedule.

d) Review and comment on TriTech provided documentation to support Initiation activities.

e) Finalize and approve the SOW with TriTech.

f) Approve the TCRs for the Project Management Plan within 5 business days.

6.1.2 Project Kick Off

During the planning phase, the TriTech Project Manager will hold a Kick-Off meeting with the Client's Project team. During the Kick-Off meeting, the TriTech Project Manager will provide an overview of the following:

1. The TriTech Execution Process.

2. A high level description of Project Deliverables.

3. Roles and responsibilities for the Project team members.

4. A high level review of the preliminary Project Schedule including projected Project milestones and checkpoints.

5. Describe the work that has been either completed, is in progress or is due to begin within the immediate future.

6. Review any project related questions from the Client's team.

Note that separate kick-offs may be conducted before initiating the activities for each of the subcontractors. These follow up kick-off meetings may be conducted over the phone and involve a small group of individuals who will be involved in the implementation of that specific system.

6.1.2.1 TriTech Responsibilities

a) Prepare the agenda and set a date for the Kick-Off that is convenient to the Client and TriTech Team.

b) Distribute any documents that the Client should review in advance of the Kick-Off meeting.

c) Conduct the Kick-Off meeting.

6.1.2.2 Client Responsibilities

a) Work with the TriTech Project Manager to facilitate scheduling a date for the Kick-Off meeting.

b) Schedule the appropriate personnel from the Client's team to attend. This should also include key stakeholders that may not participate routinely in Project operations, but who have authority or responsibility over the Project.

c) Provide adequate accommodations to include adequate seating and audio-visual equipment including a projector(s), screen, and whiteboard.

7 PROJECT EXECUTION

7.1 Overview

Project Execution focuses on the development and delivery of Project Deliverables. Processes will be iterative and consist of: 1) a review of Deliverable documents; 2) Development, configuration, Installation and testing of software and hardware deliverables, and 3) Delivery of Project related services such as Project related training. These processes are iterative in nature with a number of checkpoints to evaluate Project progress and where applicable, to initiate Change Management processes. Each Deliverable has a closing process which consists of specific completion criteria. These Deliverable closing processes are independent from the closing process of the Project.

7.2 System Installation (Inform CAD, Inform Mobile, and Interfaces)

System installation is one of the early processes in the Project implementation phase, and has a great impact on and critical dependency on a number of key activities. All tasks and activities related to System Installation are included in this section and will occur in the order presented. Note that other project activities can occur concurrently or between these steps.

7.2.1 Review Hardware Specifications

TriTech and Client will review the specifications to ensure that the correct hardware and third software components are procured and installed. TriTech will only be responsible for procurement of the hardware and third party software that is explicitly listed under the Agreement, as TriTech Deliverables, or Deliverables of TriTech's Subcontractors.

7.2.1.1 TriTech Responsibilities

1) Provide hardware and Third Party specifications to Client.

7.2.1.2 Client Responsibilities

1) Review and validate hardware and Third Party specifications.

7.2.2 Hardware and Equipment Procurement Process

TriTech and Client will procure hardware, third party software, and equipment per TriTech's recommended Specifications. TriTech is only responsible for procurement of the hardware and third party software that is identified as TriTech Deliverables in the Purchase Agreement.

If the hardware and third party software is procured by the Client, it is the Client's responsibility to procure the required equipment based on TriTech approved specifications, and to ensure the timely delivery of the hardware and third party software to the site to allow timely implementation of the System and Subsystems.

Where the Client is responsible for procuring the server hardware, the Client will be responsible for completing the following steps:

1) Fully configuring the servers with memory and disks.

2) Loading Microsoft Windows or VMware.

3) Partitioning disk drives partitioned and the implementing applicable Raid level based upon TriTech documentation.

4) Assigning the computer name and IP address based upon TriTech documentation.

7.2.2.1 Non-Stratus Servers

System servers are procured by TriTech through Athena Advanced Networks. TriTech will ensure that the hardware and third party software matches or exceeds the specifications listed in the Purchase Agreement. The following work will be completed before the server is delivered to the Client site:

1) The servers fully configured with memory and disks.

2) Windows Operating System or VMware is loaded.(TriTech is not responsible for providing Microsoft operating system licenses)

3) Disk drives partitioned and the applicable Raid level implemented.

4) The machine name and IP address assigned. (Note: The machine names will be assigned only if the servers are ordered from HP. If the hardware vendor is Dell, TriTech will not be able to assign the machine names, and this task must be completed by the Client once the servers arrive at the Client site).

7.2.3   Hardware Staging and Preparation for Installation

The Client will be performing basic server integration for all servers. Basic server integration includes placing the servers in the racks, joining them to the existing domain, with the Domain Controller in place, running the TriTech pre-requisite DVD on Inform CAD and Inform Mobile servers, and establishing remote connectivity capability (VPN and Remote Desktop) for authorized TriTech personnel to perform configuration. These activities will be coordinated between TriTech and the Client IT staff. Guidance will be provided by TriTech's Client Installation Services (CIS) team as required. If the Client is not willing to complete the basic server integration, this task may be performed by TriTech or TriTech's Subcontractors at additional cost.

In order to start configuration, the Client must provide remote connectivity to TriTech. The Client must also provide the server names, IP addresses, Administrator Account Information (User Name, Password), Services Account Information, and the location of 3rd Party Software media (such as SQL). An Installation Service Request (ISR) will be provided to the Client that organizes this information in to the TriTech preferred format. The Client is responsible for providing the completed ISR to TriTech no later than two (2) weeks prior to the installation activities.

The Client is responsible for ensuring that the site is prepared and ready for the installation of hardware, third party software, and TriTech software as detailed in TriTech's documentation including the System Planning Document no later than two (2) weeks prior to the scheduled Installation date. Delay in providing this information in its complete form will result in a delay in the Installation and the activities that follow installation of the System.

At least one (1) week prior to installation, a member of the TriTech CIS team will verify: (i) connectivity to the Client site via VPN, (ii) connectivity to each of the servers, and (iii) access to all required security accounts.

If the servers, accounts and connectivity are not ready the delay will have an impact on the Project schedule.

7.2.4   TriTech Responsibilities

a) Provide the System Planning Document.

b) Facilitate a hardware review prior to hardware/OS procurement.

c) Procure equipment and third party software if included in the Purchase Agreement as a TriTech deliverable.

d) Provide guidance and assistance as necessary if the system equipment is procured by the Client.

e) Distribute the Installation Service Request (ISR) document to the Client.

f) Assist the Client in completing the ISR.

g) Assist the Client with the preparation of a network diagram.

h) Review the completed ISR prior to the installation.

i) Test the remote connectivity to the site prior to installation of the hardware and software.

j) Install the Microsoft SQL software.

k) Work with the client to create a network diagram

l)

m) Prepare and submit a TCR for Client review and approval upon completion of these activities.

7.2.4.1 Client Responsibilities

a) Complete the Installation Service Request (ISR) document and provide to TriTech.

b) Assist and work with TriTech with creation of a network diagram.

c) Perform site preparation, as specified in the System Planning Document and ISR.

d) Assign the computer name(s) and IP address(es) based upon TriTech documentation.

e) Establish remote connectivity capability (VPN and Remote Desktop) for authorized TriTech personnel to perform software installation and configuration.

f) Run TriTech Pre-Requisite DVD on all applicable Inform servers prior to any installation work being performed.(This task will be performed by Athena Advanced Networks)

g) Provide all horizontal and vertical cable runs, pathways, coring, access points, floor cutting or drilling, and related tasks related to cable and equipment installation.

h) Provide all Client-supplied telephone, external interface connection points, electrical power and other receptacles within manufacturer recommended distance of the equipment and all peripheral components.

i) Provide and install all data communication lines, modems, hubs and routers, cabling, equipment and other components necessary for system operation and maintenance and for remote sites and connection to other systems. All lines will be clearly identified and tested.

j) Provide TCP/IP communications and connection to the hub equipment provided in support for any existing networks, workstations and printers that are to have access to the TriTech applications.

k) Obtain all necessary IP addresses and schemes.

l) Allow remote access to TriTech to all development and system "root" accounts on all servers running TriTech licensed Software.

m) Procure equipment and third party software if it is the responsibility of the Client according to the Purchase Agreement.

n) Install operating system software for Client procured hardware unless the service is specified as a TriTech responsibility in the Purchase Agreement.

o) Perform basic server integration including, but not limited to:

    i.   Installation of servers in applicable racks.

    ii. Joining servers to the existing domain with the domain controller in place.

p) Provide TriTech with all necessary configuration documentation which includes machine naming, IP addresses, Administrator Account information, Service(s) Account information, naming convention, and connectivity as prescribed.

q) Provide TriTech with a high level network diagram. The diagram should be provided prior to TriTech Software installation.

r) Install all peripheral equipment, including scanners, printers, barcode readers, etc.

s) Approve the applicable TCR.

7.2.5   Basic Server preparation and Network Services

Performing the services listed in this section is a responsibility of the Client.

7.2.5.1   Client Responsibilities

a) Provide the facility suitable to house Server hardware and network infrastructure.

b) Have a member of the Client's IT staff available while software/network configuration is being performed.

a) .

b) .

c) .

d) If required, deploy the Domain Controller by adding the member server to an existing Domain or create a new Domain, promote the member server to Domain Controller, enable and configure DNS, enable and configure DHCP if required.

e) Create domain account(s) for TriTech's remote support connectivity and access so that TriTech can assist Client with installation and ongoing maintenance

f) Perform all necessary network configurations, to include but not limited to determining the network design routing protocols, subnet mask, redundancy, router and switch configuration.

g) Create Networking/Server documentation to illustrate intended configuration.

> **Note:**   VMware, vMotion and HA require a SAN or a way to present shared storage to the physical host servers in a VMware virtual farm.
>
> **Note:** Network and Server security are always a responsibility of the client.

7.2.6   System Installation

Once TriTech and the Client have prepared the site based on TriTech documentation, to include the System Planning Document and the applicable ISR form is completed, a TriTech Client Installation Services specialist will perform the TriTech installation services.

These services will be performed remotely, unless otherwise specified in the Purchase Agreement, and include installation of the contracted TriTech Software products on the quantity of servers and workstations as specified in the Purchase Agreement.

These installation activities will be coordinated between TriTech and the Client.

> **Note 1:**   All SQL server licenses will be installed by TriTech.

Note 2: The Installation services for different components of the System may be performed at different times, based on the implementation and deployment timelines for each Subsystem.

Note 3: The scope of installation services and the number of servers and workstations to be installed and configured by TriTech is limited to the servers and workstations that have been explicitly listed in the Purchase Agreement. If the Client has been granted Site Licensing for selected TriTech Software, TriTech is only responsible for the initial installation services, and installation of additional servers will be subject to additional charges.

Note 4: If Client does not follow the processes and procedures detailed in the TriTech System Planning Document and this results in a need for reinstallation of the hardware or software, the reinstallation effort will be performed at additional cost to the Client.

Note 5: At TriTech's discretion, TriTech may perform installation activities for certain components of the system on-site.

The following pre-requisites must be in place prior to the start of TriTech Software installation:

a) Site preparation is complete as outlined in the sections above.

b) Hardware has been installed at Client site.

c) Client has provided TriTech with remote connectivity to all applicable servers.

d) Client had provided TriTech all relevant documentation as outlined in the sections above to include licensing keys, IP addresses, username/passwords, and the completed ISR.

7.2.6.1 TriTech Responsibilities

a) Install and configure Microsoft SQL to operate with each of the applicable TriTech product(s).

b) Configure the System servers in the applicable environments (Production, Test, Training, and Disaster Backup environments, if provisioned by the Purchase Agreement).

c) Install and configure the applicable TriTech system(s), such as Inform CAD, and Inform Mobile on the designated servers and applicable environments as specified in the Purchase Agreement.

d) Provide verbal support to the Client with self-installation procedures for the workstations using the TriTech provided Prerequisite Installation DVD and applicable Launch configurations.

e) After completion of the initial installation and configuration of the Inform CAD server, a member of Technical Services team provides a technical hand-off to designated staff from the Client's information Technology team via a conference call. The following major topics will be discussed during this technical hand-off:

   i.   Proper procedures for performing Inform CAD System Backups:

   o File Structure – Inclusions and exclusions

   o Databases

   o Moving Backups to media

    ii.   Proper procedures for refreshing Test/Training system (and related documentation)

    iii.   Approved configuration and use of Virus Scan software

    iv.   Approved procedure for application of Windows updates

    v.   System Upgrade process and procedures

    vi.   Support Website and TriTech list server access

    vii.   Managing/Reviewing system logs (CAD, SQL and Event Logs)

f) Prepare and submit a TCR upon completion of the installation tasks and activities.

7.2.6.2 Client Responsibilities

a) Allocate appropriate onsite Project personnel to support TriTech personnel during configuration tasks as necessary and designate a primary point of contact to be available to address and answer questions that arise during the installation of the baseline application software. Appropriate Client personnel include the necessary IT personnel and database administrator(s) as needed during installation.

b) Complete the configuration of workstations (after the installation of the limited number of workstations by TriTech) using the Prerequisite Installation DVD and applicable Launch configurations.

c) Put in place TriTech's recommended backup procedures as outlined in the System Planning Document and ensure backup procedures are consistently follow beginning at the completion of this task.

d) Install and configure virus scanning software as outlined in the System Planning Document.

e) Provide Web Security Certificates for all TriTech web-enabled applications that require a certificate.

f) After completion of the initial installation and configuration of System servers, the Client will be responsible for maintaining the System based on TriTech System Document, and the technical hand-off from TriTech Technical Services department. Specifically, the Client's IT staff is responsible completing the following activates related to Inform Subsytem servers:

    o   Updating Training/Test Systems with fresh data (from Production) as needed

    o   Continued updating and monitoring of virus scan software

    o   Application of Windows updates

    o   Following the procedures for System Upgrade

    o   Managing/Reviewing system logs (SQL and Event Logs)

    o   Management of Microsoft and other Third Party Software include patch applications and upgrades as needed for new Subsystem versions.

    o   Deployment and use of the Prerequisite Installation DVD for Subsystem upgrades as required.

g) Review and approve the applicable TCRs.

7.3 Implementation of Inform CAD

Inform CAD is implemented through a series of standard steps and process gates. These steps are designed to ensure that the operational needs of the Client are identified, the configurations are verified, and the system is tested to validate the proper functionality of the system prior to deployment. The following sections describe the implementation process for Inform CAD.

7.3.1 Inform CAD System Orientation

The Inform CAD System Orientation is conducted at the Client's site and led by a TriTech Business Analyst. The duration of the Inform CAD System Orientation is generally between 3 to 4 days and includes a Business Process Review of the Client's operations.

Some key discovery points for the Inform CAD System Orientation are as follows:

a) Work Flow – Understanding the setup for work flow from first receipt of an incident through incident completion. This may include time observing Dispatch Staff and Ride-Alongs with field units.

b) Agency Type Setup – The segmentation of operational processes including incidents, units, and call-taker/dispatcher roles and responsibilities.

c) Review reporting requirements (geographic reporting segmentation and the like).

d) Event numbering (Incidents) including master incident numbers, response numbers and case numbers.

It is recommended that the number of attendees in the System Orientation is limited to 10-15 to allow for more effective communication during the session. Based on the key discovery points during this session, it is necessary that the attendees include individuals who can properly address these key points and make configuration decisions.

During the System Orientation session the Business Analyst will facilitate an operational review of Inform CAD by demonstrating various System functionality and start gathering the configuration information.

A System Module Setup worksheet (SMS) and other reference material will be provided to the Client to assist in gathering the required Code Files. Information that cannot be produced during the meeting must be sent to TriTech as specified by the mutually agreed upon schedule.

> **Note**: The Client's provision of Code File information is an early Project checkpoint. Remote Web sessions will be scheduled as a follow up to System Orientation to guide the Client through the Code File data collection process. This information is needed to prepare the DOLF and incomplete, inaccurate or delayed Code File information can have a cascading effect on the Project Schedule.

7.3.1.1 TriTech Responsibilities

a) Schedule the System Orientation meeting in accordance with the Client's availability and the Project Schedule.

b) Prepare and distribute the meeting agendas and documents for Client review or completion two weeks prior to each meeting.

c) Conduct the meetings based on the distributed agenda.

d) Document the Client's requirements and configuration specifications resulting from the System Orientation discussions.

e) Send the System Module Setup worksheet (SMS) and other reference material to the Client.

f) Document and assign owners and due dates to any action items and track all action items to closure.

g) Document any gaps between the standard functionality of the System and functionality required by the Purchase Agreement for further analysis and discussion and/or facilitate the change control process. Client requested changes for changes beyond the scope of the Purchase Agreement will be evaluated at this phase, but will have to be evaluated for the potential impact on the Project Schedule and for additional project charges to be paid by the Client.

h) Schedule one or more Remote Web sessions as a follow up to System Orientation to guide the Client through the Code File data collection process.

i) Produce a System Orientation Report with the key decisions and configuration points as a result of the System Orientation.

j) Prepare and submit a TCR upon completion of relevant activities.

7.3.1.2 Client Responsibilities

a) Provide adequate facilities to comfortably hold the System Orientation to include a computer projector, whiteboards, and adequate seating. Two projectors are preferred.

b) Ensure participation of key stakeholders and decision-makers in the System Orientation process.

a) Provide subject matter experts that can explain the communication center's current call flow and agency structure. These persons should have the ability to make decisions regarding any changes in work flow that may arise through the use of the new Inform CAD System.

c) Provide subject matter experts with the ability to gather and provide the data elements used to build Code Files to TriTech.

d) Provide subject matter experts that will be able to explain the agency's geopolitical/operational boundaries. This person (or persons) should be able to articulate the specific response requirements that will be built within CAD response plans.

e) Provide subject matter experts that will be the CAD super users, as well as a person or persons that will be responsible for the ongoing maintenance of the CAD Code Files and configuration (CAD Administrator).

f) Provide subject matter experts that will be responsible for translating the geopolitical/operational boundaries into data (ESRI shape files) suitable for use within the CAD.

g) Provide subject matter experts that will be responsible for the maintenance of the agency's street centerline data.

h) Provide subject matter experts that can provide information on technical Systems (Interfaces and Hardware/Network) or field-related functions (Inform Mobile or other mobile systems, station alerting and the like).

i) Review and approve applicable TCRs.

7.3.2 Inform CAD Base System Code File Entry

After completion of the Inform CAD System Orientation and receiving requested data from the Client, the assigned TriTech Business Analyst will start and supervise the initial Code File building process. The Business Analyst also configures the system hierarchy based on Client's call flow and operational processes as defined in the System Orientation. The Client will be actively involved at each step of the Code File configuration process through periodic reviews including conference calls and remote web sessions.

A Code File review is completed prior to TriTech initiating the Code File entry process. The review is initiated via one or more web meetings as the Client submits the requested Code File information. The Code File review validates the accuracy and completeness of the information and ensures that there is a mutual understanding of how the information is to be used within Inform CAD.

TriTech will complete the Code File entry for Inform CAD System to a level that will allow for an evaluation of call flow and incident management. Code file build to the level described in Appendix A - Required Inform CAD DOLF Code File build of this SOW establishes a foundation that will validate basic functions such as call-taking layout, System hierarchy, incident numbering, and Incident/Unit displays. Validation through the DOLF process allows for the completion of Code File setup while limiting the risk of rework. This task is considered to have been completed when the Business Analyst has demonstrated that Code Files are complete to the level documented in Appendix A - Required Inform CAD DOLF Code File build.

TriTech personnel will participate in the Code File building process. Some Code Files that require local knowledge of the geography and the physical location of business and high-risk areas of the community (such as response plans, premise, and caution note/hazard information) cannot be built by TriTech. The Client will be responsible for entering or geo-verifying some Code File elements such as premises. The Code Files prepared by TriTech and the Code Files prepared by the Client are described in Appendix A - Required Inform CAD DOLF Code File build. The responsibility for building and maintenance of the System Code Files will transfer to the Client after DOLF with assistance from TriTech's Business Analyst.

7.3.2.1 TriTech Responsibilities

a) Monitor and evaluate Code File submitted by the Client and provide guidance as needed.

b) Conduct one or more web meetings to validate the completeness and applicability of Client submitted Code File information, prior to initiating the Code file entry.

c) Perform a preliminary Code File build of the Client's Inform CAD System at TriTech. This Code File build will be completed based upon the applicable requirements described in Appendix A - Required Inform CAD DOLF Code File build.

d) Facilitate updates to the System Module Setup (SMS) building sheet.

e) Prepare and submit a TCR to confirm the delivery of the SMS worksheet by the Client.

7.3.2.2 Client Responsibilities

a) Provide timely input and updates to the SMS sheet to support the Code File building timelines.

b) Participate in the Code File validation conference call.

c) Continue building the System Code Files (those not built by TriTech) after DOLF (refer to Appendix A - Required Inform CAD DOLF Code File build).

d) Review and approve applicable TCRs.

7.3.3 Geographical Information Services

7.3.3.1 Data Evaluation

The TriTech GIS Analyst will work with the Client to perform a one-time evaluation and initial conversion of the Client provided street center-line GIS data. GIS data must be from a single integrated source when delivered to TriTech for conversion. This analysis will include the following:

a) Routing and Navigability - The data will be analyzed to ensure that there are no breaks in the road network and that an acceptable percentage of addresses[2] within the service area are routable with

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[2] The phrase "acceptable percentage" refers to a decision that the Client must make regarding the acceptable level of navigability needed within the street centerline network. Since editing and maintaining the street data is a Client responsibility, the Client will have to evaluate and make a judgment regarding the impact of the level of accuracy and the cost associated with increasing the navigability of the data.

impedances or speed limits, applicable turn restrictions (one way data), elevations for overpasses and street types.

b) Addressing – Evaluate data for the presence of block ranges, street types, and city designators.

c) Supplemental Coverage - An evaluation of GIS data that may be available for response areas, ESRI compatible overlays including satellite image, and applicable point data to ensure compatibility.

A report will be presented to the Client upon completion of the GIS analysis prior to the import of GIS data into one or more Systems or Subsystems. If there are significant problems with the data, additional GIS work and analysis may have to be added to the project via Change Order. Additional project costs may apply.

7.3.3.2 TriTech Responsibilities

a) Evaluate Client-supplied GIS data to ensure it is formatted correctly for street-centerline display, address point usage and address functions. A report will be generated based on this analysis.

b) Evaluate Client-supplied GIS data to ensure it is formatted correctly for routable functions. A report will be generated based on this analysis.

c) Evaluate Client-supplied GIS data to ensure it is formatted correctly for Inform CAD Quickest Path Unit Recommendations functionality.

d) Review the Client-supplied GIS layers for Inform CAD and Inform Mobile for viewing and execute the initial basic map configuration.

e) Provide a report which summarizes the findings from applicable GIS analysis services.

f) Prepare and submit a TCR upon delivery of the GIS analysis report.

7.3.3.3 Client Responsibilities

a) Provide data in the required format, and per Project Schedule.

b) Provide data to include 1) Centerline data; 2) response areas; 3) viewable/cosmetic layers.

c) Based on the analysis report provided by TriTech, make needed changes to mapping data to allow the resulting GIS data to meet TriTech's mapping data requirements.

d) Review and approve the appropriate TCR.

7.3.3.4 Mapping Data Conversion and Import

TriTech will perform a Mapping Data Import that provides maps for the Inform CAD system. This process does not include making any corrections to the Client GIS data. If the GIS data consists of data from more than one source, TriTech will not be responsible for joining these areas, or "stitching" the areas to create a uniform geographic area.

7.3.3.5 Configuration of Mapping Layers

A TriTech GIS Analyst will configure up to 7 standard GIS layers each for viewing on Inform CAD and Inform Mobile. Such conversion activities will be part of the training process to allow the Client to add their own layers to the map displays in Inform CAD and Inform Mobile. Additional conversion work by TriTech staff is an additional charge and must be authorized by the Purchase Agreement or a Change Order. The standard layers may include the following:

1- Water line features (rivers, streams, creeks)
2- Water polygon features (ocean, lakes, ponds)
3- Airports
4- Railroads

5- Parks
6- City Boundaries
7- County Boundaries

7.3.3.6 Response Area Import Service

If the Client provides Response Area data to TriTech at the time of CAD map conversion, TriTech GIS Analyst will import the Response Areas into Inform CAD. GISLink training will provide the Client with the capability to add, delete, or modify Response Areas for ongoing GIS maintenance.

7.3.3.7 TriTech Responsibilities

a) Provide the initial configuration services to enable use of Inform CAD Quickest Path Unit Recommendations functionality.

b) Perform a mapping data conversion and import of the Client-supplied data into applicable licensed Systems and Subsystems.

c) Provide the initial configuration services to enable use of Inform CAD Quickest Path Unit Recommendations functionality.

d) Prepare and submit a TCR upon completion of the mapping conversion activities.

7.3.3.8 Client Responsibilities

a) After initial GIS conversion, assume responsibility for updating the data using TriTech provided GIS tools to ensure that data is up to date for Go Live.

b) Review and approve the applicable TCR.

7.3.4   Inform CAD Demonstration of Licensed Functionality (DOLF)

Once the initial Code File and configuration phase is complete, CAD is installed at the Client site, and the initial GIS map conversion is complete, a Demonstration of Licensed Functionality (DOLF) is conducted. This working meeting includes a review of the preliminary Code Files and configuration, a review of imported GIS data, and hands-on training on software utilities for completing the Code File build and on-going Code File management. The DOLF for Inform CAD will be 3-4 days and will be held at the Client's facilities, and on the Client's system hardware, after it has been configured by TriTech.

Client will be responsible for supplying the requested data to TriTech no later than four (4) weeks prior to DOLF to allow sufficient configuration time. The data will be requested as a follow up to the System Orientation for the Inform CAD. The configuration of some CAD modules may be delayed based on the Client's decision, and consultation with TriTech Business Analyst.

It is also required that the Client's centerline conversion be completed at no later than four (4) weeks prior to DOLF. In order to meet this deadline, all GIS data must be delivered to TriTech in required format per the agreed upon schedule. Any delays will result in a cascading effect on the project timelines.

Participants include key members of TriTech's implementation team and should not generally exceed ten (10) core members of the Client's implementation team. The Client's team should include representatives of dispatch, field operations and administration (reporting). At the conclusion of the session, a DOLF report is produced which documents the core software configuration, Code Files, and activities to be completed by the Client. Any issues that require follow-up action, including any outstanding Go Live issues will be documented in the applicable Project journal. Any issue that is determined to be outside the scope of this Project, as defined herein, requiring a modification or enhancement to the TriTech Software will be addressed through the Change Control process.

In preparation for the execution of the DOLF, the Client system should be built to a level that will allow for the demonstration of modules and features that the Client has licensed. The Code Files completed pre-

DOLF are defined in Appendix A - Required Inform CAD DOLF Code File build. Based upon this level of Code File build, system functionality and workflow will be examined during the DOLF.

Additional Code Files (as specified in Appendix A - Required Inform CAD DOLF Code File build) will be configured during the DOLF.

Following the DOLF process, ownership of Code Files transfers to the Client. Post DOLF, the Client will enter the balance of the Code Files (not built by TriTech). These are typically geo-centric items that require local knowledge of the community. The Client also becomes responsible for maintaining Code Files (personnel, unit, premise, caution notes and the like) that must be continuously updated to keep the Code Files in GO-Live ready status. During this phase, the assigned TriTech Business Analyst will provide consultation services.

> **Note**: Inform CAD DOLF is an event applicable to Inform CAD only. No other Systems or Subsystems will be demonstrated during this session.

7.3.4.1 TriTech Responsibilities

a) Schedule the DOLF meeting in accordance with the Client's availability and the Project Schedule.

b) Prepare and distribute the meeting agendas to all required attendees a week prior to each meeting.

c) Conduct the meetings based on the distributed agenda.

d) Provide initial hands on training on the applicable system and introduction to different modules and their configurations.

> **Note**: This training is not meant to be comprehensive for end user understanding of the Subsystem. The purpose is to give the participant an understanding of basic features, call flow and how the configuration files influence them.

e) Review the maps for Inform CAD.

f) Introduce the Client to and begin documentation within the Subsystem Journal.

g) Document and assign owners and due dates for any action items and track all action items to closure.

h) Develop and deliver the DOLF report which serves as an "as built" document describing the build of the system following the DOLF.

i) Handoff the management the Code Files to the Client.

j) Provide the Client team with a copy of the Inform CAD User and Administration Guides.

k) Prepare and submit a TCR upon completion of the DOLF, and upon delivery of the DOLF report to the Client.

7.3.4.2 Client Responsibilities

a) Provide adequate facilities to comfortably hold the DOLF to include an overhead projector. Two projectors are preferred. DOLF also requires workstations for each participant.

b) Provide subject matter experts that can examine the hierarchy build as articulated to the Business Analyst in terms of the agency structure.

c) Provide subject matter experts that can examine the proposed call flow. These persons should have the ability to make decisions regarding any changes in call flow that may arise through the use of the new Subsystem.

d) Provide participants that are versed with the ability to continue the configurations, or Code File build once ownership transfers.

e) Provide participants that will be able to verify the agency's geopolitical/operational boundaries.

f) Provide participants that were responsible for translating the geopolitical/operational boundaries into data (ESRI shape files) suitable for use within the Subsystem, and are able to validate those boundaries.

g) Provide participants that will be responsible for the maintenance of the agency's street centerline data.

h) Assume ownership for the continued build and maintenance of the system under the guidance of the TriTech project team.

i) Ensure participation of key stakeholders and decision-makers in the DOLF process.

j) Observe the change control process for any requested software changes.

k) Review and approve the applicable TCRs.

7.3.5   Inform CAD Functional Acceptance Testing (FAT)

TriTech will execute the Functional Acceptance Testing (FAT) of the Inform CAD, after DOLF and prior to User Training. This process is completed prior to Final Acceptance of the System. The purpose of the FAT is to test specific functionality of the CAD System and to formally document that the Inform CAD meets the required functionality according to the Purchase Agreement between the Client and TriTech.

Since the focus of the Functional Acceptance Testing is the functionality of the System and not a validation of the Code Files, it is not necessary that all Code Files are built prior to conducting this test process. This Functional Test process consists of running a number of tests designed to verify the functionality of the Inform CAD.

The Functional Acceptance Tests are performed based upon standard TriTech FAT documents that have a standard content and format. The standard TriTech FAT documents will be submitted to the Client prior to testing.

Before the FAT is administered the Client must sign-off on the receipt of the standard FAT documents and verify that these tests will be used of validation of the System functionality for Pre-Production and Post Go Live assessment of features for Software Acceptance.

After delivery of the Inform CAD system to the Client's site and completion of DOLF, a TriTech Business Analyst will conduct the FAT on the Client's Inform CAD system, at the Client site and on the Client System hardware. The purpose of this process is to validate that Inform CAD features are working correctly per Standard System functionality as described in the FAT documents. The testing will be fully completed and problems with individual tests will be documented, if applicable.

This process tests Inform CAD features as installed and configured at the Client site, therefore it is important that this process is executed early within the implementation cycle so that any issues discovered may be resolved. Since installation of the hardware is a predecessor to conducting the FAT, any delays to the installation of the Client's system could impair TriTech's ability to resolve issues without affecting project timelines. Other significant tasks and processes are dependent upon the Inform CAD passing the FAT process. TriTech will not train the Client's end users until the Inform CAD has passed the FAT.

Once the FAT has been successfully completed the Client's Inform CAD system will have been considered to have completed Pre-Production Acceptance (see note below). A TCR will be submitted that affirms that the Inform CAD has passed this test. Upon completion of FAT, the Client and TriTech will review the list of FAT failures (if any), perform an assessment of the errors, and determine the timeline for remedying the issues (pre versus post Go Live).

TriTech will repeat any failed FAT test following the correction of any issues which has caused the test to fail. A full retest of the System will not be conducted to verify the FAT exceptions.

> **Note**: TriTech may organize at its discretion, separate breakout FAT sessions for subsections of the FAT documents that are applicable only to one agency (for example, applicable only to Law or Fire agencies). Each test will be executed once, and all applicable users and agencies must attend the FAT session and observe the tests.

> **Note**: Successful completion of the FAT as part of the Pre-Go Live testing process does not constitute Final System Acceptance if such a Post-Go Live Reliability Testing is defined in the Purchase Agreement.

7.3.5.1 TriTech Responsibilities

a) Deliver TriTech's standard FAT documents to Client for review no later than four weeks prior to conducting the FAT.

b) Provide a TCR to the Client to approve the receipt of the FAT documents.

c) Assist the Client in conducting FAT based upon the FAT documents.

d) Identify and document any issues and exceptions discovered during the Acceptance Test Procedures

e) Upon successful completion of the FAT, provide a TCR to the Client, to be signed and returned to TriTech. All FAT exceptions will be noted in the TCR.

f) Schedule follow up testing for validation of any exceptions to the FAT after such exceptions have been resolved, and document the results.

7.3.5.2 Client Responsibilities

a) Work toward the timely completion of all predecessor tasks to include the base system installation.

b) Provide adequate facilities to execute the FAT.

c) Review and signoff on the FAT documents that have been delivered by TriTech no later than one week prior to commencement of the FAT. (through approval of a TCR)

d) Participate in the FAT by providing operational subject matter experts that have the authority to provide validation that the tests have passed.

e) Assist TriTech in documenting FAT findings and results.

f) Review and approve the applicable TCRs.

> **Note**: Inform CAD User Training may only be conducted after successful completion of the FAT, and if the identified exceptions are not critical in nature. The details of Inform CAD related training is included in later sections of this SOW.

7.3.6   Inform CAD Legacy Data Conversion

TriTech will implement a structured methodology for Inform CAD data conversion. For the purposes of this Project, TriTech will arrange the extraction of the data from the legacy Tiburon CAD, and delivery to TriTech for the data conversion. This task will not include data cleaning or scrubbing. Formats suitable for import into can include Excel, MDB, CSV, and ODBC access from MS SQL; however, the specific format to be used for this Project should be reviewed between the respective TriTech and Client teams.

This Project provides the following Legacy data conversion services for Inform CAD:

1) CAD Premise Conversion

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2) CAD Caution Notes Conversion

3) Up to two years of CAD Historical Incident Conversion.

The conversion of prior CAD data is a process that involves several steps. TriTech develops a data conversion plan to the Client detailing the data mapping between the legacy System and TriTech Inform CAD. During this phase of work, TriTech will work closely with the appropriate individuals from the Client to map each data element in each legacy application to the appropriate target data element in the Inform CAD databases and reflect this information in the data conversion plan.

Generally, there is an initial conversion to bring the data set close to Go Live, a second conversion just before Go Live and a last conversion after Go Live. Each step does not involve a re-conversion of previously converted data. These steps do not include ongoing maintenance of imported data. The scope of data conversion is limited to converting the Premises, Caution notes, Incidents and units. As long as the legacy data elements have a relevant counterpart in the target Inform CAD databases, TriTech can map the data and import it into the Inform CAD database structure.

Conversion of Premises and Caution notes can be performed independent from the Prior Incident data. A small sub-set of the data will be initially converted and loaded to validate the process. Upon successful completion of this test, the Premise and Caution notes data will be converted and imported to the system close to Go Live, as a onetime process. Additions to Premises and Caution notes in the old system, between the time of data conversion and Go Live will be manually entered to the new system.

It is imperative that a member of the Client's staff be available to support the data conversion effort. Many operational questions will arise that depend on the data and operational expertise of the Client's staff.

This process is considered complete once the last set of data has been converted for the new Inform CAD system. The Client is responsible for the validation of the data.

> **Note:** Legacy data conversion will not include conversion of attachments to Premises or Historical Incidents into TriTech databases.

7.3.6.1 TriTech Responsibilities

a) Extract the data from the legacy Tiburon CAD application

b) With assistance from the Client, define a data mapping for each legacy application.

c) Work with the Client to plan the data migration and develop a data conversion plan.

d) Complete the data conversion, based on the defined scope of the Project and based on the phases that are defined for this process.

e) Prepare and submit a TCR upon completion of the initial data conversion (pre-Go Live).

f) Prepare and submit a TCR upon completion of the final data conversion (Post-Go Live).

> **Note:** TriTech does not perform data scrubbing or cleaning on the Client's legacy data.

7.3.6.2 Client Responsibilities

a) Identify all legacy applications containing data that must be migrated to the new System.

b) Review the extracted data and approve it for use for data conversion.

c) Perform any data cleaning and modification activities that may be necessary prior to conversion of the legacy data into Inform CAD.

d) Assist TriTech in defining a data mapping for each legacy application by providing the following:

e) Legacy application software architecture (operating system; application software; database management system)

f) Database schema (if data resides in a DBMS) or file layouts (if data resides in flat file formats)

g) Data definition for each data element (data format, description of data field use, etc.)

h) Data relationships between data files and data elements

i) Obtain cooperation from any third party vendors for the legacy application that may have an impact on the data conversion process.

j) Perform validation for the data conversion.

k) Review and approve the applicable TCRs.

> **Note:** Due to the need for specific knowledge of the Client's area, the geo validation process for the converted data is the responsibility of the Client.

7.3.7   Inform CAD Training

> **Note:** Training classes are conducted based on the quantities that are specified in the Purchase Agreement. The appearance of a course description in this Statement of Work does not mean a course will be conducted – it must be listed in the Purchase Agreement.

Inform CAD Training is generally conducted on consecutive weekdays during business hours (Tuesday-Friday, during business hours). Alternate training schedules (e.g., Monday class starts, multiple classes per day, evening and weekend classes) will be subject to an additional charge.

TriTech and the Client have made arrangements for a modified Inform CAD training schedule to include 12 hour sessions as well as weekend and night classes. A modified pricing has been created for these classes.

The training classes related to Inform CAD and its subsystems are classified into three general groups:

a) Classes that are dependent upon specific Client configurations and requirements; therefore they are only conducted on the Client System after completion of the Functional Acceptance Test (FAT) and in preparation of Go Live. Inform CAD Call Taker/Dispatcher User Training Course is an example of these classes.

b) Classes such as GISLink that are delivered to a specialized group within the Client's team during the course of the Project to assist them with implementation and maintenance of the System on a routine basis.

c) Classes such as System Administration Training and CAD API Training that are not dependent upon individual Client configurations and are generic in nature. These classes are held at TriTech facilities based on a regular schedule, and are offered to attendees from different agencies.

The Inform CAD Demonstration of Licensed Functionality (DOLF) session is not listed as a training class, but includes certain training elements on the CAD setup utilities.

A detailed description of these classes is provided below.

7.3.7.1 TriTech Responsibilities (for all Inform CAD training activities)

a) Conduct a training orientation via conference call between the assigned TriTech Training personnel and the designated Client representative. The objective of this session is to define the curriculum for the Training, based on the configurations of the Subsystem.

b) Conduct the training in increments of one (1), eight (8) hour days.(Certain Inform CAD training sessions for this Project has been modified to accommodate 12 hour days.)

c) Provide feedback to Client Supervision as to the progress of the students.

d) For the Training classes that are held at TriTech, provide adequate training facilities and equipment.

e) Prepare and submit a TCR upon completion of each class or group of consecutive classes.

7.3.7.2 Client Responsibilities (for all Inform CAD training activities)

a) Participate with the training orientation by providing a decision maker that can articulate the specific business practices that have been used in guiding the build of the Client's System.

b) Provide adequate facilities for the execution of the training to include adequate seating for each workstation and an overhead projector.

c) Provide a supervisor for each class that can answer agency specific questions as related to the build of the Client's system.

d) Review and approve the applicable TCRs.

7.3.7.3 Inform CAD Call Taker/Dispatcher User Training Course (Client site)

The Inform CAD User Training course is generally a four (4) day class, and training days are a maximum of eight (8) hours in length. TriTech and the Client have mutually modified this training based on a three day class which include some 12 hour sessions. Prior to training, TriTech will hold a training orientation to develop an Inform CAD training plan for the Client. This plan will take into consideration the multi-agency and multi-site setup of the System. The training orientation should be held between TriTech Training personnel and designated Client personnel. Client personnel should include person(s) who can articulate the specific Client business processes related to configuration of the Client's System. TriTech Training personnel will tailor the training curriculum to include those business practices where applicable. Given that questions may arise for specific agency procedures during the course of the training, TriTech recommends that the Client have a supervisor present at each training class. Ideally, this supervisor would have participated in part with the implementation process.

The number of students attending the User Training course will be limited to ten (10) students per class.

This class will be held at the Client's site. The Client is responsible for providing adequate training facilities, including a conference room with adequate space and seating/conference table space, white board, projector, and computer projector (capable of 1024x768 resolution).

7.3.7.4 Inform CAD Dispatch Supervisor Training (Client site)

The Inform CAD Dispatch Supervisor Training class has been designed as a five (5) day class that includes a four (4) day Inform CAD Call Taker/Dispatcher User Training followed by a one (1) day Inform CAD Supervisor training. This class is designed for the Dispatch Supervisors with the goal of preparing them to support the users after Go Live by answering their questions and addressing post-Go Live common problems. This class will include topics such as PowerLine configuration, Premise building and maintenance, Personnel maintenance, Vehicle Manager, and other areas that may require assistance from the supervisors. This class is recommended only for the supervisors.

The class size will be limited to ten (10) students.

7.3.7.5 Inform CAD Train-the-Trainer (Client site)

The focus of this three (3) day course is to prepare selected Client personnel to train new dispatch and administrative personnel in the use of Inform CAD. Attendees will learn to apply principles of adult learning such as non-verbal communication skills, presentation skills, methods of delivery and objective writing skills. The goal is to prepare these personnel to apply TriTech's concepts of training. The course does not

include Inform CAD user training for the participants. Prior to attending this class the participants must attend an Inform CAD Call Taker/Dispatcher User Training Course.

Training classes will be conducted between Tuesday and Friday. The number of students attending the User Training course will be limited to five (5) students per class.

This class will be held at the Client's site. The Client is responsible for providing adequate training facilities, including a conference room with adequate space and seating/conference table space, white board, and computer projector (capable of 1024x768 resolution).

Prerequisites: Completion of the Inform CAD Call Taker/Dispatcher User Training Course.

7.3.7.6   GISLink Utility Training Course (Client site)

The focus of this course, conducted at Client's site, is to prepare selected Client personnel to import and use existing GIS data in Inform CAD and manage the GIS data used by Inform CAD and Inform Mobile. GISLink is an Inform CAD Utility that provides a way for Clients to intelligently import Client GIS data into the Inform CAD databases. It consolidates GIS data related tools for maintaining and using GIS data in TriTech products. It consists of a Windows Forms application, a command line console application, and a programming API that consists of a set of reusable publicly exported classes and methods.

Training classes will be conducted between Tuesday and Thursday, based on mutual availability of the TriTech and Client staff. Training course will be limited to two (2) students per class.

This class will be held at the Client's site. The Client is responsible for providing adequate training facilities, including at least one Inform CAD console with GISLink utility installed on it.

Prerequisites: GIS knowledge and background; familiarity with ESRI tools.

No other activities (including but not limited to TriTech performing follow up changes to the Client's maps, development of special material for the Client, or a follow-up one-on-one session with the Client's GIS staff) are within the scope of this class.

7.3.7.7   Inform CAD System Administration Training (TriTech Site)

The System Administration Training course provides an overall administrative perspective of the system including operating system and database management software and equipment components. This comprehensive 4-5 day course is held at TriTech headquarters, and trains System Administrators and staff members on how to set up and administer infrastructure configurations for the Client-configured Inform CAD System. The class will also provide attendees with sufficient skills to perform system maintenance manage and monitor interfaces, manage system operation and database settings for application support, maintenance and backup, and general troubleshooting skills.

Attendance of the Client-designated individuals should be coordinated and scheduled through TriTech's Project Manager and should be coordinated in such a way that does not interfere with progress of the Project. System Administration classes are held regularly in TriTech's training facility in San Diego and may have attendees registered from agencies other than the Client.

Training classes start on a Monday and end on Friday. The number of attendees will be based on the number of seats that have been purchased by the Client. If more than one seat is purchased by the Client, the Client has the option to send their attendees to one class or different classes.

The Client is responsible for the travel fees and out of pocket expenses for their staff attending this class in TriTech's facility.

Prerequisites: Basic Windows and SQL Server knowledge

No other deliverables or follow up activities, including creating special material or applications for the Client, are included within the scope of this class.

7.4 Implementation of Inform Mobile and Inform Me

7.4.1   Inform Mobile System Orientation

The Inform Mobile System Orientation is conducted by a TriTech Inform Mobile Business Analyst. Inform Mobile is an Inform CAD-Integrated System, meaning that a significant amount of mobile functionality is dependent upon CAD functions as well as the configuration of the Client's Inform CAD system. Given this interdependency, the Inform Mobile System Orientation generally will follow Inform CAD System Orientation, and occasionally is deferred until after verification of the hierarchy at DOLF.

During the Inform Mobile System Orientation, the Business Analyst will give a demonstration of the Mobile product. It is suggested that Client personnel who will be responsible for facilitating Mobile end user training should also take part in the configuration of Mobile.

The TriTech Business Analyst will document the Client's configuration options in a Configuration worksheet which will be presented to the Client team for review and approval prior to configuring the application. Timely review and approval of this document by each agency is key to timely completion of the configuration work. Functional Acceptance Testing of the Mobile system is based on a standard set of FAT test documents, as they are applicable to specific configurations of the system.

7.4.1.1 TriTech Responsibilities

a) Schedule the Inform Mobile System Orientation meeting in accordance with the Client's availability and the Project Schedule.

b) Prepare and distribute the meeting agendas and documents for Client review or completion to all required attendees two weeks prior to each meeting.

c) Conduct the meetings based on the distributed agenda.

d) Document the Client's requirements and configuration specifications resulting from the System Orientation discussions for Mobile.

e) Provide documentation and subject matter expertise to assist the Client with provisioning the mobile infrastructure.

f) Document and assign owners and due dates to any action items and track all action items to closure.

g) Document any gaps between the standard functionality of the System and functionality required by the Purchase Agreement for further analysis and discussion and/or facilitate the change control process. Client requests for functionality beyond the scope of the Purchase Agreement will be reviewed at this phase, but will have to be evaluated for the potential impact on the Project Schedule and for additional project charges to be paid by the Client.

h) Complete the configuration worksheets and deliver to the Client for review and approval.

i) Prepare and submit a TCR upon completion of the System Orientation activities, and upon delivery of the configuration worksheets to the Client.

7.4.1.2 Client Responsibilities

a) Provide adequate facilities to comfortably hold the System Orientation to include a computer projector, whiteboards, and adequate seating. Two projectors are preferred.

b) Provide communications center and participating agencies representatives authorized to make decisions with regard to the interrelationship between Mobile use and dispatcher control functions such as status updates; traffic stops and the like.

c) Provide subject matter experts that can describe operational requirements of field users.

d) Provide a subject matter expert for Mobile WAN connectivity, firewall and network configuration and in-vehicle computer hardware.

e) Ensure that requested information such as data elements necessary to begin the Subsystem build are provided within a timely manner.

f) Upon receiving the Mobile configuration worksheet, review and provide approval, or any necessary changes to TriTech in a timely manner.

g) Participate in the Change Management Process for any requested software changes.

h) Review and approve the applicable TCRs.

7.4.2 Inform Mobile Map Data Import

The process of Inform Mobile Map Data Map Import converts the Inform CAD streets data into a format that can be used by Mobile. This process also includes adding necessary map layers for the Client.

7.4.3 Inform Mobile Configuration

Inform Mobile Business Analyst will configure the Mobile based upon the options that have been documented in the Mobile configuration sheet, once the servers have been installed at the Client site. The Business Analyst will also use these configurations for preparing the FAT document. These activities will be performed remotely.

7.4.4 Inform Mobile and Inform Me Functional Acceptance Testing (FAT)

Inform Mobile Functional Acceptance Testing (FAT) follows a similar approach as described under Inform CAD. A Mobile Business Analyst performs the FAT with the Client, prior to Train-the-Trainer. TriTech and the Client will ensure participation of all participating agencies and variations of configurations in this testing process. This process will be based on the standard TriTech FAT documents. The FAT documents have a standard content and format. The standard TriTech FAT documents will be sent to the Client for review prior to conducting the tests. The FAT results are documented in a TCR for verification and approval by the Client.

TriTech will repeat any failed FAT tests following the correction of any issues which has caused the test to fail.

7.4.4.1 TriTech Responsibilities

a) Deliver TriTech's standard FAT documents to the Client no later than two weeks prior to conducting the FAT.

b) Provide a TCR to the Client to approve the receipt of the FAT documents.

c) Install at least five Mobile clients (device) to conduct the FAT.(In the event that more devices are required to test all configurations TriTech and the Client will work together to appropriately install sufficient devices in preparation for testing.)

d) Assist the Client in conducting the FAT in accordance with the FAT documents.

e) Identify and document any issues discovered during the FAT.

f) Prepare and submit a TCR upon completion of FAT, documenting any exceptions to the FAT.

7.4.4.2 Client Responsibilities

a) Work toward the timely completion of all predecessor tasks to include the base system installation.

b) Provide adequate facilities to execute the FAT.

c) Conduct the FAT by providing operational subject matter experts.

d) Assist TriTech in documenting FAT findings and results.

e) Review and approve the applicable TCRs.

7.4.5 Inform Mobile Training

Inform Mobile Training classes are conducted based on the quantities that are specified in the Purchase Agreement. These classes are conducted on consecutive days, on the weekdays during business hours (Tuesday-Friday, during business hours). Alternate training schedules (multiple classes per day, evening, and weekend classes) will be subject to additional charge. Training classes will only be delivered after the FAT have been completed and the results are documented in a TCR.

Typically TriTech trains a group of the trainers from the Client field users, and that group completes training the balance of the field users.

A detailed description of these classes is provided below.

7.4.5.1 Inform Mobile Administration Course

Mobile Administration training is a hands-on course provided by experienced trainers who have both training and public safety experience. This half (½) day course prepares the Mobile Administrator to configure and maintain the Mobile Server and Mobile Interface(s). Access to the Mobile Server and Interface(s) is required. During this process TriTech Business Analyst/System Engineer will instruct the client on installation of Mobile Clients and provides assistance for installation of up to five (5) Mobile devices. The Client will be responsible for installation of the balance of Mobile devices.

The course includes the operation of the Mobile system including customization of specific screen layouts, Active & Waiting Incident Queue, Unit Queue, and agency-specific screens.

Training classes will be conducted between Tuesday and Friday. The number of students attending the Administration Training course will be limited to eight (8) students per class.

Prerequisites: Knowledge of: 1) HTML/XML, CSS, and JavaScript 2) SQL, especially views, stored procedures, and database schema; and 3) Standard GPS protocol (TAIP and NMEA)

7.4.5.2 Inform Mobile Train-the-Trainer Course

Mobile Train-the-Trainer training is a hands-on course provided by experienced trainers who have both training and public safety experience. The course prepares personnel to use Inform Mobile and teach others how to use Inform Mobile. The course can accommodate up to eight (8) students with working and configured Mobile devices. It is desirable that each participant have their own configured Mobile device.

The course includes user operation including starting and stopping the application, updates, screen layouts, messaging, status changes, mobile maps, incident assignments and incident updates. Hands-on training and agency scenarios may vary by Agency. The duration of this class may be between four and six (4-6) hours. Training classes will be held between Tuesday, and Friday. The number of students attending the User Training course will be limited to eight (8) students per class.

This class will be held at the Client's site. The Client is responsible for providing adequate training facilities, including a conference room with adequate space and seating/conference table space, white board, projector, and computer projector (capable of 1024x768 resolution).

Prerequisites: Completion of a Microsoft Windows Tutorial (this may be waived upon demonstrated ability to work with Windows), typing skills of a minimum of 25 words/minute and Mobile field user experience.

7.5 Integration Testing of Inform CAD, Inform Mobile, Inform Me, and Interfaces

Once the FAT is concluded for all subsystems (Inform CAD, Inform Mobile, and each of the interfaces) and in preparation for Go Live, TriTech and the Client will conduct a one day Integration Testing. The Integration testing will be conducted based on a number of scenarios that test the call flow from the call creation to disposition in CAD. These scenarios include the Inform CAD, Inform Mobile, Inform Me and Interfaces that can be tested in the pre-production environment and are scheduled to Go Live at the same time. A small group of the Client staff (at least 1-2 dispatchers of each discipline and 6 Mobile field users) should participate in this test with TriTech. TriTech will work with the Client on defining a set of test scenarios that test the system based on the Client's practices. It is recommended that the Client utilize sample calls from their legacy System. These scenarios must be signed off prior to commencement of the integration testing. At the successful completion of Integration Testing without any issues that prevent the System to be taken Live the Client shall provide written approval that the System is ready for Go Live.

7.5.1.1 TriTech Responsibilities

a) Schedule an Integration Testing with the Client.

b) Assist the Client in preparing test scenarios that can be used during this test and closely simulates the normal Client's call flow.

c) Prepare and submit a TCR to the Client documenting the tests that will be used for Integration Testing.

d) Participate in the Integration Testing with the Client.

e) Participate in the resolution of identified issues.

f) Prepare and submit TCRs upon successful completion of the Integration Testing.

7.5.1.2 Client Responsibilities

a) Provide test scenarios that closely simulate the Client's normal call flow.

b) Conduct the Integration Testing.

c) Review and approve the applicable TCRs.

7.6 Implementation of TriTech.com IQ and Analytics

TriTech.com IQ and Analytics are implemented through a series of standard steps and process gates. These steps are designed to ensure that the operational needs of the Client are identified, the configurations are verified, and the system is tested to validate the proper functionality of the system prior to deployment. The following sections describe the implementation process for TriTech.com IQ and Analytics.

7.6.1 Historical Data Import and Synchronization

The historical data import is a process by which TriTech extracts applicable data from TriTech applications and imports that data into TriTech.com IQ. The data is then available for search, reporting, analytics and dashboard design functionality subject to subscriptions purchased.

The Historical data import includes up to two (2) years of data from each of the following TriTech source applications. Note: Each application must be on release versions designated as TriTech.com IQ compatible.

- TriTech's Inform CAD

The data available in IQ from Inform CAD is listed in each applications' IQ Field Mapping Guide.

7.6.1.1 TriTech Responsibilities

a) Deliver the TriTech.com Client Readiness Checklist to Client and review with Client once completed and returned.

b) Install and Configure Synchronization.

c) Perform historical Bulk Import.

d) Configure TriTech.com IQ:

- o   Provision Agencies within IQ
- o   Provision Administrator Users within IQ

e) Prepare and submit Task Completion Reports (TCR) to the Client for approval to document delivery of products and services.

7.6.1.2 Client Responsibilities

a) Complete the TriTech.com Client Readiness Checklist, return and review with TriTech once completed, address any necessary requirements.

b) Provide remote access to TriTech's implementation team to Client servers.

c) Make appropriate Client staff available during the installation to assist TriTech's implementation team in resolving any issues during the process.

d) Review and approve the applicable TCRs.

7.6.2   TriTech.com IQ and Analytics Administration Training (Remote)

This TriTech instructor led class is designed for those individuals who will be responsible for the administration of TriTech.com IQ. Participants will be instructed on how to configure, administer, and operate TriTech.com IQ in an administration role. The recommended class size for this training is up to 9 participants.

This training is up to 4 hours and is delivered in one remote session.

At the completion of the training, participants will be able to perform the following:

- Access and successfully login to IQ
- Understand the TriTech.com IQ site
- Understand the management console for TriTech.com IQ
- Create and manage roles
- Create and manage users

7.6.2.1 TriTech Responsibilities

a) Schedule the Administration training in accordance with the Client's availability and the Project Schedule.

b) Provide standard Administration training sessions for Client personnel

c) Prepare and submit TCRs upon completion of the training.

7.6.2.2 Client Responsibilities

a) Schedule appropriate personnel to attend Administration training.

b) Ensure participation of the appropriate personnel.

c) Review and approve the applicable TCRs.

7.6.3 TriTech.com IQ Core End User Training (Remote)

This TriTech instructor led class is designed for the end users of TriTech.com IQ. End users include roles such as officers, records clerks, dispatchers, dispatch supervisors, managers, and agency administrators. This class may be attended by the end users, or trainers who will be training the end users within the agency(ies). The recommended class size for this training is up to 12 participants.

This training is up to 4 hours and is delivered in one remote session. This session may be recorded for future reference.

At completion of this training, participants will be able to perform the following:

- Access and successfully login to IQ
- Understand the TriTech.com IQ site
- Use links within the site
- Use Online Help
- Use Search Filters
- Save searches and manage saved searches
- View Search History
- View Search Details
- Set up Search Alerts and manage alerts
- Create and access reports

These half day courses are conducted remotely and trains a core set of end users on the TriTech.com IQ System. Typically, the remaining end users will be trained via Client delivered training sessions.

The number of students attending the User Training course will be limited to no more than twelve (12) students per class.

> **Note**:   All remaining TriTech.com IQ end users must complete Client provided end user training.

7.6.3.1 TriTech Responsibilities

a) Schedule the TriTech.com IQ Core End User Training class(es) in accordance with the Client's availability and the Project Schedule.

b) Conduct the training session(s) on a mutually agreed to schedule.

c) Provide training material including, if available, recorded training.

d) Prepare and submit a TCR to the Client upon completion of the training.

7.6.3.2 Client Responsibilities

a) Provide adequate facilities to comfortably hold the training activities.

b) Ensure participation of the appropriate personnel.

c) Ensure that all TriTech.com IQ core end-users attend the end-user training provided by TriTech.

d) Provide TriTech.com IQ training to all other end users.

e) Ensure that each TriTech.com IQ end-user completes relevant training before assigning the end-user a username and password to access the TriTech.com IQ.

f) Review and approve the appropriate TCR.

7.6.4 TriTech.com IQ Analytics End User Dashboard Training (Remote)

This TriTech instructor led class is designed for individuals who will be using Analytics Dashboard. The recommended class size for this training is up to 9 participants.

This training is up to 8 hours and is delivered in one remote session.

At completion of this course, participants will be able to perform the following:

- Access Analytics Dashboard
- Successfully Login to Analytics Dashboard
- Filter Data
- Use Analytical Combo Controls
- Use interactive data selection to identify trends and key relationships
- Perform operational trending and historical analysis
- Expedite and enhance reporting activities
- Measure performance against work plan or work productivity levels

This courses is conducted remotely and trains a core set of end users on the TriTech.com Dashboard System. Typically, the remaining end users will be trained via Client delivered training sessions.

> **Note**: All remaining TriTech.com Analytics Dashboard end users must complete Client provided end user training.

7.6.4.1 TriTech Responsibilities

a) Schedule the TriTech.com IQ Core Analytics Dashboard Training class(es) in accordance with the Client's availability and the Project Schedule.

b) Conduct the training session(s) on a mutually agreed to schedule.

c) Prepare and submit a TCR to the Client upon completion of the training.

7.6.4.2 Client Responsibilities

a) Provide adequate facilities to comfortably hold the training activities.

b) Ensure participation of the appropriate personnel.

c) Ensure that all TriTech.com Analytics Dashboard core end-users attend the end-user training provided by TriTech.

d) Provide TriTech.com Analytics Dashboard training to all other end users.

e) Ensure that each TriTech.com Analytics Dashboard end-user completes relevant training before assigning the end-user a username and password to access the TriTech.com Analytics Dashboard.

f) Review and approve the appropriate TCR.

7.6.5 TriTech.com Analytics End User Report Training (Remote)

This TriTech instructor led class is designed for individuals who will be using TriTech.com IQ reporting. The recommended class size for this training is up to 9 participants.

Typical time length for this training is up to 4 hours and is delivered in one remote session.

At completion of this course, participants will be able to perform the following:

- Access IQ Reports

- View reports

- Edit reports

- Copy reports

- Export reports

- Use the Report Writer (if applicable)

- Use filtering options

- Sort, Group, and generate Total Counts

- Share reports

This course is conducted remotely and trains a core set of end users on the TriTech.com Analytics Report System. Typically, the remaining end users will be trained via Client delivered training sessions.

> **Note**: All remaining TriTech.com Analytics Report end users must complete Client provided end user training.

7.6.5.1 TriTech Responsibilities

a) Schedule the TriTech.com IQ Core Analytics Report Training class(es) in accordance with the Client's availability and the Project Schedule.

b) Conduct the training session(s) on a mutually agreed to schedule.

c) Prepare and submit a TCR to the Client upon completion of the training.

7.6.5.2 Client Responsibilities

a) Provide adequate facilities to comfortably hold the training activities.

b) Ensure participation of the appropriate personnel.

c) Ensure that all TriTech.com Analytics Report core end-users attend the end-user training provided by TriTech.

d) Provide TriTech.com Analytics Report training to all other end users.

e) Ensure that each TriTech.com Analytics Report end-user completes relevant training before assigning the end-user a username and password to access the TriTech.com Analytics Report.

f) Review and approve the appropriate TCR.

7.7 Implementation of System Interfaces

7.7.1 Inform Standard Interfaces' Requirement Gathering and Configuration

The functionality and applicable configuration options for each of the TriTech Standard Interfaces are described in the Interface Requirements Documents (IRD).

A TriTech Systems Engineer will review the IRDs for each of the applicable Standard Interfaces with the Client's subject matter experts and prepare a configuration worksheet (ICD) detailing the parameters that will be set to meet the desired functionality for the Interface. This process may be performed for different interfaces at different times. This process will be performed remotely via phone conference. The Client is responsible for engaging the third party vendors whose systems are being interfaced with, so that an end to end flow of the data is discussed.

TriTech Systems Engineer will configure and install the Standard interfaces on Client's system hardware. IRDs are not Client specific documents, and not subject to edits, changes, or approval. Client specific

configurations for Standard Interfaces are documented in configuration worksheets (ICD) and must be approved prior to configuration of the interface.

Installation and configuration of Standard Interfaces can only be performed by qualified members of TriTech System Engineering or Engineering teams, using proprietary tools. Any changes to the requirements of the Records Check Interface from the approved Configuration worksheet will be subject to additional cost and configuration time. Once each of the Standard Interfaces are installed and configured, they can be staged for FAT.

TriTech is not responsible for coordination, management, or covering the cost of any software, work, customization, coding or testing that is required to be performed by the third party vendors engaged in the implementation of the standard or custom interfaces, unless the work is defined under a subcontract with TriTech within the scope of this Purchase Agreement.

Note 1: Standard Interfaces are developed and enhanced within the TriTech product version process for TriTech software products (such as Inform CAD). Changes to standard Interfaces will require adherence to the development life cycle therein. Changes to standard Interfaces that are delivered within this life cycle will require the Client's system to be on a compatible version.

Note 2: The Client's provision of Interface Requirements for Standard Interfaces is an early Project checkpoint. This information is needed to prepare the configuration sheets for Standard Interfaces. Incomplete, inaccurate or delayed information can have a cascading effect on the Project Schedule, and may result in a significant delay in completion of the project, since modification to Standard Interfaces are only released with a major version of Inform CAD.

Note 3: Any changes to the configuration of Standard Interfaces made by the Client makes the Interface non-supportable, and all troubleshooting efforts resulted by such changes will be subject to additional cost.

Note 4: The Client is responsible for any services or software needed from such Third Party Systems to allow for interaction with the Third Party System or for connecting to TriTech Interfaces Software in the absence of a Third Party API. TriTech is not responsible for any cost associated for the API, any required third party lab or certification testing, cost associated with required programming or custom work by the third party vendors, or any license fees that may be required by the third party vendors.

7.7.2   Custom Interfaces' Requirement Gathering and Configuration

A TriTech Systems Engineer will review requirements specified by the Purchase Agreement applicable to Custom Interfaces, and lead gathering detailed operational requirements within the scope of the Purchase Agreement. This process may be performed for different interfaces at different times. This process will be performed remotely via phone conference.

Once sufficient information has been gathered to describe the operational functionality of the Interface, the Systems Engineer will create Operational Scenario Documents (OSD) detailing the operation of the Interface. Client's input in detailing all relevant information regarding the operations of these interfaces and interactions with the external systems are essential to timely and accurate development of the OSDs. The

completed OSDs will be provided for Client's review. This document must be approved by both the Client and TriTech prior to development. The Client will be given a TCR that the document was provided, meets the requirements and has been reviewed with the Client. The Client must review the OSD within 10 days from delivery by TriTech, and provide comments and questions back to TriTech or provide approval if no changes or edits is necessary.

The Client is responsible for obtaining the API for each of the third party vendors that TriTech applications are interfacing with. The API must be for the version of the third party software that TriTech will be interfacing with. The timelines for providing these documents to TriTech is concurrent with development of the OSD, so that any limitations associated with the level of integration with the third party application can be taken into consideration.

Delays in review and approval of the OSDs can impact timely development of the interfaces, and ultimately delay the Go Live of the system. All requirement changes for Custom Interfaces after approval of the OSD shall follow the Change Management process, and may be subject to additional cost and development time.

Upon approval of the OSD the custom interfaces are developed by TriTech engineering team. Once developed, these interfaces will be installed on Client equipment and go through testing with the Client and applicable third party vendors who own and administer the vendor side of the interface.

The Client is also responsible for coordinating execution of a mutual Non-Disclosure Agreement (NDA) between the third party vendors and TriTech before any technical information or documentation can be exchanged or testing can commence.

TriTech is not responsible for coordination, management, or covering the cost of any software, work, customization, coding or testing that is required to be performed by the third party vendors engaged in the implementation of the standard or custom interfaces, unless the work is defined under a subcontract with TriTech within the scope of this Purchase Agreement.

Note 1: The Client's provision of Interface requirements for each of the Custom Interfaces is an early Project checkpoint. This information is needed to develop the OSDs for Custom Interfaces. Incomplete, inaccurate, or delayed information can have a cascading effect on the Project Schedule, and may result in a significant delay in completion of the project.

Note 2: The Client is responsible for providing Application Programming Interface (API) documentation for the Third Party Systems. The API must document the integration process for the level of interface integration defined by TriTech's response to the RFP. The Client is responsible for any services or software needed from such Third Party Systems to allow for integration with the third party system.

Note 3: The scope of functionality for the custom interfaces is limited to 1) the capability of the TriTech System being interfaced and 2) the Application Programming Interface (API) capabilities of the external system being interfaced.

Note 4: High level descriptions of each of the custom interfaces in Appendix D - Custom TriTech Interfaces, will become the basis for the scope of detailed requirements, described in the OSD. Any changes in the requirements documented in the System OSDs, post approval of the OSDs are subject to formal Change Order.

Note 5: The Client is responsible for coordinating the development of the vendor side of all interfaces to the third party applications for the interfaces that the vendor is not a TriTech Subcontractor, based on the Purchase Agreement.

Note 6: TriTech is not responsible for any cost associated for the API, any required third party lab or certification testing, cost associated with required programming or custom work by the third party vendors, or any license fees that may be required by the third party vendors.

7.7.3   Interface Functional Acceptance Testing (FAT)

All Standard and Custom Interfaces are subject to Functional Acceptance Testing (FAT). FAT for Standard Interfaces is based on a standard set of TriTech FAT documents for each interface, as they are applicable to Client's configurations.

FAT for Custom Interfaces are based on the functionality described in the approved OSD for the interface. This process will be based on an FAT document developed by the Systems Engineer. The test source will be the provided IRDs; therefore all Standard Interfaces will be tested against standard, predefined TriTech FAT documents. These tests have a standard format and will be sent to the Client for review prior to conducting the FAT.

TriTech will repeat any failed FAT test following the correction of any issues which has caused the test to fail.

7.7.3.1 TriTech Responsibilities

a) Provide the IRD to the Client for review for each of the Standard Interfaces.

b) Prepare and submit a TCR to the Client, documenting the delivery of the IRDs to the Client for Standard Interfaces.

c) Review the IRD with the Client for each of the Standard Interfaces and gather and document the configuration options for the Interface.

d) Install and Configure the Standard Interfaces based on the agreed upon configurations.

e) Gather the operational requirements for each of the Custom Interfaces and develop and OSD.

f) Provide the OSD to the Client for review and approval. (for custom interfaces only)

g) Prepare and submit a TCR to the Client, documenting Client's approval of the OSD for each of the Custom Interfaces.

h) Develop the Custom Interfaces based on the approved OSD.

i) Install and configure the Custom Interfaces.

j) Prepare and submit TCRs upon installation of the Interfaces.

k) Develop FAT documents reflecting feature descriptions found within the provided and applicable OSDs.

l) Provide the FAT documents to the Client for review prior to conducting the FAT for each interface.

m) Provide a TCR to the Client to approve the receipt of the FAT documents.

n) Assist the Client in conducting Acceptance Testing in accordance with FAT documents.

o) Prepare and Submit a TCR, documenting completion of FAT including any exceptions to FAT.

p) Resolve FAT issues and re-run tests as required.

7.7.3.2 Client Responsibilities

a) Participate in the review of the IRDs and provide the configuration information to TriTech in a timely manner.

b) Provide the information that are necessary for development of the OSD for each Custom Interface.

c) Obtain the API for each of the third party applications that TriTech interfaces with and provide the document to TriTech.

d) Review and approve the OSDs based on the required timelines.

e) Engage the third party vendors in the requirement gathering, development, testing and other interface development activities.

f) Review and approve the FAT documents.

g) Participate in the FAT.

h) Assist TriTech in documenting FAT findings and results.

i) Review and approve the applicable TCRs.

7.8 System and Subsystem Go Live

The "cut over" of each of the Inform CAD, Inform Mobile, Inform Me and Inform CAD Browser Subsystems and Interfaces into the production environment is a highly orchestrated activity that will require a number of resources from both the Client and TriTech teams. It is recommended that Inform CAD, Mobile, and the Inform CAD Subsystems (such as the Go Live interfaces) are taken into production at one time.

7.8.1 Inform CAD, Mobile, and Inform CAD Subsystem Go Live

The "cut over" of the Inform CAD, Inform Mobile, Inform Me, Inform CAD Browser and Interfaces into the production environment is a team approach. It is the intent of the Project to take all these Subsystems Live at the same time.

TriTech utilizes a pre-Go Live checklist for Inform CAD with various activities to ensure readiness of the System prior to Go Live. There are some tasks that must be performed by the Client, which are detailed in the pre-Go Live checklist. This activity begins several weeks in advance of Go Live.

TriTech will provide the Client with a standard Go Live authorization letter that must be approved by the Client no later than 3 weeks prior to Go Live. This letter will list all the Subsystems that are scheduled for the Go Live, and any exceptions to Go Live applications. It also memorializes the date and time of Go Live, as well as the Client's confirmation that the System and staff are ready for Go Live.

TriTech will provide the Client with a Go Live authorization letter, detailing the date and time of Go Live and those components that will be taken into Live operations. It is necessary that the Client approves this letter no later than 2 weeks prior to the scheduled Go Live to secure the Go Live support resources.

Prior to Go Live the pre-production test data will be purged from the Client's system. The equipment is staged to move into the communications center and/or units. Units and personnel are logged into the System and Interfaces are activated.

At Go Live, the TriTech and Client implementation teams will support the users in the transition to the new System. Any issues are logged and resolved through TriTech Technical Services. A more detailed Go Live plan will be provided with adequate lead time.

The duration of the Go Live support for Inform CAD and its subsystems for this project will be 3 days (to include pre and post cutover) by 2 people, supplemented by 2 additional days of support by one person. The

Project Manager will be an active participant in the Go Live process. The breakdown of onsite Go Live Services is as follows:

Inform CAD, Mobile, and Inform CAD Interfaces:

> 2 people for 3 days covering 24 hour shifts.

> 1 person for 2 days covering 24 hour shifts.(As an extension to the initial Go Live support)

7.8.1.1 TriTech Responsibilities

a) Provide to the Client a Go Live check list with adequate time for review.

b) Prepare and submit a Go Live authorization letter to the Client.

c) Identify the participants for the Go Live in accordance with the terms of the Purchase Agreement.

d) Have specified personnel onsite in advance of the Go Live date to begin the final inspection of the Client's system as part of the Go Live check list.

e) Provide System monitoring resources following the actual System cut over as specified within the Purchase Agreement.

f) Prepare and submit a TCR upon first Go Live operation of the Inform CAD.

7.8.1.2 Client Responsibilities

a) Timely review of the Go Live checklist.

b) Complete Mobile roll out process in sufficient time to allow for testing prior to Go Live.

c) Review and approve the Go Live authorization letter no later than 3 weeks prior to the scheduled Go Live.

d) Provide adequate persons for the supervision and monitoring of the Client's Inform CAD end users 24/7 beyond the participation of the TriTech staff.

e) Provide dedicated workstations (preferably 2 workstations) for TriTech support staff during Go Live support period.

f) Provide 24/7 support by the Client's IT department.

g) Develop a process for the reporting and resolution of field mobile issues.

h) Review and approve the applicable TCR.

7.9 Reliability Acceptance Period

Reliability testing for each of the Subsystems will start upon the Go Live for that Subsystem and will end 30 days post Go Live, based on successful satisfaction of below criteria. The Reliability Acceptance Period of each Subsystem is independent from other Subsystems, and Subsystems that are taken Live in later phases of the Project.

Upon Go Live, the County will use the system for a thirty (30) consecutive day Reliability Test period to verify operational system and system functionality in a live environment. If no Critical or Urgent Priority Software Errors are reported during such thirty (30) consecutive day period, the system shall be deemed to have achieved Final Acceptance.

If a Critical or Urgent Priority Software Error occurs during the first fifteen (15) days, TriTech will restart the thirty (30) consecutive day period. If the error occurs after the fifteenth (15th) day, the test will resume from the point when the error occurred.

At the conclusion of the Reliability Acceptance Test, the Subsystem will be deemed accepted by the County.

8 PROJECT CLOSURE

When all pre and post go live project deliverables have been completed, Project Closure activities will take place. Support of the System and Subsystems are transitioned to TriTech's Technical Services Group. Any remaining Project related administrative tasks are completed by TriTech and Client. Project documentation is archived and primary Client interaction is officially handed over from the TriTech Project Manager to the TriTech Account Executive.

8.1 System Transition

Following Go Live, there is a transition period where the Client moves from the implementation team to the support team. This transition will change the Client's primary point of contact from the Project Manager back to the Account Executive. Software support will be handled through the Technical Services Group. The Client's issues will be entered, tracked, and managed via a computerized and web-enabled issues tracking system. This tracking system will become available to the Client at system installation.

8.1.1.1 TriTech Responsibilities

a) Provide payment reconciliation, final TCRs and final invoices.

b) Transition the TriTech point of contact from the Project Manager to the Account Executive and Technical Support Department.

c) Provide continued support based on terms of Purchase Agreement.

8.1.1.2 Client Responsibilities

a) Provide approval of Project TCRs within five (5) business days.

b) Provide payment reconciliation and payment of final invoices.

9 APPENDIX A - REQUIRED INFORM CAD DOLF CODE FILE BUILD

The purpose of this table is to identify specific portions of the System Code files, and modules that must be built and configured prior to Inform CAD System DOLF.

Note: Items identified with asterisk (*) are optional, and will be built as specified, only if the Client chooses to use them.

Code File Item	Must Be Built by TriTech Prior to DOLF	To Be Built at DOLF	To Be Built After DOLF by the Client, Under TriTech's Supervision
Advisor		Build 2 completely	X
Assigned Incident Queue		Build 2 completely	
Assigned Units Queue		Build 2 completely	
Audit Reasons *	Build up to 10		X
Bolo Type [Law agencies only] *	Build up to 20		X
Burn Permit Type*	If provided prior to DOLF, build up to 10	X	X
Call Response Disposition *	Build up to 10	X	
Call Taking		X	
Caller Types *		Review functionality	X
Cancellation Reasons	Build up to 15		X
Capability Types *		Review functionality	X
Cardfile *		Review functionality	X
Cardfile categories *		Review functionality	X
Caution note category		Review functionality	X

Caution Note Source		Review functionality	X
Caution Notes		Review functionality	X
Change Destination Reason *		Review functionality	X
Color Assignment		X	
Confidential Information*		Review functionality	
Controlling Dispatcher		X	
Custom Data Field Builder *		Review functionality	X
Custom Timestamp Builder *		Review functionality	X
Customer Information		X	
Dispatch levels *		Review functionality	X
Employee Certification Type *		Review functionality	X
Employee Positions *		Review functionality	X
Employee Schedule Change *	Build up to 10		X
Explorer Setup Utility		X	
Eye Description [Law agencies only]	(TriTech uses NCIC standard)		
Facility Warning Reasons *		Review functionality	X
Gender Description-[Law agencies only] *	(TriTech uses NCIC standard)		
GIS REQ. Cities Tables	X (Part of GIS Conversion)		
GIS REQ. County Tables	X (Part of GIS Conversion)		

GIS REQ. Map Layers (parks, water, rails, etc.)	X (Part of GIS Conversion)		
GIS REQ. Response Areas	At least one will be built for DOLF. If Provided to TriTech prior to DOLF, this information will be imported to Inform CAD	Review functionality	X
GIS REQ. State Tables	X (Part of GIS Conversion)		
GIS REQ. Streets Database	X (Part of GIS Conversion)		
Hair Description [Law agencies only]	(TriTech uses NCIC standard)		
Hierarchy	X		
Hydrant Class Type *	One to be built prior to DOLF if applicable	Review functionality	X
Incident Types	Build all Incient types that are provided to TriTech prior to DOLF	Review functionality	X
Inter-Agency security and comment sharing (if applicable)		X	
Late Response Reasons *		Review functionality	X
License Plate Types [Law Agencies only] *	(TriTech uses NCIC standard)		
Location Type Utility	Build all Incident types that are provided to TriTech prior to DOLF	Review functionality	X
Message Audit Utility		Review functionality	
Method Call Received *		Review functionality	X
MSI - Call Taking Settings		Review functionality	X
MSI - Global Settings		X	
MSI - Priority Builder		X	
MSI - Toggles		X	

MSI- Miscellaneous Functionality		X	
MSI-Nomenclature		X	
MSI-Odometer *		X	
Multi Agency Setup *		Review functionality	X
New Messaging		X	
Number Setup Utility	X		
Out of Service Reasons		Review functionality	X
Paging		Review functionality	X
Password Security		Build 2 completely	X
Pending Incident Queue		Build 2 completely	
People as Capabilities *		Review functionality	X
Permission Security Manager		Build 2 completely	
Permit Status*		Review functionality	X
Permit Type*		Review functionality	X
Personnel Manager	Build up to 50 prior to DOLF		X
Powerline Setup Utility		Review functionality	
Premise Utility		Review functionality	X
Protocol Module		Review functionality	X
Prescheduling Cal Taking Thresholds		Review functionality	X

Priority Builder	Build up to 10 prior to DOLF		X
Problem (Incident Sub-Type)	20		X
PSAP Codes		Review functionality	
Race Description [Applicable to Law agencies only] *	(TriTech uses NCIC standard)		
Radio Channels *		Review functionality	X
Reset Timer Reasons *		Review functionality	X
Resource Group Manager *		Review functionality	X
Resource Icon Assignment	Build up to 20 prior to DOLF	Review functionality	X
Response Area Builder	Build at least one prior to DOLF	Review functionality	X
Response Plan Manager		Review functionality	X
Response-Incident Editor Queue		X	
Roster Cancellation Reasons*		Review functionality	X
Roster Exception Reasons *		Review functionality	X
Roster Setup Utility *		Review functionality	X
Roster Template Builder *		Review functionality	X
Rotation Categories *		Review functionality	X
Rotation Suspension Reasons		Review functionality	
Shift Type	X		
Shorthand Comment Builder *		Review functionality	X

SOP Module		Review functionality	X
Sound Manager *		Review functionality	X
SSM Plan Manager *		Review functionality	X
Station Post Manager	X		X
Status Names		X	
Street Finder alias Utility		Review functionality	X
Timers and Warnings Utility *		Review functionality	X
Toggle on-off		X	
Transport Priority Types	X		X
Transport Protocol Types	X		X
Unit Cross Staffing		Review functionality	X
Unit Names	Build up to 50 prior to DOLF		X
Unit Status Queue		Build 2 completely	
Upgrade- Downgrade Reasons	X		X
User Functionality Groups	Build up to 5 prior to DOLF	Review functionality	X
Vehicle Certification Type *		Review functionality	X
Vehicle Manager	Build up to 50 prior to DOLF		X
Vehicle Types *			X

10 APPENDIX B - CONTRACTED MODIFICATIONS TO STANDARD TRITECH SOFTWARE PRODUCTS

Note: Any changes in the requirements documented in the System OSDs, post approval of the OSDs are subject to formal Change Order.

List of Product Modification OSDs:

There are no product modifications proposed for this project.

11 APPENDIX C - STANDARD TRITECH INTERFACES

> **Note**: The scope of functionality for these Standard interfaces is limited to 1) the capability of the TriTech System being interfaced and 2) the capabilities of the external system being interfaced.

> **Note**: High level descriptions of each of the custom interfaces below will become the basis for the scope of detailed requirements, described in the OSD. Any changes in the requirements documented in the System OSDs, post approval of the OSDs are subject to formal Change Order.

> **Note**: The Client is responsible for coordinating the development of the vendor side of all interfaces to the third party applications for the interfaces that the vendor is not a TriTech Subcontractor, based on the Purchase Agreement.

List of Project's Standard Interface:

Production Environment:

a) One (1) Standard ANI/ALI Interface

b) One (1) Standard Alpha numeric Paging Interface

c) One (1) Standard Station Alerting Interface (Note: Standard Station Alerting Interfaces for TriTech include WestNet, Zetron M25 and M26, US Digital Design, and Locution)

d) One (1) Standard TeleStaff Interface

e) One (1) Standard Push to Talk Interface (limited to standard PTT and Emergency notification functionality with GPS)

   Note: The scope of this Push to Talk interface may grow beyond the Standard functionality. TriTech and the Client will work on obtaining the operational and technical requirements and provide a cost estimate for the additional scope. These changes will change this interface from a Standard Interface to a Custom Interface, shall the Client choose to add it to the scope of the Project.

f) Three (3) licenses for the Standard Integration with ProQA

g) Three (3) Standard CAD to External System Data Transfer (FireHouse, ESO, and ERS)

h) One (1) NCIC/CLETS Interface as defined below.

Test Environment:
   None

NCIC State Message Server

The Standard NCIC State Message Server includes the following Queries and Connections:

1. Standard Queries

   The following standard queries/masks will be included in the project, subject to applicable access (State switch access in most States and County access in California). These standard queries can be performed via Inform CAD PowerLine, Inform CAD Query screen, and Inform Mobile Query screen.

   - Driver's License Query
   - Firearms Query (If available through State/NCIC, this may include historical registration and stolen entry; historical wants)
   - License Plate Query (If available through State/NCIC, this may include LoJack)
   - Name/DOB Query (If available through State/NCIC MS, this may include Warrant or Missing/Unidentified person Information)
   - Property Lookup Query
   - VIN Lookup Query (Information on specialty vehicles, such as boat, aircraft and the like is only available based upon data available through State/NCIC. Specialty vehicle databases and quires can be added as custom connections or quires.)
   - Administrative Messages (available through State/NCIC for CAD only)

   Note: None of above queries include updates (Cancel, Clear, Locate, Modify), or new entries.

   Note: Above queries are included as long as they can run against Standard Connections, or Custom connections specified by the Purchase Agreement.

2. Custom Queries

   Custom queries can be performed via Inform CAD Query screen and Mobile Query screen only. For an additional cost, custom PowerLine commands can be developed for these queries.
   Examples of custom queries include, but are not limited to the following:

   - New record entries (For each of Standard or Custom queries)
   - Updates (Clear, Cancel, Locate, Modify)- (For each of Standard or Custom queries)
   - Boat queries to separate databases not available through standard connections
   - Restraining order

   Custom Queries included in this Purchase Agreement.
   None

3. Standard Connections

   The following standard connections will be included in the project, subject to applicable access (State switch access in most states and County access in California). Queries can be configured to access the following connections:

   - State Justice Switch (County in California)
   - One Police RMS System
   - Inform CAD (BOLO and Plate History)

4. Custom Connections

   Local Warrants Databases

12 APPENDIX D - CUSTOM TRITECH INTERFACES

Note: The Client is responsible for providing Application Programming Interface (API) documentation to these Third Party Systems that document the integration process for the level of interface integration defined by TriTech's response to the RFP. The Client is responsible for any services or software needed from such Third Party Systems to allow for interaction with the Third Party System API or for connecting to TriTech Interfaces Software in the absence of a Third Party API.

Note: The scope of functionality for these custom interfaces is limited to 1) the capability of the TriTech System being interfaced and 2) the Application Programming Interface (API) capabilities of the external system being interfaced.

Note: High level descriptions of each of the custom interfaces below will become the basis for the scope of detailed requirements, described in the OSD. Any changes in the requirements documented in the System OSDs, post approval of the OSDs are subject to formal Change Order.

Note: The Client is responsible for coordinating the development of the vendor side of all interfaces to the third party applications for the interfaces that the vendor is not a TriTech Subcontractor, based on the Purchase Agreement.

List of Project's Custom Interfaces (OSDs to be provided):

There are no Custom Interfaces proposed for this Project.

13 APPENDIX E - SUBCONTRACTOR(S) STATEMENT(S) OF WORK

List of attachments:

1. Athena Advanced Networks Statement of Work
2. Deccan Statement of Work

Scope of Services

Finalize the configuration

Once selected, Athena will work with TriTech project management and the client staff to finalize the configuration. *All parties agree that the scope and price of the configuration may change as a result of this process.*

Procure the hardware/software

Athena will order, track and receive the equipment and software as agreed upon during the finalization process.

Install, Rack, and Configure VMware Infrastructure

Athena personnel will be onsite to perform the following tasks outlined below. These tasks provide the general steps for creating the necessary environment to support the TriTech project.

Tasks to be performed by Athena

Equipment:

1. Inventory and verify received hardware order
2. Install equipment into new or existing rack
3. Cable and label all equipment
4. Configure KVM switch

Network Configuration:

1. Install network switches
2. Configure switches with proper vlans needed for virtualization (management, iSCSI, vMotion) and LAN connectivity

SAN Configuration:

1. Configure SAN storage
2. Create disk groups and LUNs to be used for VMware datastores
3. Assign LUNs to the Dell servers for VMware
4. Configure SAN replication

VMware Configuration:

1. Install VMware ESXi on the host servers
2. Create virtual switches for management, iSCSI, vmotion

3. Build virtual machine for vCenter on one of the servers
4. Install and configure vCenter
5. Create a cluster in vCenter
6. Add VMware hosts to the cluster
7. Present the shared SAN LUNS to servers
8. Create the necessary virtual machines for the TriTech Systems (CAD, database, etc.)
9. Configure VMware site recovery manager (SRM)
    a. Includes SAN replication tasks
10. Test SRM
11. Document and diagram the configuration

Tasks to be performed by TriTech / Monterey CO

TriTech Software Systems and / or Loveland CO is responsible for the following tasks:

1. Notify Athena when equipment has arrived to schedule installation
2. Provide network cabling
3. Ensure power in the server room is available
4. Provide KVM ports and cables for ESXi host servers

DECCAN INTERNATIONAL

Decision-support software solutions for Fire & EMS

Monterey Emergency Communications Department

LiveMUM 2.0 Statement of Work

December 1, 2015

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Change History

Version	Date Modified	Published By	Notes
1.0	12/01/15	Julie Desmarais – Deccan International	

Table of Contents

1. Purpose of Statement of Work

This statement of work has been created to define the work to be performed by Deccan International for the **Monterey Emergency Communications Department (ECD)** therein after referred to as the "Client" to build Deccan International's LiveMUM 2.0 application.

1.1 General Client Responsibilities

In addition to those Client responsibilities stated elsewhere in this SOW, the Client is responsible for:

a) Network/communications connections (e.g., Online Meeting, telephone, VPN, and other voice/data connections), or ongoing network/communications associated with installation, operation or support of the proposed system including the establishment and maintenance.

b) Unless specified as a defined service to be delivered by Deccan International, the installation, configuration, maintenance (including patch management and upgrades of Microsoft software required by the System) shall be completed by the client.

c) Unless specified as a defined service to be delivered by Deccan International, the configuration of machine names and IP addresses for servers to be utilized by the System.

d) The provision of code files and GIS data as requested by Deccan International staff. This information must be provided on a timely basis in order to meet the project timelines. This information will be provided in the format specified in Appendix A and Appendix B

e) The timely review and approval of the Acceptance Test Procedures (ATP), and other project documentation as further defined in this SOW.

f) Active timely reviews of code file data and GIS data.

g) Making the appropriate personnel available for scheduled training sessions

h) Provide a training facility with the required computer and audio-visual equipment for training.

1.2 Project Exclusions

Work, software, services, hardware, Systems, Subsystems, product/software modifications or any other deliverables not described in this SOW or the Agreement will not be included in the Project. Changes in scope will only be executed through a mutually agreed upon Change Management Process, as described in the Project Management Plan. The Agreement will be the governing document, and any deliverables that are not explicitly stated in the Agreement shall not be delivered in the Project.

2. LiveMUM 2.0 Application

Live Move-Up Module (LiveMUM 2.0) is a software tool that interfaces with a live CAD system to display to Communication Center dispatchers current coverage and offer move-up recommendations based on various criteria (business rules and/or operational procedures) set by the Communication Center. LiveMUM 2.0 does the following:

•   Takes the guesswork out of move-ups.

•   Eliminates dependence on pre-plans, which are of limited use.

•   Allow dispatchers to test out and evaluate the effectiveness of planned move-ups.

•   Equips dispatchers with move-up rationale to show field units why a move-up is necessary.

•   Ensures a consistency of move-up quality across all the dispatchers.

2.1 General Specifications

1.   LiveMUM 2.0 analyzes CAD data and displays color-coded maps for specified unit types, which illustrate coverage, thus allowing dispatchers to view weaknesses and strengths in coverage.
2.   LiveMUM 2.0 makes tactical redeployment (move-up) recommendations based on criteria set by the Communication Center.
3.   Communications center staff may test the effectiveness of their own move-ups, taking into account information not available to the LiveMUM 2.0.
4.   LiveMUM 2.0 incorporates an extensive list of business rules and/or operational procedures and strategies that dispatchers utilize when dispatching and redeploying units.
5.   LiveMUM 2.0 allows dispatchers to manually adjust a unit's expected time until available to ensure recommendations are accurate.
6.   A user may make alternate recommendations beyond LiveMUM 2.0's standard recommendations. LiveMUM 2.0 features the ability to calculate coverage scores and what the impact may be by using the user's recommendation.

2.2 Software Specifications

1.   LiveMUM 2.0 offers a user-friendly interface employing a Graphic User Interface (GUI) operating in a Windows environment.

2.   Once installed, Communication Center staff may use LiveMUM 2.0 to perform area coverage & redeployment analysis in a convenient fashion without the assistance of analysts or other external personnel. Please see sections below for details on area coverage and redeployment analysis.

3. User inputs and actions are intuitive and utilize a pointing device, pull-down menus and standardized tables.

4. The primary display is the client's map with the client's response areas displayed. The display supports zoom features for selected response areas and/or grids.

5. LiveMUM 2.0 permits the storage and retrieval of logs on disk for later analysis.

6. LiveMUM 2.0 allows the application to be run in three settings: Live, Static, and Replay.

7. Live setting allows for move-up recommendations to be determined using real-time data from the CAD system and customized by client's business rules.

8. Static setting allows the client to create scenarios and specific move-up recommendations for testing purposes. Feedback from this testing will be provided to Deccan to incorporate business rules.

9. Replay setting allows client to replay past log files to review move-up recommendations or configure LiveMUM 2.0 for future scenarios. This tool is useful to determine performance during extreme settings such as multi-alarm fires.

10. LiveMUM 2.0 allows multiple map layers to be included such as water layers, major roads or highways, hospitals, and major landmarks. These layers may help make the visual map easier to navigate for end users.

11. LiveMUM 2.0 features the ability to analyze call volume to predict when move-ups may not be required due to low call volume. This tool helps minimize unnecessary move-ups in addition to the regular business rules configured by the user.

12. Calculations are made based on all capabilities so as to not negatively impact one capability while positively impacting another. Also, this will help minimize the number of move-ups and maximize the effectiveness of move-ups.

13. LiveMUM 2.0 supports AVL for real-time data tracking. Units may be posted to their current real-time location based on X/Y coordinates and not solely on unit status messages received from the CAD system.

2.3 Current Coverage (Area Coverage) Specifications

Current coverage is displayed in the form of Current Coverage window. This window includes a tab for each capability whose current coverage is to be displayed. This window's specifications are listed below:

1. Coverage is displayed as color-coded response zones based on Client specified criteria.

2. Unit availability is displayed using color-coded stations.

3. Zooming in and out is supported in the coverage map display.

4. The user is allowed to click and see which units are present in a station. Unit attributes displayed are listed below:

   a. ID

   b. Status

   c. Estimated Time Back in service (ETB)

   d. Last Status Date-Time.

5. The user may switch on and off the map's station labels.

6. The Coverage Performance is displayed above the map as percentages.

7. A list of units and their ETBs are displayed in their corresponding tabs (based on capability). User may modify these ETBs.

8. CAD messages and some Coverage Window User Actions are logged for analysis.

2.4 Recommendation (Redeployment Analysis) Specifications

1. The concept of station depth is used to illustrate coverage.

2. Units with multiple capabilities are supported.

3. Cross-staffed units are supported.

4. The Move-Up methods of nearest neighbor, leapfrog, & bump and cover are all supported and may be used individually by capability modeled.

5. Unmovable units are supported.

6. Preferred move-up stations are supported.

7. Preferred move-up units are supported.

8. Minimum score increase is supported to eliminate ineffective move-ups or maximize the score impact of move-ups. For example, a move-up may only be triggered if it increases the coverage score by 10% or more.

9. Coverage Drop thresholds are used to ensure that moved-up-from areas do not worsen too much.

10. LiveMUM 2.0 may be configured to automatically recommend units back to their home station once coverage is increased in the area they were moved to.

11. Specific event types can be configured to prompt move-up recommendations.

12. A user-defined constraint on the move-up travel time may be implemented.

13. The user is alerted to move-up recommendation with a pop up window.

14. When a recommendation is generated, the following are displayed and enabled:

    a. Maps displaying the coverage before and after the evaluated move-up are shown.

    b. The recommendation is displayed in a grid for easy view.

    c. The user can check or uncheck a recommendation and see the effects.

    d. The user can append recommendations and see the effects.

15. All recommendations are logged. Some user activities in the Recommendation windows are also logged. Client may combine recommendation log files to review daily, weekly, or monthly recommendations to determine problematic areas for coverage or which units are most useful for recommendations.

3. Project Implementation

3.1 Client's Points of Contact

Successful implementation of the LiveMUM 2.0 application needs active participation and collaborative effort between the Client and Deccan. The support needed is primarily in the form of ability to ensure that the data is provided to Deccan in a timely fashion. As such, Deccan expects the Client to assign a primary point of contact familiar with the dispatch and move-up operations to partner with Deccan International in building applications. Since move-ups impact field operations, a field person experienced with move-ups should be assigned to participate in discussions. Please see the document titled "Deccan Project Resources Worksheet – LiveMUM 2.0" for additional details.

3.2 Web Meetings

Throughout the install process, the Client needs to have periodic meetings with Deccan International, which will occur remotely, via an online meeting tool such as JoinMe. These meetings will be scheduled with the Client as and when they are needed. For this purpose the Client is expected to provide a computer connected to Internet, a speakerphone, and a projector that can project the computer screen for convenient viewing by multiple people.

3.3 Project Phases

The application will be built and delivered in three phases. The application requires of Client's relevant business rules to be provided in a tabular format. Each phase involves dialog and feedback between Deccan and the Client to ensure that the business rules built into LiveMUM 2.0 meet the Client's needs. Project phases are employed to ensure accuracy for the application. Each of these phases, in the order of occurrence, is outlined below with associated tasks and responsibilities.

3.3.1 Phase I – Collection of Incident Data and Map Data

During this phase Deccan International will work closely with the Client to retrieve the necessary data from its CAD system that is required to build the application. Deccan International will also work with the Client to obtain the necessary GIS data such as streets, stations and polygon layers.

The Tasks in Phase I are as follows:

Deccan International's Responsibilities:
1. Project Kickoff. An initial meeting summarizing expected timelines and data requirements will be held between Deccan Project Manager and client.

Client's Responsibilities:
1. Identify and assign one key contact as project manager for the agency and a single point of contact for GIS and CAD data. This may be the same individual.

2. Retrieve raw Incident, Activity and CAD data from CAD System in specified format (Appendix A). Place CAD Data on Deccan FTP site.

3. Retrieve and upload raw map data from client in specified format (Appendix B).

4. Retrieve all necessary unit information and initial business rules for agency's move-up policies.

3.3.2 Phase II – Building of LiveMUM 2.0 Static Scenario Evaluator

Deccan International's Responsibilities:
1. Convert data into the standard format used by Deccan International.

2. Import data into mapping software for use with LiveMUM 2.0.

3. Build ETB (Estimated Time Back) table, defaulted station depths, station and unit information, and other client specific data into the application.

4. Work with Client to gain an understanding of current move-up procedures and strategies. These are known as "Business Rules" throughout this document.

5. Build "Depth" tables, one for each capability to be modeled in the application that reflects agency's tradeoff between coverage and doing too many move-ups. If possible, these will be built through business rules.

6. Build "Coverage Drop Thresholds" tables, which reflect the agency's tolerance for coverage worsening in moved-from areas.

7. Setup initial Business Rules if provided by client.

8. Deliver LiveMUM 2.0 SSE to client via Deccan FTP site.

9. Provide client with download and installation instructions for LiveMUM 2.0 SSE.

10. Provide client with training of Static/Offline LiveMUM 2.0 application via the online meeting tool JoinMe.

Client's Responsibilities:
1. Download and installation of LiveMUM 2.0 SSE.

2. Schedule time to be trained about application's functionality and test configurations.

3. Provide feedback to Deccan based off initial offline testing for future changes.

3.3.3   Phase III – CAD Testing & Acceptance
During the third phase Deccan International will setup and test LiveMUM 2.0. Deccan International and the Client will schedule regular feedback sessions that will be used to define and tune the coverage and business rules. The following work will be performed:

Deccan International's Responsibilities:
1. Make configuration changes as required after feedback provided by client. Client will provide feedback after testing LiveMUM 2.0 in Test/Production CAD environment.

2. Assist client with testing the CAD/LiveMUM 2.0 interface by analyzing the initial Synchronization and Tracking logs received by the application.

3. Schedule formal acceptance testing

4. Perform acceptance with client or provide acceptance testing document for client to test application with individually.

Client's Responsibilities:
1. Provide Deccan International with VPN connection to Test\Production CAD workstation if available.
2. Work independently, or with Deccan, to verify successful interfacing with CAD system in test and/or production environment.
3. Verify configuration of business rules is acceptable and closely matches requirements outlined by client.
4. Perform acceptance testing with Deccan Project Manager or independently and provide signed acceptance test document to Deccan PM.

3.4 Payment Terms

As a subcontractor to TriTech, payment for this Project will be made by TriTech to Deccan in accordance with the Subcontract Agreement between TriTech and Deccan.

If the Client terminates LiveMUM 2.0 prior to the execution of Appendix D (LiveMUM 2.0 Acceptance Testing Document), Deccan will cease work on LiveMUM 2.0 and TriTech will not be required to pay any further Milestone payments. However, any Milestone that has already been signed off on and paid by TriTech is non-refundable to either TriTech or the Client.

3.5 Warranty Period & Annual Maintenance

The Warranty period begins upon acceptance of LiveMUM 2.0 (execution of Appendix D) by the client. The first year Annual Maintenance period for LiveMUM 2.0 begins as of the date of the LiveMUM 2.0 SSE delivery. The first year Warranty and Maintenance fees are payable at the time of installation of LiveMUM 2.0.

3.6 Services offered as a part of Warranty & Maintenance

3.6.1 Bi-Annual Data Refreshes of LiveMUM 2.0

LiveMUM 2.0 uses CAD data from actual events to analyze past coverage holes and call volume to best recommend move-ups. As such, the currency of the application is dependent on the currency of the CAD data on which it is based. To keep the application current, it will have to be regularly updated with CAD data built up since the last update. This task involves, among others, updating ETBs, identifying new units, stations, incident types, and unit types in the new CAD data and updating LiveMUM 2.0 Code Tables and business rules to reflect them.

As part of the warranty and annual maintenance plan, these tasks will be performed bi-annually by Deccan International. In between updates, it is possible for the Client to add units; Deccan does not currently support a convenient utility for this task, but will assist the client in adding units at any time. If the Client prefers to add units directly to a Units table themselves, Deccan International will train the Client on this task. Since directly adding units to tables is not a foolproof task, the Client will have to do this with care.

3.6.2 Technical Support

As part of the warranty and maintenance plan, Deccan will provide technical support via phone and email during normal business hours 0900 to 1700 Pacific Time Monday thru Friday with the exception of Deccan-observed holidays.

3.6.3 Applications upgrades

As part of its goal to ensure that LiveMUM 2.0 continues to meet client needs, Deccan adds features to the application on a continual basis. As part of the warranty and maintenance plan, we will offer these feature updates to the Client when they are completed.

3.6.4   Services offered requiring additional cost

Occasionally, the Client might require additional tasks in addition to those included within the scope of this Project. These additional tasks will require additional cost. Below are some of the additional tasks that may be performed at additional cost.

3.6.5   Updating LiveMUM 2.0 to Reflect Complicated Business Rules

LiveMUM 2.0 code tables reflect the Client's current requirements of its move-up strategy. If the Client's move-up strategy changes, the application will have to be updated to reflect this strategy modification. Changes that involve updating tables consistent with the current rules contained in Client's LiveMUM 2.0 implementation are part of warranty and normal maintenance. If the rules contained in Client's LiveMUM 2.0 implementation are modified or new rules are added, then additional coding will be required at additional cost. Deccan will quote a fixed cost for the task.

3.6.6   Updating the LiveMUM 2.0 Interface to Reflect Available Business Rules

The various features and configurations available within the LiveMUM 2.0 System are dependent upon specific data points being successfully transmitted from the CAD system to LiveMUM 2.0 via the established interface; this includes, but is not limited to: initial sync of unit id, unit status, unit location, and event message (with associated event id and event type); as well as continued track messages of unit id, unit status, unit location, and event messages (with associated event id and event type).

3.6.7   Changing Zones

Deccan will assist the client with changing LiveMUM 2.0 zones during the bi-annual refresher. Zones changes between bi-annual refreshers will be at additional cost.

3.6.8   Changing Streets

Currently, changing streets in LiveMUM 2.0 is a process that requires data to be sent by the Client to Deccan. Deccan will always have to assist with changing streets, and this service is included during the bi-annual refresher. Updating the street network under any other circumstances will require additional cost.

3.6.9   Changing CAD

LiveMUM 2.0 interfaces with CAD. If the Client changes its CAD at any point during the build process or warranty period or during maintenance, then Deccan will have to rewrite the interface at additional cost to Client.

3.7 Project Services

3.7.1   Project Manager

Deccan will appoint a project manager to coordinate all project-associated tasks with the Client's assigned project manager.

Through periodic meetings, Deccan will create the project plan and project schedule, review the project and its progress, and review the current task list and upcoming milestones.

3.7.2 Training Services

Training for LiveMUM 2.0 is completed during the installation of the application at the Client's site. These courses are required as a part of the installation process.

All training will be provided via the web using an online meeting tool such as JoinMe. Trainings will be scheduled by the Deccan Project Manager on a day/time that is convenient for both Deccan and the Client. Each training course may last a maximum of 4 hours in length for up to 6 users.

See the attached document *"Template LiveMUM 2.0 Training Plan"* for additional training details.

3.8 Installation

Deccan will install the LiveMUM 2.0 application as outlined in the Statement of Work only. The installation program will be made available to the Client via FTP and/or shipped via CD/DVD.

Deccan is not responsible for installing or configuring any hardware or other third party software components not outlined in this document.

4. Appendix

4.1 APPENDIX A – CAD data needed by Deccan

To build and update LiveMUM 2.0, Deccan needs certain data from the Client's CAD.

1. **Incident Data**

    a. Deccan needs incident data for the past 2 years. The incident data contains incident-specific information especially:

        i. Incident Number

        ii. Incident Type

        iii. Incident Location

        iv. Incident Date-Time

2. **Unit Activity Data**

    a. The Unit Activity data contains Unit Activity related data especially:

        i. Incident Number

        ii. Unit Status (e.g. Responding)

        iii. Date-Time Stamp

        iv. Vehicle ID

        v. Unit Name

        vi. Unit's Current Station

The Client should provide incident and Unit Activity data for the past 2 years. The Incident and Activity data should be provided as it appears in the Client's CAD without filtering of any fields in delimited ASCII text, DBF or Access (.mdb) format. Excel format cannot be used because of its size limitations and tendency to convert text fields to dates.

Field descriptions for the data should also be provided.

3. **Other CAD data**

    a. In addition to the CAD incident and response data specified above, the Client must provide Deccan with the data in the code tables in Client's CAD or any documents describing the following:

   i. All Unit Statuses and their corresponding descriptions (e.g. DISP = Dispatched, RESP = Responding, OS = On Scene etc.) specifically:

     1. ID

     2. Code

     3. Description

 b. All CAD Incident Types codes and their corresponding descriptions (e.g. FIB = Fire in Building, FIV = Fire in Vehicle, BRSH = Brush Fire etc.) specifically:

   i. ID

   ii. Code

   iii. Description

 c. All Station information, specifically:

   i. Station ID

   ii. Station Code

   iii. Station Name

 d. Vehicle Information:

   i. ID

   ii. Name

   iii. Type (Engine, Ladder, Truck, Brush Rig, Chief, Tender, ALS, etc.)

   iv. Associated Unit

 e. Vehicle Types

   i. Code

   ii. Description

 f. Unit Information

   i. ID

   ii. Code

   iii. Radio Name (If applicable)

          iv.   Description

          v.   Capability

          vi.   Home Station

4.2 APPENDIX B – Map data needed by Client

The Client must provide any available map layers to be used in LiveMUM 2.0. The maps can be provided in ESRI shape file format or ESRI ArcInfo export format or MapInfo tab file format. Deccan also needs the projection system on which the maps are based.

The following is a list of Map layers which can be used in LiveMUM 2.0:

1. **Streets**

   a. This is the most significant map layer that is needed for this implementation, since LiveMUM 2.0 uses the streets file to perform routing. The following data must be provided for each street line:

      i.   Street name

      ii.   Co-ordinates of starting and ending nodes

      iii.   From and to address ranges for the left and right sides of the segment

      iv.   Alias street name, if any

      v.   One-way info

      vi.   Speed limit

      vii.   F-level and Z-level, if any

The Client must ensure that the street network provided has good connectivity and very close to the actual street network in THE CLIENT's service area.

2. **Jurisdiction Boundary**

   a. The polygon layer that defines the jurisdiction boundary or the service area boundary.

3. **Fire Dispatch Grids**

   a. This polygon layer is used to build LiveMUM 2.0 response zones.

4. **Fire Stations**

a. A map layer corresponding to the current fire station locations in the Client's jurisdictions and any mutual aid station locations that need to be modeled in LiveMUM 2.0

4.3 APPENDIX C – Providing the data to Deccan

The Client can send the data to Deccan in two ways – via FTP or via mail. Deccan prefers data to be sent via FTP because it is more secure and able to handle larger amounts of data.

Via FTP: (Preferred)
The data can be uploaded to our FTP site.

The Client will be provided with access to our FTP site upon project kick off.

4.4 APPENDIX D – LiveMUM 2.0 Acceptance Testing Document

Introduction

This document will describe the test plans to ensure proper install and functionality of LiveMUM 2.0. The test plans would be performed on the LiveMUM 2.0 installed on the Client workstations. The workstations used for this test purposes can be either test or production systems.

Test Case 1 – LiveMUM 2.0 launches successfully

On the workstation, double click on either the LiveMUM 2.0 shortcut available on desktop or by clicking on MUM.exe available in LiveMUM 2.0 install folder.

LiveMUM 2.0 launches successfully without errors   Yes _____ No _____

Test Case 2 – LiveMUM 2.0 Stations, Units and Capabilities Displayed

Launch LiveMUM 2.0 and verify the following:

1.	*Correct capabilities modeled*	Yes _____ No _____
2.	*Correct stations being displayed*	Yes _____ No _____
3.	*Correct units being displayed under each capability*	Yes _____ No _____
4.	*Correct maps being displayed under each capability*	Yes _____ No _____

Test Case 3 – Graphical Display toolbar

For any given capability, all the buttons in the graphical display toolbar should work as follows:

1.		*button allows zooming into an area on the map window.*	Yes _____ No _____
2.		*button allows zooming out of an area on the map window.*	Yes _____ No _____
3.		*button allows panning the map window in any direction.*	Yes _____ No _____
4.		*button allows to switch to the entire map layer.*	Yes _____ No _____
5.		*button allows selecting a station on the map to display the units in that station and their current statuses, in the "Station and Unit Info" pane.*	Yes _____ No _____
6.		*button allows turning the station labels on and off.*	Yes _____ No _____

Test Case 4 – Change ETB in coverage window

Select a given unit under a given capability and modify its ETB in coverage window to 100. Click on "Change ETB". LiveMUM 2.0 should update the coverage map for that capability based on the new ETB.

Change ETB Works   Yes _____   No _____

Test Case 5 – Zone and station legends

Launch LiveMUM 2.0. Create a Structure Fire incident or high emergency incident in CAD and dispatch units. LiveMUM 2.0 should display the correct coverage on the maps as shown in the zone legend. The more units you dispatch, the more variation of colors you would see in the coverage.

LiveMUM 2.0 updates coverage as necessary.   Yes _____   No _____

Also, you will notice that stations are changing colors according to the station legend shown.

LiveMUM 2.0 updates the station colors as shown in station legend   Yes _____   No _____

Test Case 6 – Move-Up Recommendations

Launch LiveMUM 2.0. Create a structure Fire incident or high emergency incident in CAD and dispatch units. Dispatch units till you see holes in coverage in LiveMUM 2.0 (red regions). Depending on the client's configuration, either the recommendation pop-up should appear or recommendation button should turn red for all capabilities with coverage holes, when applicable.

Is a recommendation made for each capability as needed?   Yes _____   No _____

Test Case 7 – Recommendation window

Launch LiveMUM 2.0. Create a structure Fire incident or high emergency incident in CAD and dispatch units. Dispatch units till you see holes in coverage in LiveMUM 2.0 (red regions). Depending on the client's configuration, either the recommendation pop-up should appear or recommendation button should turn red for all capabilities with coverage holes, when applicable. Click on each pop-up window or recommendation button to view the recommendation window. On each recommendation window:

Does LiveMUM 2.0 display the from coverage map and to coverage map?   Yes _____   No _____
Does LiveMUM 2.0 display the recommendation(s)?   Yes _____   No _____

Test Case 8 – Alternate recommendations

Launch LiveMUM 2.0. Create a structure Fire incident or high emergency incident in CAD and dispatch units. Dispatch units till you see holes in coverage in LiveMUM 2.0 (red regions). Depending on the client's configuration, either the recommendation pop-up should appear or recommendation button should turn red for all capabilities with coverage holes, when applicable. Click on each pop-up window or recommendation button to view the recommendation window. On the alternate recommendations, select a unit and station of your choice and click "Evaluate".

LiveMUM 2.0 updates the to coverage map (right map) taking into account the alternate recommendations selected for evaluation?   Yes _____   No _____

4.5 APPENDIX E – LiveMUM 2.0 Task Schedule

*NOTE: These task durations are dependent upon availability of Client resources, and are only provided as a general reference. The actual project duration may vary **significantly**, based upon project constraints, timelines, client availability, CAD Vendor support, and other factors.*

Task / Phase	Estimated Work Days for each Sub-task	Estimated Work Days for Each Task	Estimated Work Days from Phase Start date
1) Project Initialization – Phase 1 *(3.3.1)*		**1**	**1**
1. Project Kick-Off *(1)*	1		
2) Getting CAD/MAP data – Phase 1 *(3.3.1)*		**17**	**18**
Data Requirements Provided to Client *(1)*	1		
Data Upload to Deccan International *(2)*	14		
Data Analysis *(3,4)*	2		
3) Building of LiveMUM 2.0 SSE – Phase 2 *(3.3.2)*		**24**	**42**
Data Conversion *(1)*	5		
Building of ETB Tables and CAD Data *(2, 3)*	3		
Business Rule Discussions *(4)*	3		
Building of Station Depths and Unit Files *(5)*	3		
Implementation of Business Rules *(7)*	8		
Delivery of LiveMUM 2.0 SSE *(9)*	1		
Installation and Training of LiveMUM 2.0 SSE (9, 10)	1		
4) CAD Testing & Acceptance – Phase 3 *(3.3.3)*		**18**	**60**
Configuration Changes to Business Rules *(1)*	4		
CAD Interface Set-Up by CAD Vendor *(2)*	10		
Initial Synchronization and Tracking Testing *(2)*	1		
Feedback Provided from Initial Testing *(1,2)*	2		
Acceptance Testing *(4)*	1		

4.6 APPENDIX F – Hardware and Software Requirements

LiveMUM 2.0 is a web-based application and does not require any complex hardware/software installations prior to LiveMUM 2.0 install.

Given below are recommended specifications for LiveMUM 2.0/WallMap and LiveMUM 2.0 Server to operate.

LiveMUM 2.0

Hardware Requirements

Specification	Minimum
Processor	1 GHz or faster 32-bit (x86) or 64-bit (x64) processor
Memory	1 GB RAM (32-bit) or 2 GB RAM (64-bit)
Disk	16 GB available disk space (32-bit) or 20 GB (64-bit) -- just for the OS, not applications or data files
Video Card	DirectX 9 graphics processor with Windows Display Driver Model (WDDM) 1.0 or higher
Operating System	Windows 7 32-bit or Windows 7 64-bit, Other Windows Versions should work but not recommended

Software Requirements

Specification	Minimum	Optimal
Internet Browser	Microsoft Internet Explorer	Mozilla Firefox or Google Chrome
Microsoft .NET Framework	v4.0.0	v4.5.2 or latest

LiveMUM Server 2.0

Hardware Requirements
(Does not need to be installed on a server OS machine)

Specification	Minimum	Optimal
Processor	Dual Core 2.4 GHz (or better)	Quad Core 3.0 and above
Memory	12 GB RAM	32 GB Ram
Disk	120 GB (50 GB working space free 7200 RPM)	120 GB (50 GB working space free 7200 RPM)
Operating System	Windows 7 64-bit	Windows Server 2010 or later

Software Requirements

Specification	Minimum
Microsoft OLE DB driver	Visual FoxPro
Microsoft .NET Framework	v4.0.30319
Microsoft Visual C++	2012 Redistributable (x86)

Notes

The Internet Information Services (a standard component of Microsoft Windows Operating Systems) will need to be accessed and enabled.

The amount of processing power and available memory required to run LiveMUM Server is dependent in part on the total volume of message traffic that is transmitted across the interface (<1,000,000/day is ideal) and the user-defined amount of logging files created.

The LiveMUM server should not be installed on a Laptop unless the Laptop will be physically connected to the network during operation hours. This is due to the unreliability of wireless connections for a roaming device (machine).

TriTech VisiCAD 4.X is only compatible up to Server 2008/32 bit environment. Inform 5.X is compatible up to Server 2012/64 bit.