Specifications/Scope of Work

City of Dallas

Request for Competitive Sealed Proposals (RFCSP)
Project Title: Fire Station Alerting System for Dallas Fire Rescue
Buyer Solicitation Number: BCZ23-00021813

Scope of Work

I. Introduction, Purpose, and Intent

The City of Dallas (City) is seeking proposals from qualified vendors for a stable state-of-the-art internet protocol (IP) Fire Station Alerting System (FSAS) that offers pre-alert capabilities, dispatch capabilities, audio, and visual features, administrative features, and alternative forms of monitoring for Dallas Fire and Rescue (DFR or Department).

The selected Proposer must be capable of providing a proven superior platform along with project implementation, installation services, support, and equipment to successfully implement a full functioning Fire Station Alerting System which will best meet the City's needs.
The Department requires a system that delivers the operational and functional benefits to enhance the quality of services it provides. The proposed solution will be installed throughout the city, including fire stations, training facilities, maintenance facilities, fire boat stations, airport rescue firefighting response units (ARFF) and back-up dispatch centers. It must be able to: (1) accommodate a high call volume with no degradation of service, (2) integrate with Dallas Fire-Rescue Department's computer- aided-dispatch (CAD) software and hardware, and (3) have redundancy with radio-based fallback capability.

The proposed FSAS must be compliant with the current National Fire Protection Association (NFPA) guidelines and standards. The proposed FSAS must already be implemented in other cities or fire communication systems that: (a) have requirements similar to that of the City, (b) reflect best practices that the Proposer recommends to the City, (c) are comparative or greater in size and complexity then the City and (d) facilitate the goal of reducing response turnout time through some means of pre-alerting units that a dispatch is about to occur within a station's geographic area of responsibility.

The purpose of the project is to:

- Decrease incident turnout times through earlier pre-alerting of first responders, prior to actual dispatch recommendation and voice dispatch phase.
- Decrease first responder stress levels through earlier alerting and use of technology that allows for ramping of distinct audio/visual alerting devices from preset minimum levels to maximum levels and adjustable by time of day or night and by company/unit type.
- Decrease first responder stress levels through zoned night alerting of specific unit companies and personnel, without disturbing those responders who are not recommended/alerted.

- Create efficiency and reduce dispatcher stress by reducing time dispatchers must vocalize dispatches allowing them to concentrate on CAD dispatch recommendations and essential voice radio traffic.

Due to the varied sizes and locations of the fire stations, site visits will be mandatory for this project, as well as visits to the dispatch center. The purpose of the site visits is to allow Proposers to view the facilities and identify, on a fire station by fire station basis, an accurate quote, based on individual needs of each site. The site visits must be coordinated by the City. All visits are listed below under the **Site Visit Locations** section. Visits shall have an estimated timeframe of at least two hours per location. The timeframe may vary at each location depending on size, quantity of needs being requested, or any other aspects that may affect the visit. The visits are estimated to last a span of two days with a total of eight hours each day. This is to assure each mandatory location is visited and seen. It is recommended to arrive at the first location of that day at least ten minutes before the scheduled visit timeframe.

Each location along with date and estimated time are listed below:

Site Visit Locations

Station 59	201 N. Jim Miller Road, Dallas, TX 75217	April 25, 2023, at 9:00AM
Station 4	816 N. Akard Street, Dallas, TX 75202	April 25, 2023
Station 18	660 N. Griffin Street, Dallas, TX 75202	April 25, 2023
Dispatch Center at City Hall	1500 Marilla Street, Dallas, TX 75201	April 26, 2023, at 9:00AM
Training Facility	5000 Dolphin Road, Dallas, TX 75223	April 26, 2023
Backup Center at Dawson	3131 Dawson Street, Dallas, TX 75226 (upstairs)	April 26, 2023
Radio Shop	3131 Dawson Street, Dallas, TX 75226	April 26, 2023

Dallas Fire Rescue Overview

DFR performs numerous functions including fire suppression and emergency medical services, fire prevention and inspections, and arson investigation. DFR is one of the largest municipal fire rescue departments and serves the fourth largest metropolitan area in the U.S.

The table below provides selected metrics on the department's size. All numbers are approximate.

Uniform Personnel	2024
Civilian Personnel	120
Divisions	2
Battalions	9
Fire Stations	59
Single Engines	59
Task Forces	26
Paramedic Ambulances	46 Full Time, 5 Peak Time
Specialty Teams	Aircraft Rescue & Firefighting, Hazardous Materials, Water Rescue (Boat & Swift Water), Urban Search & Rescue, Wildland & Urban Interface Firefighting

Dallas Fire-Rescue Dispatch Center

Dallas Fire-Rescue Dispatch is the primary public safety answering point (PASP) that serves as the vital link between the residents of the City and emergency fire and medical services. Annually DFR dispatch answers greater than 247,000 telephone calls and dispatches resources to more than 480,000 incidents. The department averages 676 dispatches per day.

DFR dispatch center is located at Dallas City Hall and operates 24-hours a day. If a problem causes staff to relocate from the primary dispatch center located at Dallas City Hall, DFR operates out of an alternate site located at the DFR training facility.

The table below provides metrics on the dispatch center. *All numbers are approximate.

Dispatch Workstations	11
Certified Dispatchers	60
Training Consoles	1
Backup Center	1

II. Mandatory Pre-Proposal Meeting Schedule, Questions, and Inquiries

Mandatory Pre-Bid Meeting: During the solicitation process, bidders are required to limit their communication regarding this project to the assigned Procurement Specialist with the Office of Procurement Services. A mandatory pre-bid meeting will be held by the City whereby the bidders will have an opportunity to ask the requesting department(s) questions and/or obtain clarification. The mandatory pre-bid meeting will be the only time when bidder and requesting department(s) will communicate directly. Thereafter, all communication associated with this project shall be address to the

assigned Procurement Specialist with the Office of Procurement Services. The mandatory pre-bid meeting will be held via Microsoft Teams on April 24, 2023, at 1:00p.m. CST.

Microsoft Teams meeting

- **Join on your computer, mobile app or room device:**
- Click here to join the meeting
- **Meeting ID: 225 342 939 58**
- **Passcode: CYFzAy**
- **Or call in (audio only)**
- +1 469-217-7604,,468292564#
- Phone Conference ID: 468 292 564#

Questions and Inquiries: All questions must be submitted electronically through the City's solicitation portal, https://dallascityhall.bonfirehub.com/login. The City will respond to all questions by way of addendum which will be posted as part of the solicitation. The City, its agents, and employees shall not be responsible for any information given by way of verbal communication. The deadline for the submission of questions is 2:00 P.M. CST on Wednesday, May 3, 2023.

Proposal Submittal Requirements

The City of Dallas migrated to a new electronic solicitation portal on March 1, 2019 and applicants will be submitting their proposals online through this portal. Prospective applicants will need to click on this link https://dallascityhall.bonfirehub.com/login in order to register on this new portal to ensure you continue to receive notifications of addenda and business opportunities with the City and to allow submission of electronic responses. Submissions of Proposals, pricing and any other requested documents will be thru the Bonfire system. Applicant submissions shall be uploaded to the online solicitation system by 2:00 p.m. on May 26, 2023.

Bid Submittal Requirements

To be considered responsive, bid response must be submitted electronically to Bonfire, the City's procurement platform (https://dallascityhall.bonfirehub.com/login.), by the due date and time indicated in the solicitation. Please note that any technical assistance or issues encountered with the platform should be directed to the software staff directly. The City is unable to assist respondents with submissions and will direct bidders to contact Bonfire.

III. Specifications or Scope of Work

This section outlines the tasks and duties expected of the selected vendor. The Proposer's response should reflect an understanding of these tasks and demonstrate their ability to carry them out. The City is seeking an experienced vendor to provide the services necessary to

successfully develop and implement a stable IP fire station alerting solution (FSAS), which includes but is not limited to the system and the following services:

1. **Fire Station Alerting System:** Proposer shall provide all hardware, software and accessories necessary to implement the proposed FSAS to ensure it is fully functional. This includes, but is not limited to, all new system components, lighting, speakers, message indicators, labels, power component, local network switch at each fire station and the dispatch centers.

2. **FCCS Integration:** Proposer shall describe how the proposed FSAS will integrate with the CAD, through vendor-supplied APIs or equivalent technology. The City will be responsible for utilizing the APIs. Proposer has sole responsibility for integration with the master clock, voice logging, and headset audio (although the City will assist in coordinating as required).

3. **Installation:** Proposer shall be responsible for the complete installation of all hardware and software necessary to implement the proposed FSAS as well as the removal of all equipment and associated wiring/accessories of the replaced FSAS. Proposer shall also provide as-built documentation, is the format(s) the City assigns, of the system and its configuration at each location. Vendor shall be responsible for obtaining all City and/or State permits required to implement, install and/or operate the proposed FSAS and all fees associated with such permits. Proposer shall ensure that all alterations and/or modifications to fire stations or City property are pre-approved by DFR and compliant with all City and/or State rules and regulations. Proposer shall ensure all required approvals are received for work performed.

4. **Project Management:** The complexity and timeframe for completing the Project will require a significant amount of oversight and project management. The Proposer shall provide a full-time project manager and key personnel to work on-site to respond to City needs, questions, and/or issues.

5. **Simultaneous Dual FSAS Operation:** The selected Proposer shall collaborate with DFR, the City's Information Technology Department and FSAS Project Team to develop a migration plan from the existing FSAS to the new FSAS. The migration plan must accommodate the simultaneous operation of both systems until DFR/all sites have completely migrated to the proposed FSAS. This will allow fire stations to be switched from the old system to the new system (and possibly back again) as work is completed at each fire station, and as confidence grows in the smooth operation of the new system.

6. **Testing and Acceptance Procedures:** Proposer's project manager shall work with DFR, ITS, and FSAS Project Team to develop a phased migration plan to operate and test the proposed FSAS and transition DFR from the existing system to the proposed solution.

7. **Training:** Proposer shall offer and conduct intensive training courses for DFR and ITS personnel and technicians to use, operate, maintain, and support the proposed FSAS.
   The Proposer must develop and deliver to the City a process to facilitate transfer of knowledge of system design and operation to technical staff. The knowledge transfer process must include the timing, method, and Proposer staff. This education process must be defined as early as possible to allow the City adequate time to provide the appropriate staff for the knowledge transfer.

8. **Warranties, Maintenance and Support:** Proposer shall provide warranties for all proposed hardware and software along with optional extended warranty offerings. Proposer shall propose maintenance and support packages.

9. **System Upgrades:** Proposer shall address offerings it will make for future system upgrades and/or the potential expansion of the proposed FSAS in new locations.

V. Fire Station Alerting System

1. Functional Requirements

The City seeks a new FSAS that offers innovative technology solutions for dispatching resources. It shall be robust with synchronized backup systems and multiple monitored delivery paths. Within each fire station and dispatch location, the new FSAS shall be installed in all identified areas, including, but not limited to offices, kitchens, locker rooms, restrooms, dormitories (individual and/or group), workrooms, training rooms, fitness rooms, hallways, apparatus bays, exterior areas around the location and other structures on the property.

Proposer's system shall contain state of the art features that will improve current fire dispatch operations and reduce the amount of time required to dispatch resources. The proposed FSAS shall have the ability to utilize state of the art digitized speech technology and provide the capability to dispatch through the public address (PA) system at each fire station or location, as well as the ability to dispatch with a live human voice.

The selected FSAS Proposer shall provide all new system components, color-coded wiring with appropriate labeling, lighting, speakers, message indicators, and other necessary systems. No remanufactured or used equipment will be allowed.

The proposed FSAS shall be able to:

1.1) Be controllable at the dispatch center or backup dispatch centers with the ability to turn off for all fire stations, groups of stations or individual stations.

1.2) Alert fire stations and dispatch locations automatically and simultaneously.

1.3) Integrate with the current CAD vendor.

1.4) Alert personnel in quarters by generating distinct audible tones and visual alert notifications for the various incident types and types of resources or apparatus housed at each fire station.

1.5) Customize the type and number of rings programmed if fire phones are maintained.

1.6) Provide the automatic time settings to switch to nighttime mode to provide shunting or reduce volume of inside or outside speakers, initiate zoning settings, override the audio to speakers/lighting for specific resources and dimming of the screen settings. These nighttime settings shall be programmable and allow for audio to be set as desired by the Department via centralized programming. Some programming should be allowed at the remote location/fire station for specific zoning. Proposer to specify what features should be allowed to program from the remote location/fire station level.

1.7) Be programmed and/or modified from a central location at each dispatch operations facility if the Department desires to program and/or modify the tones and settings for the pre-alerts. The Pre-Alerts capabilities will include the incident type/category, the location of the incident, the cross- street, the commonplace name if given; stated only once.

1.8) Provide full control to adjust, override or manage settings by ITS Fire Apps personnel. Vendor to explain what locations have which specific capabilities.

1.9) Provide Call-Taker and/or DFR Dispatcher with the option to type commands that dictate the use of the pre-alert notifications and allow none, some, or all pre-alert options.

1.10) Contain security features that only allow authorized personnel at the dispatch centers or at each fire station to control the volume, adjust the intensity of the visual indicators, control zoning, override automatic turning on or shunting of devices, override night settings and/or program or modify system settings.

The City seeks a FSAS that offers the following features:

Category	Feature
Pre-Alert Capabilities	■ Pre-Alerting • Unit name (Example: EN01, TR07, TL50, TE15, TR10 RE03, BO17, BU17, BLKR1, BC02, 684, 800, BR26, MAR1, RD01, SW59, US33) • Incident Type/category (example: Grass Fire, Structure Fire, Motor Vehicle accident, Heard Attach, Medical Emergency). • If this is a Greater alarm level than 1, then insert alarm level announcement prior to incident type. (Example: Alarm level 3 would say "3 Alarm" prior to incident type/category "Grass Fire or Structure Fire"). • Location/Address (example: Main St/Harwood St, 1234 S Poke St, L B J Fwy/Exit 22 or L B J Fwy SB/Skillman St). • Cross Street (example: Cross street Ackard St). • Commonplace Name (example: 7-11 Seven Eleven, Dillard's, Chipotle) • Mapsco Grid or Page 47D 27A-D (example: Map 47 -David, Map 27Apha -Grid David) • Optional data fields: Firebox number, Channel Assignment, Tac Channel, Apt/Suite numbers, if DFR decides to implement. • In the event of alarm levels greater than 2 alarms, All stations (City wide) should hear the subsequent 3rd, 4th, 5th etc. alarm dispatch/announcements. This is for situational awareness that they could be in the next alarm level or be moving up/filling in at those stations just assigned. ■ Shut-off
Dispatch Capabilities	■ Queuing of Simultaneous Dispatches ■ Receipt of Dispatch/Message Acknowledgement Capability
Audio	■ Audible Tones ■ Text-to-Speech, Digitized Speech or Other Synthesized Voice System ■ Automatic Volume Controls ■ Fire Phones

Visual	■ Visual Alert Dispatch Lighting ■ Automatic Nighttime Settings ■ Screen Dimming ■ Ramped Up Night Lighting ■ Lighting Pathways ■ Alert (Strobe) Lighting in Areas Subject to Loud Noise ■ Message Boards ■ Time-Elapsed Dispatch Readout ■ Fire Station Printing ■ Alternate Display Capabilities
Administration	■ Security Features ■ User Configurable Settings (ITS Fire Apps) ■ Full Zoning Capabilities
System Stability	■ Synchronized Redundant Server/Controller Systems ■ Multiple Dispatch Paths - Primary and Secondary links ■ Backup Storage Systems ■ Log and Reporting Features
Alternate Monitoring/Alerting Systems	■ Alternate Alerting ■ Portable FSAS Capabilities ■ Equipment Integration

The FSAS shall have a logical user interface to provide the ability to send tones and text-to-speech (or other synthesized voice system) to any remote location and/or fire station. It shall also have the ability to send an "all-call" dispatch to all locations or selected locations with a combination of some or all of the tones, text-to-speech, human voice, data, information to printer, turn on lights, etc.

The FSAS shall use the master time clock synchronized with the CAD, allow recording on the current voice logger system or other voice logger systems, with the capability of recording all individual audios to each location, record for all time logs, incident information and reports.

The term text-to-speech is used throughout this document but is not meant to limit the type of digital or synthesized voice systems used by vendor. Proposer shall explain the benefits of its specific voice system and shall submit several audio samples of text-to-speech, inclusive of samples from a current fire station installation, audio from a digital trunked radio system and a conventional radio system, clearly identifying differences in the samples submitted. Text-to-speech samples must be submitted on a flash drive in either MP3 or WAV format.

The Department should have the ability to select different voices, accent and gender and shall approve the text-to-speech voice prior to installation and will have final approval prior to acceptance of the system.

2. Pre-Alert

The Fire Station Alerting System shall generate a unique alert tone for each unit or company type followed by a text-to-speech announcement at the fire station upon call-taker incident entry and prior to actual dispatch functions by the radio dispatcher. The FSAS shall be capable of different and distinctive tones for varying unit or company types. The visual alert shall be to lighting displays, display boards with a unique light and text display for each unit and/or company type. Proposer should explain what portions of the audible and visual indicators are controllable by each fire station by authorized personnel including if by time of day and/or location of personnel within the station. Lighting/displays shall be consistent at all locations throughout the system.

The pre-alert shall be sufficient to notify station personnel both audibly (text-to-speech announce and audible alert) and visually (light bars, display boards, TV overlay, computer display, etc.). For example, if Truck Company personnel are assigned to one dorm on a particular shift but assigned to a different area on a subsequent shift, the FSAS shall include the ability to accommodate this type of change, specific to an individual dormitory level and without dispatch center intervention.

The proposed FSAS shall not cause any limitations of the text-to-speech announcement or transmission as the result of the number of units being recommended, or stations pre-alerted or dispatched.

The pre-alert shall further audibly alert fire station personnel via text-to-speech the unit identification of those units responding when available in quarters (QTR) for each specific fire station. It should provide the incident type/category, the location of the incident, the cross-street, the commonplace name if given; stated only once. It is desirable for the pre-alert system to provide text-to-speech to resources on the radio. Vendor shall explain if this can be accomplished and provide a separate line-item quote.

The pre-alert functionality may be basic information to initiate personnel response, where the actual dispatch will carry more detailed information.

3. Dispatch

Upon conclusion of the pre-alert notifications, the dispatcher shall be able to dispatch the resources and/or units to the reported incident. All affected fire stations and resources and/or units shall be dispatched simultaneously. When the dispatcher activates the alerting system with the unit and radio channel assignment, a distinct and unique tone shall alert fire station personnel with the details of the incoming

incident, by resource type. Simultaneously, a distinct visual lighting notification shall also be activated. The subsequent alert tones and synthesized voice announcement shall immediately and automatically be broadcasted.

4. Dispatch Queueing

In the event that a "collision" of incidents occurs simultaneously at the same location causing the audio system to temporarily become unavailable, the FSAS shall have the ability to "stack" or "queuing of calls" by placing multiple dispatch calls in the queue automatically until the audio system is available to dispatch the next call. The queuing of the calls shall occur without missing and/or losing said calls and should not slow the dispatching time of other calls. The FSAS shall have intelligent timing and activation to handle separate back-to-back incidents to avoid cut-offs or missed alerts, with the time delay between calls in queue modifiable by Department through remote programming from immediate to an adjustable delay.

Proposer shall explain if the proposed system does not allow for queuing of calls and explain how the proposed system can overcome the concern regarding missed alerts.

5. Receipt of Dispatch/Message Acknowledgement Capability

The FSAS shall include a mechanism for fire personnel to acknowledge receipt of dispatches or messages and "answer-back" while in quarters. These buttons shall be conveniently located to minimize any need to travel outside of a direct path to the apparatus the member is responding upon. Some locations with separate and multiple apparatus bays will require multiple answer-back buttons. Proposer shall explain how this will be accomplished and provide locations on drawings created after site visits.

A personnel acknowledgement shall not cause reset of the alerting system process in the fire station. The Proposer shall explain how the answer-back will provide an indication for dispatchers.

The FSAS shall also provide a manual reset button for fire station personnel. This separate button/device shall also be provided for reset of the FSAS for false alerts or corrected dispatches and shall be located where designated by fire station site visits.

Reset and personnel acknowledgement buttons shall be color-coded and differentiated for daytime and nighttime use and lit for nighttime identification. These devices/buttons may also be infrared or RF remotes to allow for firefighters to remain in bed and not have to physically change their location to reset; fire station alerting controllers shall be capable of this type of activity.

6. Shut-off

The FSAS shall have the ability to:

6.1) Shut off lights or alarms after a pre-determined time that is programmable centrally or at a fire station.

6.2) Manually shut off lights or alarms at the remote location/fire station

7. Audio

7.1) Audible Tones

The FSAS alert tones shall:

7.1.2) Broadcast a ramped up and progressive sound throughout the fire station PA system that is audible for personnel throughout the interior of the fire station and in the exterior yards and allow for one decibel (DB) increments per second.

7.1.3) Allow independently adjustable inputs and outputs.

7.1.4) Allow for controls by time of day.

7.1.5) Allow authorized personnel, at the dispatch centers, to set the standard minimum and maximum volume settings at each fire station.

7.1.6) Automatically reset only after a pre-determined amount of time has passed.

7.1.7) Provide a manual reset.

7.1.8) Interface appropriately with stations PA system and doorbell. Provide muting to the PA system when the alerting system is activated.

7.1.9) Allow for alert prioritization: the FSAS pre-alert tones and text to speech audio shall be subordinate to and give priority to live dispatcher voice. The FSAS cannot override or cause mixed audio with the dispatcher voice.

7.1.10) Provide a programmable notification/alert to personnel at the fire station/location for operational or administrative messages sent only to the printer (ex: Special Notice, Information Notice, Street Closure, etc.)

7.2) Text-to-Speech (or Other Synthesized Voice System)

The FSAS shall have the ability to perform the following functions:

7.2.1) Audibly alert personnel in quarters with the resources being dispatched, the incident type, incident description, location of incident, cross-streets, and the commonplace name and, if given, time of dispatch via text-to-speech.

7.2.2) The text-to-speech database and pronunciation shall be proper and pronounced phonetically. It shall allow programming for the announcement of street numbers a minimum of two times in different formats. It should be programmed for the first announcement to give the address by street number (i.e., 15-5-5) and, if desired, a second announcement shall be by individual number (i.e., 1-5-5-5). The number of times the announcement is made shall be user configurable.

7.2.3) The FSAS shall offer text-to-speech technology that has the ability to be turned on or off at all dispatch centers according to the current dispatch operations mode or by specific incident type.

7.2.4) The FSAS shall allow the Department to select and control the speed of the text-to-speech audio from a dispatch location. This location should allow a global change to all or any remote location/fire station systems voice speed and can only be set by an administrator and not by the remote location/fire station.

7.2.5) The FSAS shall not cause any limitations of the text-to-speech announcement or transmission as the result of the number of resources being recommended, or stations pre- alerted or dispatched.

7.2.6) It is desired to have the text-to-speech sound files installed on a server. If the proposed FSAS operates differently than server based, the Proposer should be explained in detail how the system works, as well as upgradability and reprogramming.

7.2.7) Any subsequent programming of text-to-speech for additional streets, names, information, etc., shall be easily modified by the Department at a central location with a secure sign-in by authorized personnel without the need for any special programming or equipment. It shall provide a simple preview facility that will play the announced audio of any word or address. The changes shall be immediate, without any perceived delays. Text-to-speech updates shall not require any chip re-programming by Proposer, re-flashing of chip, require the purchase of update, or otherwise require interaction of an outside party.

7.2.8) Any customized pronunciation changes shall be propagated to all stations automatically and in a timely manner. (This applies only to systems with distributed audio databases.)

The vendor shall be responsible for the initial programming of text-to-speech for all streets, names, information, etc. and shall check to ensure pronunciations are proper prior to full acceptance of system.

Proposer shall detail all digital voice features the system incorporates and detail the benefits for using its form of text-to-speech technology.

7.3) Volume Control

The volume levels for the FSAS audible features such as the pre-alert tones, digital voice system and public address shall be able to "ramp" up upon activation. The FSAS should allow for central programming of the maximum/minimum settings for all locations with the FSAS and allow designated personnel at each location to adjust the volume levels as required so long as the settings cannot be programmed outside the parameters of the dispatch center's settings.

IMPORTANT NOTE: The Proposer shall provide a solution for the FSAS to provide amplified sound and/or strobe lights to loud areas such as an Apparatus floor, or at high noise locations (i.e., airport stations). If amplified sound is used, it should have the capability to detect current noise levels and adjust the volume of amplified sound up or down accordingly.

7.4) PA System/Additional Inputs

The proposed FSAS shall provide the capability, if desired in the future, for fire station personnel to monitor radio communications through the PA but still allow the dispatcher to send live voice dispatches or text-to-speech announcements when there is an incident or an "all-call."

The integrated FSAS PA system should have inputs to allow the monitoring of other desired audio. Proposer shall provide the details of this feature.

8. Visual

The FSAS shall provide visual alert notifications that can be seen by personnel throughout the interior of the fire station, apparatus bays and exterior perimeter of the station to alert personnel of a dispatch to an incident.

The FSAS shall offer visual alert features, including but not limited to:

8.1) Provide unique colored lighting alert notifications programmed for various units and/or companies.

8.2) Cause apparatus bay lighting, alert (strobe) lighting, directional path lighting, room lighting and ancillary lighting (maps, etc.) to activate until reset by programmable timer or by responders with the capability for the system to recognize and adjust automatically by the time of day.

8.3) Provide a message board that automatically activates with unique colored lighting and displayed text for each specific unit, resource and/or company type. During the site visit the Proposer shall determine the recommended quantity and location for the visual alert mechanisms at each fire station. The proposal should further detail the logical reasoning for the suggested placement of the visual alerting mechanism.

8.4) Provide a solution in areas subject to loud noises such as the apparatus floors of fire stations, apparatus floors and perimeter of airport ARFF stations, etc. that will alert personnel visually when the noise level exceeds the ability to hear the audio.

Proposer shall identify the type of visual alert mechanisms offered by the proposed FSAS and indicate the suggested quantity and specify the location of each mechanism.

9. Lighting

The FSAS shall contain multiple methods of lighting. Pre-alert, dispatch and any alternate methods of alerting shall cause appropriate lighting to activate for the various resources housed at each fire station. These resources include but are not limited to: an Engine, Truck, Rescue Ambulance, Urban Search and Rescue (USAR), Specialty Apparatus, Battalion Chief, Division Chief and/or all units. The lighting features shall be controllable by time of day by authorized personnel. The system that controls these lighting configurations shall be software controllable by personnel at either the primary or backup dispatch centers or by personnel in the respective fire station.

9.1) The FSAS shall provide night lighting with the automatic ability to ramp-up the intensity of lighting from a minimum to a maximum level over the course of the first 30 seconds. Proposer shall indicate the maximum number of different lighting levels for this feature. All proposed lighting shall be energy efficient illuminators designed to reduce power consumption without compromising the greatest amount of illumination possible.

9.2) The FSAS shall be able to provide lighting paths and directional lighting for nighttime operation or navigation in dimly lit areas of the fire station.

9.3) The FSAS shall automatically turn on lighting to maps, printers, apparatus bays and any other areas as identified during the site visits. The FSAS shall be able to differentiate between light apparatus bay responses and heavy apparatus bay responses (i.e., trucks, engines, etc.) and be programmable at station level if the apparatus are a mix between heavy and light apparatus on the same apparatus floor.

10. Time Elapsed Since Dispatch Readout

The FSAS shall allow the ability to provide a readout of time elapsed since dispatch readout in locations/fire stations. Proposer shall provide the suggested number of readouts in fire station/location and document if these dispatch readouts can be combined into other message boards.

11. Printing

The FSAS shall provide a printing functionality at all locations including the primary and backup dispatch centers and, at large facilities, allow for multiple printers to be installed in separate areas at the same fire station or location. CAD will generate printouts for dispatches, move-ups, and canceled dispatches. The printer shall have the ability to print multiple pages quickly and not delay units from responding while waiting for the print-out.

12. Alternate Display Capabilities

The FSAS shall have future capabilities to display data across tablets, iPads, mobile and/or handheld wireless devices, Television display in any rooms having such devices, or data to dedicated computer screens, or data to dedicated unit response displays.

IMPORTANT NOTE: Provide in your response as noted in a separate line-item quotes for display to Televisions, display/reader boards, computer displays, etc.

13. Administration

13.1) Security

Proposer should specify the built-in security features of the proposed FSAS designed to guard against viruses, cyber terrorist attacks along with the features to project the stability of the system and system access by City personnel. Proposer shall explain the various levels of security and the access to the systems/settings allowed for each level.

14. Zoning

The FSAS control panel shall have the capability to zone areas of the fire station with appropriate audible and visual lighting cues and all lighting and speakers shall be integrated. During the site visits the Proposer shall assess the zoning options for each fire station which will be dependent upon the individual floor plan and layout. Proposer shall consider the potential for future changes to the structure, staffing, and resources assigned at each fire station and allow for flexibility.

The proposed FSAS shall have zoning capabilities that allow DFR to:

14.1) Programming at the fire station for zoning of audio and lighting in dormitories according to the individual dormitory, general dormitory by apparatus personnel or the room to minimize waking of personnel not assigned to respond to a reported incident.

14.2) Easily set the zone features to account for personnel assigned to specific resources during a particular shift based on time of day and location of personnel in station for either resources normally assigned to the station or on a move-up to the particular station being alerted.

14.3) Assign the same resource as the shift before or use a different dormitory by easily selecting the dormitory area without dispatch center intervention.

14.4) Set the volume levels in specific areas and/or shut off the audio in specific areas. This should be configurable at the remote location/fire station level and shall have a visible and easy to interpret readout in each zone.

Please identify if there are any security precautions, control mechanisms, and/or measures to regulate who has the ability to adjust the settings and controls. Proposer shall also provide explanations and/or solutions to prevent fire station/location system settings from becoming set too low, potentially causing a missed response.

VI. System Stability

1. Performance and Reliability

The FSAS shall be available to users twenty-four (24) hours per day, seven (7) days per week, with FSAS availability of no less than 99.999%, measured annually.

The FSAS shall be considered down whenever normal FSAS operations cannot be conducted without experiencing major system alarms or conditions that inhibit or prevent

a dispatcher from communicating with the fire stations or performing vital FSAS functions.

The proposed system shall be capable of performing hardware/software routine maintenance and upgrades while the system is fully operational. The Proposer shall identify all required activities, such as hardware/software maintenance, data reorganization, off-line processing, etc. that may cause parts of the system to be unavailable or off-line. The Proposer shall identify the average period of time, if any, that parts of the system can be expected to be unavailable or off-line due to each of these activities over a one-month time frame. The Proposer should also explain how it will enable the system to be available to users during these times and what special steps, if any, it will take to make sure this is the case during these times. Additionally, Proposer will identify any update or maintenance process(es) in which a full system outage would be encountered.

The FSAS shall provide for transactional alerting response times. Transactional alerting response time is the amount of time from receipt of station alert data at the alerting PC to the return of data to the alerting PC acknowledging that the initial alert activities noted in the Statement of Work are successful.

Proposer shall describe how its solution will allow the City to perform inquiries, transactions, updates, having minimal impacts on overall FSAS performance. Additionally, describe how your FSAS provides for transaction response times and whether the proposed FSAS meets/exceeds this goal, or if there are any limitations to this goal.

Proposer shall provide specifications regarding the level of degradation, if any, based on call volumes or other system activity.

2. Full Redundancy Capabilities

It is desired for the FSAS to have synchronous full redundant capabilities.

3. Fault Tolerance

It is expected that the failure of one or more components in the fire station should not impact the functionality of the remaining components (e.g., speaker failure should not impact the fire station from receiving the dispatch print outs).

The FSAS shall be capable of operating on its own, independently of the CAD if the CAD is unavailable.

4. Multiple Dispatching Paths – Dual Link

The FSAS shall have the capability to use a minimum of two links. A primary link is required for sending all dispatch audio and data with a secondary link using the Department existing radio system frequencies for a backup link. The connection to these links shall be at the primary dispatch center, and backup dispatch centers.

The FSAS dual dispatching paths shall be a self-checking system with continual monitoring to ensure all systems are functioning and communicating. It shall have the ability to automatically switch from the primary link over to the secondary (backup link) if primary link is down. This automatic backup shall not create duplicate dispatch audios to locations, systems, or dispatch center notifications. The error shall be logged in reports with a specific clear text indicating the problem. Proposer shall describe how their system accomplishes this and the lag time between the primary link and secondary link.

5. Backup Storage

All call reports shall be available for at least twelve (12) months and have the ability to be archived for at least an additional twenty-four (24) months. All audio pre-alerts and/or dispatches shall be available for at least eighteen (18) months and have the ability to be archived for at least another twenty-four (24) months. The system shall have enough memory to support the logging requirements. Proposer shall outline the type of backup storage system offered and its storage capacity.

6. Log and Reporting

The proposed FSAS shall contain a built-in error reporting and debugging tool system to provide its status and if something went wrong or right and time stamp successful or failure. The reports shall be able to be generated from the dispatch center or fire station.

Proposer shall detail its reporting features and outline any and all ad hoc and canned reports inherent in the system.

7. Alternative Wireless Fire Station Alerting

DFR desires a FSAS that has the capability of sending dispatch information, Special Notices, and/or pertinent fire alerting information generated in CAD via, email, pagers, SMS and HTML, to tablets, iPads, mobile and/or handheld wireless devices. It shall have the ability to send information to all users, groups or a single individual or resources. The FSAS shall also have the ability to send this information to MDC's, command vehicle systems or fax machines. Proposer shall explain how this will be accomplished.

8. Portability

A self-contained portable FSAS is desired with the capability of alerting by audio and visual systems and may be used as a temporary system in the event of a total failure of the FSAS in a fire station or other temporary uses. The portable system should have the capability to connect to a network as a primary link, use the radio system as a secondary link and accept 110volts. The Proposer should specify the details of this.

VII. Fire Station Alerting Technical Requirements

1. Component Testing Capability

This section describes the requirements related to component testing capabilities.

2. Component Selection

Proposer shall ensure that each component is addressable individually for testing. It shall be possible for the operator in the dispatch center to control every function of every component in each fire station.

3. Ad Hoc Testing

In addition, every function of each component shall be able to be tested on an ad hoc basis. For example, if a component function is normally activated only as part of a larger dispatch system, it shall be possible to activate that function alone, without activating the larger system.

4. In-Use Indication

The test facility shall indicate what components are currently in use so an operator does not inadvertently interrupt a dispatch or call.

5. Test Dispatch Override

In the case of a dispatch requiring equipment that is being tested, the FSAS shall be able to override the test and proceed with the emergency dispatch.

6. Systems Tests

In addition to individual component testing, Proposer shall accommodate end-to-end tests of common systems, including those listed below. These tests shall restore the previous dispatch settings and not impact actual settings after the tests are concluded.

6.1) Fire Dispatch – This test should perform all the usual dispatch activities associated with a daytime dispatch of a fire company.

6.2) Rescue (Zoned) Dispatch – This test should perform all the usual dispatch activities associated with a daytime dispatch of a single ambulance unit.

6.3) Special Case Dispatches – This test facility should ignore the current settings of the fire station and the time of day, and allow a dispatch by varying (at least) the following settings:

6.4) Night-switch or time-of-day settings
6.5) Volume settings
6.6) Set pre-alert type
6.7) Visual alerts and house lights
6.8) Dispatch zone
6.9) Audio port selection (if applicable)

7. Dispatch Test and Training Equipment

In addition to the fire stations, Proposer shall provide and install additional equipment for two dispatch test training rooms, CAD/FireApps office and MTC radio shop. Every component that is in the field shall be included in the test suite. This test suite should behave identically to a real fire station. Where unusual, expensive, or impractical hardware is being controlled (such as appliances, multiple lighting systems, traffic signals, etc.) an indicator may be used to simulate operation.

8. FSAS Monitoring

This section describes DFR's requirements related to system monitoring.

All diagnostic messages shall be in plain English; fault messages or detection notices requiring translations are not acceptable.

9. Monitoring and Backup Console

Proposer shall provide a console from which technicians may monitor the health of the system. A mechanism shall also be provided to control the FSAS. It is preferable if these are co-located or part of the same system.

Proposer shall provide both the hardware and software for this console. In addition, any special tools required to measure and monitor system performance shall be included.

The monitoring console shall be coupled with a functionally equivalent backup console. It is expected that this console will be used when the primary console is not available.

The monitoring consoles may be configured as primary/backup, or the backup console may be simultaneously updated with the main console. If the backup console shall be used, it is expected to be available with minimal delay.

The backup console may be co-located in the primary dispatch center, or it may be located in a remote facility.

10. Monitoring Tools

The Proposer shall provide all required testing and equipment, tools, and software for system monitoring and troubleshooting.

11. Local Fire Station Alarm

If the equipment in the fire station detects that it has lost connectivity with the dispatch center, and if that outage lasts longer than 30 seconds, an alarm shall sound in the fire station. This duration shall be configurable from the dispatch center.

12. Component Status

The monitoring consoles shall provide the status of each component of the fire station alerting system. The failure of any system shall be logged (see below). The resolution time and action shall also be logged.

- Major System Failures: The system shall generate configurable, audible alarms for major component failures. A persistent visual indication shall also be generated on the monitoring console. The audio/visual alert shall continue until acknowledged.
- Alarm Acknowledgement: As is typical of annunciator panels, it shall be possible to silence the alarm after it has been acknowledged. This activity should also be logged.
- Minor Component Failure: The system shall provide some indication (such as trouble icons) for transient or minor problems. It is important that some indication is presented in those cases where a transient failure occurred but was resolved before an operator took action. Each failure/recovery instance shall be logged.
- Open Protocols: As with the entire fire station alerting system, the use of open protocol where possible is required.
- Permanent Log: The system shall generate a permanent log of component status and activity. It is expected that only the transition of a component state will generate a log record. Repetitive records without status change will not be accepted (see below). Further, transient failures and recoveries shall not flood the log with repetitive entries. In these cases, the number of these failures in a given time period should be logged.

13. Configurable Alerts and Indications

It shall be possible to configure each alert condition. Each shall be capable of, but not limited to, generating the following:

13.1) Pre-acknowledgement visual indication (e.g., a flashing lamp)
13.2) Post-acknowledgement visual indication (e.g., a steady lamp)
13.3) Audio indication with configurable volume and content
13.4) E-mail and pager notification
13.5) Relay contact closure to provide additional hardware notification

14. Logging

Successful problem solving relies on complete and detailed information. It is imperative that the FSAS provide a complete and accurate record of every action attempted and the success or failure of that action. Where failure occurs, all relevant information is expected to be included in the logged report. Device error codes are required.

Each individual FSAS action shall generate an audit trail. For example, it is not enough to log that a dispatch was issued. Each action (activating the PA, turning on the house lights, shutting off appliances, etc.) shall be logged individually. In addition to operator actions, all remote operations (from the fire stations) shall also be logged. This includes adjusting local volume levels, setting the night switch, etc.

It is expected that this log be viewable in real time. It is also expected that the log shall be viewable (in order) by time of day. In addition, custom reports may be generated either on the screen or system printer.

It is also desirable to be able to search by CAD-provided incident number. Proposer should indicate if this functionality is available.

15. Battery Status

The monitoring system shall indicate if a fire station is currently using battery power to operate. It should also indicate the remaining battery life in minutes. If available, the system should show the battery age or condition.

16. Connection State

The monitoring system shall indicate how each fire station is currently connected (i.e. primary network or backup network).

17. Statistics

The monitoring system shall maintain and display upon request the following statistics:

17.1) Network timing information to each fire station, including minimum, maximum, and average delay.
17.2) Network outage to fire stations, individually and in total.
17.3) Failure count of each monitored component and system.
17.4) Use count of each component

It shall also be possible to generate a statistical report for any time period, stretching back at least five years.

18. Notification

The FSAS shall provide a visible and audible notification in the event of a power outage at remote location/fire station. This notification is in addition to the outage indication that is sent to the dispatch center.

The FSAS shall also provide alerts when the battery backup power is low, both at the fire station and at the dispatch center.

19. FSAS/FCCS Integration

This section describes the connectivity-related requirements.

20. CAD Integration

The City anticipates that CAD integration will be accomplished through the use of vendor- supplied APIs or equivalent technology. Any function available natively to the FSAS should also be accessible via API. This includes, but is not limited to, CAD communication to FSAS of pre- alerts and dispatches as well as FSAS communication to CAD of acknowledgements (answer- back).

Proposer shall provide extensive API documentation, listing and describing each function as well as the input/output variables.

21. TCP/IP

The FSAS shall be TCP/IP based, including transport. Wherever possible, all devices/equipment should be IP-addressable.

It is expected that the termination point of the FSAS network connection will be relocate-able with minimal effort.

If the FSAS is not in use, it should consume minimal bandwidth on the network to allow for the system to perform health checks. This is not applicable to internal components if the FSAS incorporates an internal network that is isolated from the City network.

Proposer shall indicate the minimum, typical, and maximum bandwidth requirements for the FSAS per fire station.

22. FSAS Backup Connection

In addition to the primary network connection, each fire station shall be reachable via Radio Network existing in the City.

In case of the main FSAS failure the proposer shall provide a backup, preferably using the Departments existing radio system frequencies for a backup notification link. The Proposer shall provide all necessary radio equipment and indicate how this will be accomplished using an existing Radio infrastructure. The Department will decide and approve a radio channel for this purpose.

23. Network Security

The Proposer shall explain if they have remote log-in capabilities and, if so, how security and unauthorized use to system is managed. The proposer shall explain how they will provide security to network with a password or by encryption. The network itself will be closed, with the possible exception of vendor remote assistance, which ITS/DFR will control.

24. Headset Audio Interface

Currently the FSAS, the 9-1-1 telephone, administrative telephone, and radio system are all integrated to operate via a single headset at the dispatch console. Proposer shall describe how their additional audio source can be seamlessly integrated.

25. Documentation

In addition to as-built documentation required for each FSAS location proposer is required to provide at least, but not limited to, the following in both hard copy and electronic form (indexed PDF or Microsoft Office suite):

25.1) Training and Operations – Site-specific user training and operations manuals

25.2) Service and Maintenance – Site-specific service and maintenance manuals

25.3) Troubleshooting Guides

25.4) Any other document relevant to the initial troubleshooting and maintenance of the system

25.5) Reliability Report

25.6) Detailed test plans and procedures

25.7) Software code (for non-standard product developed specifically for this project)

25.8) Software, configuration files, APIs and Licenses

25.9) Project Plan

25.10) Phase-Over Plan

The vendor shall submit the system documentation and user guides to the City for review. The final system and user documentation shall incorporate and address any City feedback.

The proposal shall clearly describe these documents including the purpose, format, content and scope of each. Proposer shall indicate where in the schedule of deliverables these will appear.

VIII. Installation

The selected proposer shall provide installation of the FSAS. The FSAS shall be installed in such a manner that normal fire station alerting is not impacted and remains operational during the installation process. The City shall not provide any tools, materials, equipment, or personnel other than points of contact.

Vendor shall provide complete wiring to all subsystems and components for power, control, and communications for the entire FSAS including, but not limited to, lighting, audio, PA system, answer-back panels, servers, controllers, gateways, network switches, firewalls, and the FSAS network infrastructure at dispatch centers and all fire stations. The vendor shall provide network connectivity to the demarcation points at fire stations as specified by the City for City- provided data transport between the fire stations and dispatch centers.

All system components shall be installed in standard racks and cabinets. vendor shall provide rack/cabinet elevation drawings with system components as part of the preliminary design documentation.

The proposed FSAS must have proper grounding and surge protection, potentially connected to an Uninterruptible Power Supply (UPS), battery backup, and remote reset capabilities.

IX. Compliance

The vendor shall install and configure hardware and software, as well as perform any activities or tasks necessary for the development and operation of the FSAS. The vendor shall ensure that FSAS hardware, related equipment, products, custom software, and third-party proprietary software are configured and integrated to meet the functional, technical, operational, and performance requirements described in this RFCSP.

The workmanship standards and appearance of work throughout shall be in accordance with Best Practices for good workmanship. Work shall adhere to the highest standards of safety for persons and property. Work shall be performed only by competent technicians certified by the Proposer for installation, test and turn up of the proposed equipment, and shall be supervised by a technically competent and trained foreman.

To minimize operational disruptions, the City will coordinate with the vendor on an installation plan, for each facility, that includes dates and times installation may occur, no less than 1 week (7 calendar days) ahead of the start of any installation. The City reserves the right to alter the installation calendar to meet emergency operational needs, no less than 72 hours (3 calendar days) prior to the start of an installation. If an installation at one

location is canceled for emergency operational needs, the vendor must be prepared to move on to the next facility in the installation plan. Means of egress shall be continually maintained free of all obstructions or impediments to full instant use in case of emergency. All installation teams must perform their own daily site clean-up.

The City shall approve all designs (e.g., equipment location) before installation begins.

Proposer shall ensure that all alterations and/or modifications to fire stations or City property are compliant with all City code and ordinances.

All installations shall be labeled per industry standard and approved by the City. IP Addresses shall be marked on the devices where applicable.

All network cables shall be minimum CAT-6A or higher. All cables shall be approved by the City before installations. All cable installation shall be certified, and the test results provided. All cables must be labeled in accordance with Information Technology Services (ITS) standards

All permits necessary and where applicable (including low voltage and high voltage) shall be obtained by the vendor through the appropriate agency. Vendor is responsible for all fees associated with such permits.

X. As-Built Documentation

Vendor shall provide complete digital and paper sets of all FSAS documents including but not limited to charts, diagrams, drawings, descriptions, floor plans of each fire station / alert location that identifies any and all equipment that has been installed for FSAS; licenses; permits and reports.

All digital documents shall be in one or all the following editable formats: PDF, MS Word, Visio, MS Project, or Excel. All AutoCAD drawings shall be submitted both in .DWG and .PDF formats.

At a minimum, as-built documentation shall include, but is not limited to, the following:

1) Production Data, including descriptions or catalog cuts for each system component
2) System Level Diagram
3) Design documentation including preliminary and detail design documentation such as: detailed engineering, block diagrams, cabling, wiring, floor plans, equipment

lists, detailed drawings, cable routing plans, calculations, equipment layout diagrams etc.

4) Site Floor Plans
5) Survey document, site preparation and installation requirements
6) Site Equipment Rack Configurations
7) An interface document for each site, where applicable
8) ATP Test Checklists
9) Functional Acceptance Test Plan test sheets and results
10) Maintenance Manuals
11) Technical Service Manuals

XI. Fire Station Equipment

1. Limited Space

Proposer shall be aware that in many fire stations, there is extremely limited space for additional equipment.

Proposer shall indicate if additional space will be required, or if an equipment rack is needed. All equipment shall be installed in a manner which will provide security against tampering.

Proposer shall specify how the equipment will be installed to protect against all types of damage and secure against tampering it.

Any bracing if required shall be provided for approved installation.

2. No Climate Control

Proposer shall also be aware that no stations have a separate equipment room, and no climate control will be possible for any equipment. As in any fire station alerting system, the equipment shall be expected to withstand high temperatures and dust.

3. External Devices

All exterior speakers provided in FSAS shall be durable and weatherproof. The operation of the exterior speakers shall be configurable with the ability to turn on or off any speaker at the remote location/fire station and provide a visible readout of speaker's status, e.g., temporarily shunted, on. The outside speakers shall be programmable from a remote

location to shut automatically with global nighttime programming or by fire station personnel.

4. Maintainability

The equipment that will be installed into the fire stations shall be easily serviceable. Ideally, the equipment would all use modular circuit board assemblies, possibly in a rack mounted card cage.

5. Battery Backup

The FSAS shall have a battery backup system and be connected to a UPS system where available and or allow for future connection to UPS. Proposer shall specify the minimum time the battery backup will provide power for all FSAS components. Proposers shall also provide visual and audio indicators when the backup system is incapable of sustaining the FSAS. The battery backup provided shall use a commercial, off-the-shelf standard replaceable battery that is readily available at distributors.

XII. Project Management

1. The Proposer shall provide a single-point-of-contact for all work to be performed under the eventual agreement. The Proposer shall assign personnel to tasks and manage all work on the project including coordination with City staff for any City task and responsibilities. The Vendor shall work closely with the City's Project Manager including regular meetings as appropriate to meet deadlines and complete the required work.
2. The Vendor shall provide weekly written status reports comparing their status with the approved Work Plan/Control.

   At a minimum, written weekly status reports shall include:

   2.1) Activities completed in the previous week

   2.2) Planned activities for the next week

   2.3) Variance from work plan

   2.4) Reasons for such variances

   2.5) Corrective actions taken or proposed to ensure adherence to project schedule

   2.6) Modifications to the work plan

   2.7) Issues and potential future issues of concern

XIII. Project risks and associated risk mitigation measures

The City expects that the vendor will bring to its attention any City tasks that are off-track and endangering the project's success.

The vendor shall provide portions of documents and major system development components (such as workflow, security, etc.) for review and testing, as they are developed in order to facilitate timely review of completed deliverables. The Vendor shall conduct walkthroughs of all draft and final deliverables with City staff to enhance understanding and further facilitate and expedite the City review and approval process associated with deliverables.

A project issues management process shall be established to enable the maximum level of communication and documentation for the project. All members of the project team shall be responsible for communications regarding project issues to whoever is managing this process. The Vendor shall be responsible for monitoring and managing the resolution of identified project issues and communicating the resolution of each to the City Project Coordinator. As issues arise, appropriate City and Vendor staff shall be notified and a process to resolve the issue initiated. The issues tracking process shall be maintained and utilized throughout the term of the project.

XIV. Project Work Plan/Control Document

1. The vendor shall develop a Project Work Plan/Control Document (Work Plan) and provide continuous on-site management. The purpose of the Work Plan is to:
    - 1.1) Provide the City and Vendor with the information necessary to make the decisions that ensure the Project is completed in the most efficient manner possible within the constraints of the deadline,
    - 1.2) Enable the City to effectively track Project progress on a weekly basis,
    - 1.3) Establish a communication process to ensure timely reporting and resolution of issues as they are identified, and
    - 1.4) Manage configuration and control technical changes to production and test environments.

2. The Work Plan shall include:
    - 2.1) Task and Deliverable descriptions
    - 2.2) A Work Breakdown Schedule (WBS) that outlines sequence dependencies among tasks, including City tasks/deliverables
    - 2.3) Tasks responsibilities, staffing, effort, and due dates presented in Gantt and milestone charts

2.4) Identification of major go/no-go milestones in the Project, and go/no-go criteria

2.5) A list of key assumptions

2.6) City review periods for Deliverables

The City expects that the proposer will provide a "best practices" work plan, which shall be adapted for the City's requirements and expected timeline for City-owned tasks.

The vendor shall monitor personnel work and task performance on a daily basis. The work plan shall be viewable online by City staff and updated weekly or sooner as new tasks are defined, tasks are completed, or task due dates are missed. All such tasks shall be included and highlighted for the weekly briefings and in the weekly written status reports.

The vendor shall also maintain a log of project task assignments, both for its own personnel and for tasks assigned to City staff for purposes of knowledge transfer.

The work plan shall be submitted for the City's review and approval and shall be reviewed and revised, if necessary, to meet content and format requirements of the City

XV. Risk Analysis, Risk Mitigation, Contingency Planning

The vendor shall be responsible for identifying, analyzing, and mitigating risks to the project objectives, scope, budget, or timeline. Proposers shall include a description of the approach, processes and tools used to manage risk and develop contingency plans throughout the project duration.

XVI. Change Order Process

All changes to the WBS or Statement of Work shall be formally documented with a scope of work description, explanation, and budget, and approved by the City's Project Manager prior to implementation or commitment to resources or funds. The change in scope request shall include reallocation of total contract funds to cover the change. Changes in the total contract award amount will require contract amendment. Scope changes which have not received prior approval will not be reimbursable.

The vendor is expected to accomplish approved project work within the budgeted amounts. It should be assumed, unless otherwise directed by the City in writing, that all scope adjustments shall stay within the contract's not-to-exceed value. An increase in the budget of any task shall be matched by an equal or greater decrease in the budget of other tasks such that the total contract value shall not increase. It is the vendors responsibility to suggest such scope adjustments in a manner that will minimize their effect on the overall project deliverables.

The City understands that in some cases, portions of the project's tasks may be logically assigned to a sub-vendor. In such case, it shall be the vendor's responsibility manage its sub-contractor(s) and to ensure all the appropriate contract requirements and project management tasks are included and adhered to. Under no circumstances will the City have any responsibility for management of or actions taken by Proposers sub-contractors.

Tasks identified by a sub-vendor and not included in the vendors contract shall be the responsibility of the vendor unless the vendor receives a written waiver from the City.

XVII. Penalties

During contract negotiation, the selected vendor shall be expected to agree to including penalty clauses addressing, but not limited to, the following areas:

1. Time of performance – agreed amount per day (or other agreed period) per location for work not completed within the agreed performance period
2. Late repair – agreed amount per day (or other agreed period) per location for warranty defects not corrected within the contractual service level agreement
3. Warranty performance – reimbursement at agreed hourly rate for warranted emergency repairs performed by City resources
4. Warranty returns – reimbursement of shipping cost for repair or replacement of any equipment or software media that does not materially conform to the agreed warranty during its respective warranty period

XVIII. Vendor and City Responsibilities

The table below provides a high-level view of the expected responsibility split between the City and selected Vendor.

Vendor	City
■ Recommend equipment placement	■ Approve equipment placement
■ Recommend printer model(s)	■ Approve printer model(s)
■ Provide samples of audio sounds, text-to-speech, and voice types	■ Approve audio sounds, text-to-speech, and voice types
■ Recommend radio channel for secondary dispatch link	■ Approve final radio channel
■ Recommend other equipment	■ Approve equipment
■ Procure and install equipment	■ Review and approve installation
■ Provide as-built documentation	■ Review and approve as-built documentation
■ Provide APIs for CAD integration, including related documentation and assistance to City technical staff	■ Use APIs to integrate new FSAS to CAD ■ Build table-driven structure to support simultaneous dual FSAS operations

▪ Provide integration with master clock, voice logging, and headset audio	▪ Provide information to assist with clock, voice logging and headset audio integration
▪ Provide component monitoring, or APIs to allow monitoring through the CAD	▪ Approve monitoring approach, use APIs to integrate to CAD if necessary
▪ Provide project management for all aspects of vendor responsibility and tracking/coordination for City responsibilities	▪ Provide project management for City responsibilities, provide coordination with vendor
▪ Identify and assist in resolving issues	▪ Identify and assist in resolving issues
▪ Develop security configuration recommendations	▪ Review and approve security configurations
▪ Perform initial testing and provide results	▪ Review initial testing results
▪ Develop acceptance testing plans and schedules	▪ Review and approve acceptance testing plans and schedules
▪ Conduct acceptance testing and provide results	▪ Review and approve acceptance testing results
▪ Provide training courses	▪ Attend training courses
▪ Provide other documentation	▪ Review and approve documentation
▪ Provide workspace space requirements	▪ Provide necessary workspace

XIX. Integration and Simultaneous Dual FSAS Operations

Proposer shall provide the capability to allow the CAD to integrate with the FSAS. The logic and functionality of the CAD will be retained, and the new API(s) identified by the vendor shall allow the tight integration of the CAD with the newly acquired FSAS. The vendor shall be required to provide the API(s), proper documentation and sample code if applicable, of the API(s) and access to support engineers and developers to facilitate the City's development and integration task using the provided API(s).

Simultaneous Dual FSAS Operations

The successful implementation of the new FSAS shall require the simultaneous operation of both the old and new alerting system until the new system is fully installed, tested, and operational.

XX. Testing and Acceptance

The purpose of this section is to provide a description of plans, tests, and procedures to measure and verify proof of performance to ultimately gain acceptance and achieve use of the FSAS by the City at cutover.

As soon as possible after the completion of an identified deliverable, the City and vendor shall make a joint inspection. The vendor shall prepare a list of items of work remaining to be completed or work to be redone or modified, if any. City and vendor shall agree to items on the Work Breakdown Structure (WBS) and any required modifications, rework, etc.

The above process shall be repeated with respect to items so listed until all work has been accepted by the City.

1. System Testing and Pilot

The Development/Test environment shall contain a scaled down version of the main FSAS, where it shall allow the full functional development and integration with the CAD. The application teams and integration teams at the City shall work closely with the vendor's development team in order to identify and understand the APIs that shall allow the CAD to control all the functionalities of the FSAS. Once the development has been completed and integration established between the CAD and the FSAS, it shall be tested. Upon successful testing, and at the City's sole discretion, acceptance will be provided.

Upon successful completion of this phase, the pilot phase shall commence. For the pilot phase, DFR shall identify a set of fire stations to act as FSAS pilots.

2. Final FSAS System Acceptance

Final System Acceptance for this RFCSP is defined as each participating fire station having received all equipment designated for installation, completed installation of same by the vendor and a relative sampling of implemented and tested FSAS systems throughout the communications system for full system performance acceptance. Additionally, as a condition of performance acceptance, the system shall operate error-free for a period of thirty (30) days after the last successful test/implementation.

Error-free for this RFCSP is defined as any error occurring between the receiving workstation PC and the FSAS control module and all-encompassing peripheral or secondary or redundant FSAS operations required within this RFP and Statement of Work.

The vendor shall conduct facility operations tests at each of the sites that are a part of this Statement of Work. This includes equipment tests, alerting tests, backup power tests, and any related tests in order to show functionality and completeness of the FSAS.

3. Acceptance Test Outline

The Proposer shall include tasks and estimated duration of the Acceptance Test Outline as part of their proposal and WBS.

4. Test Plan/Procedure

4.1 Acceptance testing shall follow a phased approach as described above.

- 4.1.1 Pilot fire stations
- 4.1.2 Individual/groups of fire stations after vendor completes installation at the location(s)
- 4.1.3 Entire FSAS after all installations are complete
- 4.1.4 For each phase/group of locations:

4.2 The vendor shall provide a draft Acceptance Test Procedures list to the City Project Manager 14 days prior to beginning each phase of the FSAS System Performance testing.

4.3 The vendor shall provide notice of readiness to inspect (Facility Inspection) to the Project Manager prior to implementation.

4.4 The vendor shall provide notice of readiness to inspect (Final Inspection) for dispatch to the Project Manager indicating that installation has been completed.

4.5 The vendor shall provide a Pre-Test resolution punch list document as a result of physical Final Inspection for the locations prior to a notice to proceed with the FSAS System Performance testing.

4.6 The City Project Manager shall provide notification to the vendor to proceed with Acceptance Testing.

4.7 The vendor shall provide the FSAS System Test Report, no more than five working days after completion of the testing.

4.8 The City Project Manager shall provide notification of Cutover to the affected DFR staff.

4.9 The vendor shall deliver the final documentation including the FSAS System Maintenance Manual and the as-built documentation.

For the final phase only:

4.10 The City Project Manager shall provide notification to proceed with 30-day performance period.

4.11 The City Project Manager shall provide notification of Final FSAS System Acceptance to the vendor.

5. FSAS System Acceptance Sequence

The sequence for acceptance of each location (or group) shall be as follows:

5.1 The vendor shall provide the approved FSAS design definition.

5.2 Notification to vendor that the City is ready for installation.

5.3 Notification by the vendor to the City Project Manager that installation is complete.

5.4 Final Inspection of each site by designated City staff, and creation of punch list for inspection items.

5.5 Notification by the vendor that the Pre-Test punch list is resolved, and acceptance tests are ready to begin.

5.6 Perform the Acceptance Testing as defined in the FSAS System Performance paragraphs of this Section.

5.7 Vendor delivers the FSAS System Test Report.

5.8 Approval of FSAS System Test reports by the City Project Manager.

5.9 Successful Cutover.

5.10 Vendor delivers documentation.

For the final phase:

5.11 Successful completion of a 30-day performance period.

5.12 Vendor delivers Final Documentation.

5.13 Recommendation for acceptance by the City Project Manager.

5.14 Final FSAS System Acceptance.

6. Acceptance Test Procedures (ATP)

Should specific devices or subsystems fail to meet specifications during the acceptance test the City Project Manager may, at their option, elect one of the following procedures:

6.1 The vendor would repair or reconfigure the equipment and would then retest that device or subsystem later in that test sequence.

6.2 The vendor would retest the device or subsystem at a later date and submit the results to the City's Project Manager for approval.

In the event that devices, subsystems, or systems fail to meet specifications upon retest, or in the event that multiple devices or subsystems fail during any individual test sequence, the City Project Manager may, at their option, terminate the test sequence for rescheduling at a later date. In the event of a reschedule, the City will be held harmless of

costs incurred by vendor due to delays or other costs to correct issues and prepare for retesting.

The vendor shall provide all test equipment and personnel necessary to demonstrate the viability of the FSAS. The ATP shall include the Methods, Procedures, Data Reduction Process and Results Display, as defined below.

The ATP shall also specifically address:

6.3 Exercising every primary and backup circuit and document the results.

6.4 Provide specific tests to prove the absence of single mode failures.

7. Inspection Process

Designated City staff shall conduct specific physical site inspection tasks for the Final Inspection. The results from these inspections shall be recorded as punch list items.

For Final Inspection:

7.1 The vendor shall provide notice of readiness that the installation is complete and ready for final inspection, and therefore the FSAS is ready for Acceptance Testing.

7.2 The City Project Manager and Vendor Project Manager shall agree to an inspection schedule, which shall be updated as necessary in the Master Schedule.

7.3 The City Project Manager or designee shall inspect the site, create the project punch list, fill out site inspection forms, and deliver these lists and forms to the Project Team as a project transmittal.

7.4 The vendor shall respond to these inspection items in the form of a Pre-Test resolution list.

7.5 The resolution of these punch list items is required prior to notification to begin the Acceptance Testing.

8. Acceptance Testing

The final Acceptance Test Procedures shall be provided and approved after contract award. The Procedures shall address testing the FSAS performance per the criteria and all tests listed in the FSAS System Performance section of this RFCSP. They shall be structured according to the following basic format:

1.1 Methods - A description of the test sequence, objectives and steps required to verify compliance.

1.2 Procedures - Detailed test procedures shall be provided to enable testing of all performance criteria as specified in this RFCSP. Procedures shall include, as a minimum, a schedule for performance, specific equipment required for the tests, step by step instructions for completing the test,

and all test-specific requirements such as routing for coverage tests.

1.3 Data Collection/Reduction Process - Detailed description of the data collection/reduction process to be used. As a minimum, this shall include the data acquisition equipment, check lists, forms, required software, statistical reduction methods, and procedures used to reduce the collected data to a usable form.

1.4 Result Display - Describe the format to be used to display the results of the test.

9. FSAS System Performance

The equipment described in this RFCSP is expected to function individually and as a complete FSAS. As such, the overarching performance specification and of subsequent acceptance criteria shall be on complete FSAS System Performance. The equipment shall have been turned on, aligned and operational prior to beginning the acceptance test. Tests shall be conducted in such a way as to be repeatable.

For acceptance purposes, the tests shall be documented by the Vendor, and may be witnessed, all or in part, by the City Project Manager and/or the project team. The vendor shall issue the FSAS System Test Report. The test report shall be provided no more than five (5) working days after completion of these tests, for approval by the City Project Manager.

10. Failure Mode Performance Testing

The Vendor shall demonstrate the failure mode operation of the FSAS. All equipment and equipment components, both main and standby or alternate, shall be exercised during the course of the test.

All standard FSAS functions and failure modes, including continued FSAS operation within the limits as defined in this RFCSP, shall be demonstrated. Alarm functions shall also be demonstrated.

11. Phased Implementation Plan

The conversion from the existing FSAS to the new FSAS shall be accomplished such that there is minimum disruption to operations during the cutover. The vendor will provide a detailed cutover plan including all procedures for the plan to the City Project Manager for approval at least 30 days prior to beginning the acceptance testing.

This plan should take into account fixed equipment cutover, interfaces with and transfer of control to or from existing FSAS/equipment, any dispatching transitions, special sequences, scheduled downtime, any dual operation necessary, and personnel schedules.

XXI. Training

Proposal must explain how vendor will train dispatch personnel during the dispatch 24-hours of operation on the FSAS functions. Vendor must provide all training materials, including but not limited to booklets, manuals, and diagrams for the staff of the DFR Dispatch Center.

The training shall have adequate hands-on approach on the model of equipment supplied and it shall include sufficient information and experience to familiarize dispatch center personnel with FSAS features and operations for their assignments.

Vendor must offer multiple identical training sessions to account for the various staffing and shift assignments as well as make-up sessions.

1. Training for Personnel in the Field

Proposer shall explain how they will provide/conduct training during business hours on all FSAS functions and provide all manuals for the staff assigned to the field (Fire Stations) of the DFR working 24-hour shifts.

The training shall have adequate hands-on approach on the model of equipment supplied and it must include sufficient information and experience to familiarize field personnel with FSAS features and operations for their assignments.

Vendor shall offer multiple identical sessions to accommodate personnel who work on the different shifts, as well as offer make-up sessions.

Technical training shall be provided to appropriate Information Technology Staff and support personnel including complete orientation with FSAS components, troubleshooting guidelines and software and hardware operations. The training shall provide in depth knowledge on how to make routine repairs and replacements upon completion of training. Vendor should contemplate providing training for IT, radio shop technical staff and dispatch center supervision/administrative staff.

The technical training can be categorized into three groups:

- ITS Technical Staff – Engineers and Technicians
- ITS Development and Integration staff – Support staff
- DFR staff – DFR operation support

2. Training Solutions

Proposer shall include the proposed training course(s) description(s) and curriculum in the proposal. Proposal should also include the costs for said training/offerings. Proposer shall provide a list of training courses available to technical, staff and field personnel. The training shall be comprehensive to ensure that the dispatchers, field personnel and if

used, “train the trainers” can effectively use, operate, and maintain the FSAS. Outline the length of time it will take to train personnel on the new system via these various forms of training listed below:

- Train the Trainer
- In-Class instruction
- Manuals
- Webinars
- YouTube Videos

IMPORTANT NOTE: The total bid cost should include the line item for the training offered in the cost proposal.

XXII. Warranty, Maintenance and Support

1. Work and Equipment Warranty

The Proposer shall warrant that all equipment, work, and documentation to be supplied to meet the following specification:

Such work and equipment shall be free from defects in material and workmanship. The vendor shall provide all parts and labor needed during the warranty period. All equipment supplied as part of the contract shall be new. Refurbished or remanufactured components will not be accepted.

2. System Warranty

The system warranty shall include the total FSAS including all interfaces to the other systems, such as, interfaces to radio system, 9-1-1 telephone system, CAD, Logging Recorders, and components which support the activities of the DFR dispatch operation related to the FSAS system.

If at any time during the warranty period the City or the Vendor discovers any malfunction, failure, defect or design error, the vendor shall, entirely at its own expense, promptly correct such malfunction, failure, or design error within a service level to be agreed during contract negotiations.

3. Software Warranty

The Proposer shall warrant that any software products provided for the FSAS shall be free from defects or errors for the life of the contract. The Proposer shall provide all

necessary services to promptly correct any such defects at no cost to the City. This applies to the correction of "bugs" which may be found in the operating software.

IMPORTANT NOTE: Software upgrades and licenses shall not require the City to purchase upgrades of hardware to support the software changes for the life of the contract.

4. Extended Service Agreement

Maintenance service shall be available on a 24/7-day a week basis to perform both preventive and repair maintenance according to the extended service agreement provided.

Proposer's field engineers shall respond to service calls initiated by the City according to a service level to be agreed during contract negotiations.

Remote troubleshooting may be conducted via secured modem/VPN access. If remote trouble- shooting with assistance from ITA technical staff does not resolve the problems, physical presence of Proposer's technical staff shall be required on-site at no additional cost to the CITY. If requested by the City, the Proposer's engineer/technician shall arrive on-site according to a service level to be agreed during contract negotiations.

The City may engage the Proposer to make upgrades or requested changes to the FSAS within mutually agreed upon terms and conditions during the active warranty or service agreement periods.

IMPORTANT NOTE: **The City reserves the right to deploy system trained City technicians to perform emergency maintenance during the warranty period without voiding the terms of the warranty.**

5. Spare Parts

In order to limit downtime, selected vendor shall maintain five percent (5%) spare parts for the new major/critical equipment associated with this RFCSP.

6. Equipment Failure During Warranty Period

If any equipment fails during the warranty period, the Vendor shall meet with the City to discuss and explain such failures. If, in the opinion of the City, these failures indicate that the equipment is potentially prone to continuing failures, the vendor shall replace such equipment at no cost to the City.

7. Technical and Maintenance Support Services Post Implementation and Warranty

Proposal must provide a description of the various levels of technical and system support services post implementation and "going-live" including but not limited to: telephone support, on-site support and virtual support. In the description of each level of support please include the following: the hours of operation, whether the support is available during holidays, technician qualifications, and method of providing maintenance. Costs associated with these support services, along with location of technical support staff, and procedures for obtaining support should also be included. All other terms and pricing of support services and applicable warranties offered by Proposer should be clearly set forth in the proposal.

The Proposer shall provide a written statement indicating the length of time they will remain committed to supporting the proposed FSAS hardware solution with parts, modules, boards, equipment, upgrades, and modifications required for maintaining and/or expanding the system.

The Proposer shall describe in detail how it proposes to maintain continuous availability of the system to the City, with a minimum uptime of 99.999%, measured annually.

The Proposer's response shall include, but not be limited to, the following:

1. Describe the support services required to implement the system through "going-live".
2. What is the highest level of support services that you provide? Include a complete description of the services and the proposed cost.
3. Do you offer any lower or midlevel support service packages? Describe the associated services and the proposed costs.
4. What on-site supervisory and technical support staff shall support the proposed FSAS, and during what hours shall they be available? Are maintenance services provided by in- house personnel or another party?
5. Describe the Help Desk services available by telephone for City ITS hardware and software support technicians. The Proposer shall at a minimum provide 24/7 availability of Help Desk services during the entire term of the contract.
6. If errors/issues are discovered at another agency's site, how and when will the City be notified and the FSAS be corrected?
7. Describe the method and procedures for escalating service problems, issues, or failed commitments for maintenance of the FSAS. Define the roles and responsibilities of the escalation reporting structure.
8. Provide a customer satisfaction summary for a recent 12-month period.
9. Provide a list of known and outstanding errors/FSAS deficiencies and a

plan for resolution.

10. Describe your policy/process for updating, applying service patches, fixing bugs to the FSAS when new releases of support software become available.
11. What level of support is provided to the City during implementation and go live and for how long?
12. What are the different levels of host implementation post warranty?

XXIII. System Upgrades and Expansion

Contract(s) executed pursuant to this RFCSP will result in the City expending significant resources to achieve a fully integrated, state of the art FSAS. Therefore, the City requires assurances that the system will not become unserviceable within a short time after implementation or fail to be nimble enough to withstand expansion and change within the City in the years following implementation of the original system. Therefore, your Proposal must address the following issues.

The Proposal must have an open-architecture interface that allows the City to upgrade, add to and/or replace elements of the system in the future.

The Proposal must describe the required process for expanding the system over time, as the need arises in the City.

The Proposal must describe upgrades that the Proposer anticipates occurring during the life of the FSAS.

The Proposal must include responses to the following questions:

1. If the City requests software enhancements after implementation of the original system has been completed, what process will you use to evaluate and satisfy the request?
2. How long will you support each version of the proposed software?
3. Have you ever discontinued support for an older release of the proposed hardware and software?
4. Do you have a policy governing the length of time you support software solutions?
5. What is required of the City to remain compliant with your maintenance and support proposals after the warranty and implementation periods have expired?
6. What are the average costs and timeframes associated with a software update?
7. Can you assure the City that in the event that a customized solution is implemented,

you will support and maintain it in future releases of the FSAS software.

8. Describe your change management process for software releases, including but not limited to regression testing and version control procedures etc.
9. Describe your approach to supporting open systems standards.

XXIV. Communication

The need to respond quickly and clearly is essential to the City. Vendors shall answer written correspondence from the City within three (3) working days; vendors shall have a company employee (not an answering service or answering machine) answer the phone during normal business hours or provide either a cell phone number or a pager number. Phone messages shall be returned within twenty-four (24) hours. The City of Dallas or its representative reserves the right to cancel this agreement at any time if the services are deemed unsatisfactory.

XXV. Commencement Date

All proposers shall be prepared to begin transition upon final approval by Council. However, contract services will not commence until contract is signed by appropriate parties.

XXVI. Award Method –The City's intent is to award this solicitation in its entirety, but the City reserves the right to award in the method that is most advantageous to the City.

The City reserves the sole discretion to determine whether a solicitation response is responsive. City reserves the right to reject any or all bids and to waive minor irregularities or discrepancies in any solicitation response as may be in the best interest of City. Late bids will not be considered for award.

XXVII. Location and Invoicing

The City shall pay invoices in 30 days. In order for the City to pay invoices in 30 days, the vendor's invoice must be correct, and reflect the work or goods delivered to the City. The 30 days begin when the City has received a correct invoice reflecting the work or goods delivered. If the City receives an invoice that is not correct and/or reflective of work or goods that have been delivered, the City will request a corrected invoice and the 30-day period will begin once the correct invoice has been received. All work described in the vendor invoice must have been delivered in compliance with the terms of the contract.

Invoices shall be submitted monthly to the City for payment, unless both parties agree to alternative arrangement based on project milestones. Each invoice submitted for payment shall include, at a minimum, the following information:

- Name and address of the department for which services were provided
- Contact information of City staff who placed order (name, phone number, department)

- Date of order or Service
- Detailed description of each service
- Price good or services (charges for all services covered by this contract are to be separately stated and explained
- Total cost of goods/services

Submitting invoices without the above information may cause delays in payment processing. Incorrect invoices or invoices sent to the wrong address will delay payment. Vendors who fail to follow this procedure risk having the contract with the City cancelled.

XXVIII. Ownership

The City of Dallas will retain full ownership of all project and work artifacts created by the natural progression through this project's life cycle. This is to include, but not limited to, all electronic and paper documentation relating to the design, configuration, testing, and implementation of the Station Alerting System. The electronic documentation subject to the City's ownership will also include relevant project documentation located on externally shared or hosted locations. At the conclusion of this contract, all project artifacts will be delivered to the City of Dallas DFR team for storage within the City of Dallas systems. The delivery method of City owned artifacts will be jointly agreed upon by City DFR and the Implementation Partner.

All City of Dallas data (online and backed up) belongs to the City of Dallas. The vendor must comply with COD data retention and data return policies.

XXIX. Evaluation Criterion

1. **Experience – 30 points**

a) Proposals will be evaluated to determine if Proposer has had adequate and successful experience with similar projects or with the target populations as well as sufficient and qualified staff to perform specified activities.

2. **Approach – 30 points**

a) Proposals will be evaluated on the overall description of the project and the general approach taken. Proposals will be evaluated on the Proposer's strategic approach to achieving the goals of Dallas Fire Rescue through equity, collaboration, sustainability, and data.

3. **Cost and Timeframe – 20 points**

a) Proposals will be evaluated by the Office of Procurement Services (OPS) or delegated department to determine if the organization has the financial capacity to

administer and sustain the project and how the project matches funding available under this RFCSP based on the availability of other funding and resources. Additionally, proposals will be evaluated to determine if Proposer has adequate and successful experience with fiscal tracking and reporting with projects similar in size.

4. **Local Preference Program- 5 points**
   a) The City of Dallas aims to maximize economic return in the procurement of goods and service with the Local Preference Program. The City's Local Preference Program values the participation of companies who have their principal place of business in the City of Dallas and who hire City of Dallas residents. 5 points will be awarded to those Suppliers that qualify for the local Preference points on a pass/fail basis.
   b) The information shall be submitted in the proposal. In order to receive the points a supplier must satisfy one of the following:
      - Proof of principal place of business located in the City of Dallas; OR
      - Proof of local workforce composition including:
      - At least 100 full time employees who are Dallas residents; OR
      - At least 20% of its total full-time employees who are Dallas residents; OR
      - If available, participation in Workforce Development Program

5. **Business Inclusion and Development Plan - 15 points total**
   a) It is the policy of the City of Dallas to involve Minority and Women-Owned Business Enterprises to the greatest extent feasible on the City's construction, procurement, and professional services Contracts. The City and its Vendors shall not discriminate on the basis of race, color, religion, national origin, or sex in the award and performance of Contracts. In consideration of this policy, the City of Dallas has adopted the Business Inclusion and Development Plan (BID Plan) for all City of Dallas Contracts.
   b) The information shall be submitted with the proposal. It shall include the Submission of the Office of Business Diversity Pre-Bid/Proposal Form (OBD-FRM-623). This form consists of four sections:

      i. **Section I: Business Inclusion Affidavit = 0 points**
      It is the policy of the City of Dallas to involve qualified Minority and Women-Owned Business Enterprises (M/WBEs) to the greatest extent feasible on the City's construction, procurement and professional services contracts. The BID Policy establishes subcontracting goals and requirements for all prospective bidder/proposer to ensure a reasonable degree of M/WBE business inclusion and participation in City contracts. By signing this section, the bidder/proposer agrees to comply with the City of Dallas BID Policy.

      ii. Section II: Historical Utilization = up to 5 points
      Projects = 5 Points; 2 Projects = 3 Points; 1 Project = 1 Point

The purpose of this section is to show the bidder/proposer's recent history of and commitment to utilizing M/WBE companies to complete contracts with municipalities as well as private contracts that may or may not have a business inclusion goal. Historical Utilization is not limited to City of Dallas contracts, but should include:

1. The last two projects performed with municipalities that had a business inclusion goal; and
2. The last private contract that may or may not have had a business inclusion goal.

If the vendor has not done business with the City of Dallas or any other municipalities as a prime vendor, they may list the last three private contracts instead.

iii. Section III: Team Make-up/Schedule of Work = up to 10 points

Meets goal = 5 Points; Exceeds goal = 3 Additional Points; Diverse Team Make-Up (Reflective of the City of Dallas) = 2 Additional Points

The purpose of this section is to confirm the M/WBE participation percentage for the sub-contracting team that will be utilized for the anticipated project. In this section, the prime vendor will show their proposal to meet the established M/WBE subcontracting goals.

As a prerequisite for City Council Award, the vendor must demonstrate and document its good faith effort to meet the established goal. Any apparent low bidder/most advantageous proposer who fails to adequately document good faith efforts to subcontract or purchase significant material supplies from Minority and Women-Owned Business Enterprises (M/WBEs) may be denied award of the contract by the City based on the vendor's failure to be a "responsive" or "responsible" bidder.

This section should include all subvendors, both M/WBEs and non-M/WBEs, and should also include the prime vendor's percentage. Contact the Office of Business Diversity if you require additional lists of certified M/WBE companies to perform additional scopes of work.

XXX. Performance Measures and Contract Management

- On time delivery or ship complete – the vendor should know whether the measure will be monthly, quarterly, bi-annual, or annual
- Invoicing – is the vendor invoicing on time and is the invoice accurate. Are the invoices correct and due they detail the work or deliverable associated with the cost being billed
- Quality of goods or services – percentage of deliveries that are correct, performance matrix, or whether service delivery complies with the contract requirements
- Quality of customer service – how expeditious the contractor resolves issues and returns calls

- Deadlines – how often is vendor meeting the established contract deadlines
  Reports (what information should be included in reports) and frequency of such reports

XXXI. Special Requirements

The Contractor is responsible for obtaining any and all permits required by the City of Dallas, State of Texas, or any other entity or governing body. The Contractor and its representatives shall be certified and qualified to perform the services requested by the City. The City reserves the right to request proof of said licenses and or certificates (if applicable), but the primary responsibility shall lie with the Contractor to provide proof of a documented permits and licenses. The Contractor is responsible for and shall include all charges incurred, whether foreseen or unforeseen, for these permits, licenses.

XXXII. Audit Requirements

Each individual FSAS action shall generate a permanent record or audit trail. For example, it is not enough to log that a dispatch was issued. Each action (activating the PA, turning on the house lights, shutting off appliances, etc.) shall be logged individually. In addition to operator actions, all remote operations (from the fire stations) shall also be logged. This includes adjusting local volume levels, setting the night switch, etc.

XXXIII. Service Completion Schedule

The proposal shall include an anticipated performance schedule by phase indicating the plan for accomplishing the design, development, implementation, acceptance testing, training, and any other support proposed for completion of this project. This section should also show the personnel engaged in each task, the deliverables for each task, and the significant completion dates for each deliverable. Appropriate review periods should be indicated.

The schedule should also address the Proposer's approach to project management, as described in the Scope of Work section of this document.

XXXIV. Transition

The proposal shall take into account fixed equipment cutover, interfaces with and transfer of control to or from existing FSAS/equipment, any dispatching transitions, special sequences, scheduled downtime, any dual operation necessary, and personnel schedules as outlined in the Scope of work section of this document.

XXXV. Closeout Procedures and Requirements

1. Successful completion of a 30-day performance period.
2. Vendor delivers Final Documentation.
3. Recommendation for acceptance by the City Project Manager.
4. Final FSAS System Acceptance.

XXXVI. Documents Submitted with Proposal or upon Request

1. Business Information Form (OPS-02)
2. Conflict of Interest Policy and Questionnaire (OPS-06, State Form CIQ)
3. Office of Business Diversity Pre-Bid/Proposal Form (OBD-FRM-623)
4. Office of Business Diversity Workforce Composition Form (OBD-FRM-27)
5. Copy of vendor's internal affirmative action plan or policy
6. Living Wage Affidavit (OPS-3)
7. Sample Contract with markups
8. Any other City documents as required

XXXVII. Opening of Proposals

The City will open proposals during the bid reading. Proposer names will be publicly read at the bid reading which take place at 2:00 p.m. on Fridays and can be viewed on the City's website.

It is the responsibility of the proposer to clearly mark and identify all portions of the proposal, which, in the proposer's opinion, contain trade secrets, confidential information and other proprietary information. All proposals are subject to the Texas Open Records Act process.

XXXVIII. Review of Proposals

1. The City will review and evaluate the proposals submitted to determine if submitted proposals demonstrate the required experience and qualifications to fulfill the obligations of the services identified in this RFCSP. If presentations are required proposers will be notified by the buyer as to the location and times of presentations.
2. The City may conduct all necessary inquiries or investigations, including but not limited to, contacting references to verify the statements, documents, and information submitted in connection with the Proposal. The City may also seek clarification from the referenced Proposers about any financial and experience issues.
3. Please be aware that the City of Dallas may use sources of information not supplied by the proposer concerning the abilities to perform this work. Such sources may include current or past customers of the organization; current or past suppliers; articles from industry

newsletters or other publications or from non-published sources made available to the City of Dallas.

XXXIX. Proposal Pricing

1. Proposed pricing shall be firm for the entire contract. The Contract shall commence on the date of award by the Dallas City Council and upon the execution of the Contract.
2. Costs not included or calculated in the applicable unit prices as-proposed will not be paid by the City, regardless of the intentions of the proposer-when the proposal was submitted and regardless that those costs were actually incurred.

XL. Insurance

1. The successful vendor will be required to purchase, within fifteen days of award, and maintain, during the term of the contract, insurance as described in Attachment 1 and agrees to the indemnification agreement therein and required performance and payment bond.

XLI. Insurance Requirements

The successful bidder(s) shall procure and keep in full force and effect for the duration of the contract liability insurance that complies with all applicable Federal, State and local laws. The successful bidder(s) will provide a certificate of insurance evidencing proof of Automobile Liability and Workers' Compensation insurance coverages. The City of Dallas will be provided a Waiver of Subrogation and will be shown as the certificate holder.

XLII. Discussion with Reasonably Qualified Proposals

1. The City reserves the right to engage in discussions or conduct interviews, either oral or written, with the proposers determined by the evaluation criteria to be reasonably viable to being selected for award. If discussions or interviews are held, the buyer may request best and final offers. The request for best and final offers may include:
    - Notice that this is the opportunity to submit written best and final offers
    - Notice of the date and time for submission of the best and final offer
    - Notice that if any modification is submitted, it shall be received by the date and time specified or it will not be considered
    - Notice of any changes in the Proposal requirements
2. Following evaluation of the best and final offers, purchasing may select for negotiations the offer that is most advantageous to the City, considering price or cost and the evaluation factors in the RFCSP.

3. After the most advantageous proposer(s) has been identified, Contract negotiations may commence. If at any time Contract negotiation activities are judged to be ineffective, Office of Procurement Services will cease all activities with the proposer and begin Contract negotiations with the next highest ranked proposer. This process may continue until either both the proposer and Office of Procurement Services executes a completed Contract or Office of Procurement Services determines that no acceptable alternative proposal exists.
4. The City reserves the right to reject any or all proposals received or to award, without discussions or clarifications, a Contract based on initial proposals received. Therefore, each proposal should contain the Proposer's best terms from a price and technical standpoint. Also, only proposers submitting a proposal will be notified of any communications after the RFCSP closing.

XLIII. Rejection or Acceptance of Proposals

1. This RFCSP does not commit the City to award any Contract. The City reserves the right to reject any or all proposals, to waive technicalities or irregularities, and to accept any proposal it deems to be in the best interest of the City. The City shall not be liable for any costs incurred by any company responding to this RFCSP.
2. The City will require the recommended proposer to sign the necessary Contract documents prepared by the City Attorney's Office. A sample Contract is included as an attachment. Proposer must take exception to any term of the Contract to which it will not agree in its proposal.

XLIV. Late and Withdrawn Proposals

Proposals are required to be submitted electronically at using the City procurement website *https://dallascityhall.bonfirehub.com/login.* The system will not accept submittals after the due date and time and hard copy submittals are not permissible.

XLV. Confidentiality

Any information deemed confidential, shall be clearly noted as such on each page of the solicitation response. City cannot guarantee it will not be compelled to disclose all or part of any public record under the Texas Open Record Act. Proposals will be opened by the City to avoid disclosure of contents to competing Respondents and kept secret and confidential during the solicitation process and prior to award. Respondents who include information in a proposal that is legally protected as trade secret or confidential shall clearly indicate the information which constitutes a trade secret or confidential information by marking that part of the proposal "trade secret" or "confidential" at the appropriate place. If a request is made under the Texas Open Records Act to inspect information designated as trade secret or confidential in a proposal, the Proposer shall, upon request, immediately furnish sufficient written reasons and information as

to why the information designated as a trade secret or confidential should be protected from disclosure, for the City Attorney to present the matter to the Attorney General of Texas for final determination.

XLVI. Disqualification of Proposers

Proposers may be disqualified for, but not limited to, the following reasons:

- Reason to believe collusion exists among the proposers
- The proposer is involved in any litigation against the City of Dallas
- The proposer is in arrears on an existing contract or has failed to perform on a previous contract with the City of Dallas

XLVII. Permits Required by Law

Vendor shall comply with all requirements of federal, state, and local statutory requirements and regulations pertinent to or affecting any phase of this contract.

XLVIII. Records and Audit

The Vendor shall keep accurate records of all components of invoices to the City, including but not limited to times and payroll receipts for hourly personnel utilized by this Contract. These records shall be retained for a minimum of two years after the conclusion of the Contract. The City reserves the right to audit any records it deems necessary for the execution of this Contract.

XLIX. Assignment of Contract

The Vendor shall not assign, transfer, sublet, convey or otherwise dispose of the Contract of any part therein or its right, title or interest therein or its power to execute the same to any other persons, firm, partnership, company or corporation without the prior written consent of the City. Should the Vendor assign, transfer, sublet, convey or otherwise dispose of its right, title or interest or any part thereof in violation of this section, the City may, at its discretion, cancel the Contract and all rights, title and interest of the Vendor shall therein cease and terminate, and the Vendor shall be declared in default.

L. Default by Vendor

The following events shall be deemed to be events of default by Vendor under the Contract:

- Vendor shall become insolvent, or shall make a transfer in fraud of creditors, or shall make an assignment for the benefit of creditors;
- Vendor attempts to assign the Contract without the prior written consent of the City;
- Vendor shall fail to perform, keep or observe any term, provision or covenant of the Contract; or
- Vendor fails to properly and timely pay Vendor personnel, suppliers or other vendors and the failure impacts the City or its Facility in any manner.

In the event a default occurs, the Director shall give the Vendor written notice of the default. If the default is not corrected to the satisfaction and approval of the Director within the time specified in such notice, the City may immediately cancel the Contract. At the direction of the Director, the Vendor shall vacate the facility, if applicable, and shall have no right to further operate under the Contract.

The Vendor, in accepting the Contract, agrees that the City shall not be liable to prosecution for damages or lost anticipated profits if the City cancels or terminates the Contract.

No Waiver: No waiver by the City of any default or breach of any covenant, condition, or stipulation shall be treated as a waiver of any subsequent default or breach of the same or any other covenant, condition, or stipulation.

LI. Termination

The City may terminate this agreement in whole or in part by giving thirty days written notice thereof to Vendor. The City will compensate Vendor in accordance with the terms of the agreement for all goods and services delivered and accepted prior to the effective date of such termination notice.

LII. Miscellaneous

1. After executing the Contract, no consideration will be given to any claim of misunderstanding.
2. Proposers shall submit with the Proposal, the required Vendor's qualification statement with supporting information as stated herein along with all other supporting documentation requested.
3. Proposers shall thoroughly familiarize themselves with the provisions of these Specifications and the Facilities.
4. The City reserves the right to reject all Proposals and to waive any minor irregularities.
5. A Proposal may be disqualified if the corporation or individual Proposer is in arrears or in default to the City for delinquent taxes or assessments or on any debt or Contract, whether as defaulter or bondsman; or who has defaulted upon any obligation to the City by failing to perform satisfactorily any previous agreement or Contract within the past seven years. Also, Proposers may be disqualified for poor prior performance on similar Contracts with other entities.
6. The Contract with the Vendor will be drawn by the City and may contain such other provisions as are deemed necessary to protect the interests of the City.
7. The Vendor agrees to abide by the rules and regulations as prescribed herein. The Vendor will, in all solicitations or advertisements for personnel to perform services under the Contract, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, gender, or national origin.
8. If either party hereto is prevented from completing its obligations under the Contract by act of God, strike, lockout, material or labor restrictions by any governmental authority, civil riot, flood, or any other cause beyond the control of the parties hereto, then such party shall be excused from such performance for such period of time as is reasonably necessary after such occurrence to remedy the effects thereof.
9. The section headings in these Specifications are for convenience in reference and are not intended to define or limit the scope of any of the conditions, terms or provisions of these specifications.
10. Should any question arise as to the proper interpretation of the terms and conditions of these specifications, the decision of the City Attorney or his authorized representative shall be final.

LIII. Conflict of Interest

CHARTER XXII Sec. 11 FINANCIAL INTEREST OF EMPLOYEE OR OFFICER PROHIBITED

(a) No city official or employee shall have any financial interest, direct or indirect, in any contract with the city, or be financially interested, directly or indirectly, in the sale to the city of any land, materials, supplies or services, except on behalf of the city as a city official or employee. Any violation of this section shall constitute malfeasance in office, and any city official or employee guilty thereof shall thereby forfeit the city official's or employee's office or position with the city. Any violation of this section, with knowledge, express or implied, of the

person or corporation contracting with the city shall render the contract involved voidable by the city manager or the city council.
(b) The alleged violations of this section shall be matters to be determined either by the trial board in the case of employees who have the right to appeal to the trial board, and by the city council in the case of other employees.
(c) The prohibitions of this section shall not apply to the participation by city employees in federally funded housing programs, to the extent permitted by applicable federal or state law.
(d) This section does not apply to an ownership interest in a mutual or common investment fund that holds securities or other assets unless the person owns more than 10 percent of the value of the fund.
(e) This section does not apply to non-negotiated, form contracts for general city services or benefits if the city services or benefits are made available to the city official or employee on the same terms that they are made available to the general public. (f) This section does not apply to a nominee or member of a city board or commission, including a city appointee to the Dallas Area Rapid Transit Board. A nominee or member of a city board or commission, including a city appointee to the Dallas Area Rapid Transit Board, must comply with any applicable conflict of interest or ethics provisions in the state law and the Dallas City Code. (Amend. of 8-12-89, Prop. No. 1; Amend. of 8-12-89, Prop. No. 15; Amend. of 11-4-14, Prop. Nos. 2 and 9)

LIV. Indemnity

The selected Proposer agrees to defend, indemnify and hold the City, its officers, agents and employees, harmless against any and all claims, lawsuits, judgments, costs, and expenses for personal injury (including death), property damage or other harm for which recovery of damages is sought, suffered by any person or persons, that may arise out of or be occasioned by the selected Proposer's breach of any of the terms or provisions of the contract, or by any other negligent or strictly liable act or omission of the selected Proposer, its officers, agents, employees, or subvendors, in the performance of the contract; except that the indemnity provided for in this paragraph shall not apply to any liability resulting from the sole negligence or fault of the City, its officers, agents, or employees and in the event of joint and concurrent negligence or fault of the selected Proposer and City, responsibility, and indemnity, if any, shall be apportioned comparatively in accordance with the laws of the State of Texas, without waiving any governmental immunity available to the City under Texas law and without waiving any defenses of the parties under Texas law. The provisions of this paragraph are solely for the benefit of the parties hereto and are not intended to create or grant any rights, contractual or otherwise, to any other person or entity**.**

LV. Wage Floor Rate Requirement

1. On November 10, 2015, the Dallas City Council passed Resolution 15-2141 which requires prime vendors, awarded general service contracts valued greater than $50,000, and first-tier subvendors on the contract to pay their employees rendering services on the contract a wage floor of not less than $ 17.82 per hour.

2. Pursuant to Resolution 15-2141 the wage floor requirement for all general service contracts greater than $50,000 shall be effective immediately on all new contracts awarded after November 10, 2015. Vendors bidding/proposing on general service contracts shall take into consideration such wage floor requirements in their bid/proposal. The wage floor requirement for the City of Dallas' general service contracts shall be derived from the most current Massachusetts Institute of Technology Living Wage publication and shall remain fixed for the term of the respective contract. The City reserves the right to audit such contracts for compliance with the wage floor requirement as mandated by Resolution 15-2141. This requirement does not apply to construction contracts in which prevailing wage of employees is governed by the Davis-Bacon Act as defined in the Texas Local Government Code 2258, purchase of goods, procurements made with grant funds or procurements made through cooperative and/or inter-local agreements.

3. The purpose of this policy is to promote an acceptable wage floor for working families in the City of Dallas, increase the level of service delivered to the City through specific contracts and reduce turnover in such contracts thus maintaining a continuous and consistent level of service for vested parties.

4. The City Manager shall use the following definitions to administer the benefactors of the "wage floor" for purposes of the referenced resolution:
    - "City" means the City of Dallas, Texas.
    - "General Services Contract" means any agreement between the City and any other Person or business to provide general services through an awarded City contract valued greater than $50,000. A General Services Contract for purposes of the Resolution does not include (i) a contract between the City and another governmental entity or public utility, (ii) a contract subject to federal or state laws or regulations that would preclude the application of the application of the wage floor, (iii) or a contract with all services under the contract performed outside of the City of Dallas.
    - "Subvendor" means any Person or business that has entered into its own contract with a prime vendor to perform services, in whole or in part, as a result of an awarded City general
    - "Employee" means any person who performs work on a full-time, part-time, temporary, or seasonal basis, including employees, temporary workers, contracted workers, contingent workers, and persons made available to work through services of a temporary services, staffing or employment agency or similar entity.

5. Wage Floor Reporting Requirements

Vendors awarded City general services contracts as described in the wage floor rate requirement section of this specification shall be required to provide the buyer the residential zip code and respective number of employees directly impacted by the wage floor requirement ten days after Council approval and on January 1st. but not later than January 31st. for the term of the contract. The Vendor shall submit the report to the contract administrator during the established period.

LVI. Wage Floor Compliance Requirements

Vendors submitting a response to a solicitation for general services must comply with the wage floor requirement to be consider responsive. The City may request that Vendors, at any time during the pre- or post-award process, demonstrate compliance with the wage floor requirement. Vendors not compliant with the wage floor requirement will be deemed nonresponsive and will not be considered for award. Vendors awarded general service contracts must comply with the wage floor policy and reporting requirements for the term of the contract, failure to remain in compliance may result in breach of contract.

LVII. Selection Process

The internal team will evaluate all proposals received in response to this RFCSP. After reviewing the proposal submissions, consultants may be selected for in-person interviews/oral presentations. From those presentations and possible interviews, the proposals will be re-evaluated, and final determination will be made.
The City of Dallas will pursue negotiations with the top ranked respondent with the goal of entering into a contract.

LVIII. Development Costs

Neither City of Dallas nor its representatives shall be liable for any expenses incurred in connection with preparing a response to this RFCSP. Respondents are encouraged to prepare their proposals simply and economically, providing a straightforward and concise description of your firm's ability to meet the requirements of the RFCSP.

LIX. Contract Award

Upon selection of a successful Proposer, the City and the Proposer will negotiate a final contract, based on the terms outlined in this RFCSP. A sample agreement, with the general terms for the final contract, is attached as Sample Contract for Services. By submitting a proposal, the Proposer agrees to be bound by these terms and conditions unless otherwise noted in the Submittal. The final contract is subject to City Council approval.

LX. Certificate of Interested Parties (Form 1295)

All vendors recommended by City staff for a contract pursuant to this RFCSP will be required to comply with Section 2252.908 of the Texas Government Code. Each vendor shall complete Form 1295-Certificate of Interested Parties- for every contract for which they're recommended. Vendor will complete the form electronically at the Texas Ethics Commission website,

https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm ,

and submit a copy to the buyer before the contract information will be sent to the City Attorney's Office to draft the contract. Once the terms of the contract are fully negotiated; the recommended vendor has signed the contract indicating agreement with the terms of the contract; and the Form 1295 is on file at the Texas Ethics Commission website with a copy provided to the buyer; the staff recommendation will be placed on a City Council agenda to award the contract.

Technology Acquisition Appendices

1. Appendix

1. *Appendix A - City of Dallas RFCSP Technology Reference Architecture*

TECHNOLOGY REFERENCE ARCHITECTURE

The City of Dallas Technology Reference Architecture (TRA) is a compact illustration of the current and future technology elements supporting desired business outcomes at the City of Dallas.

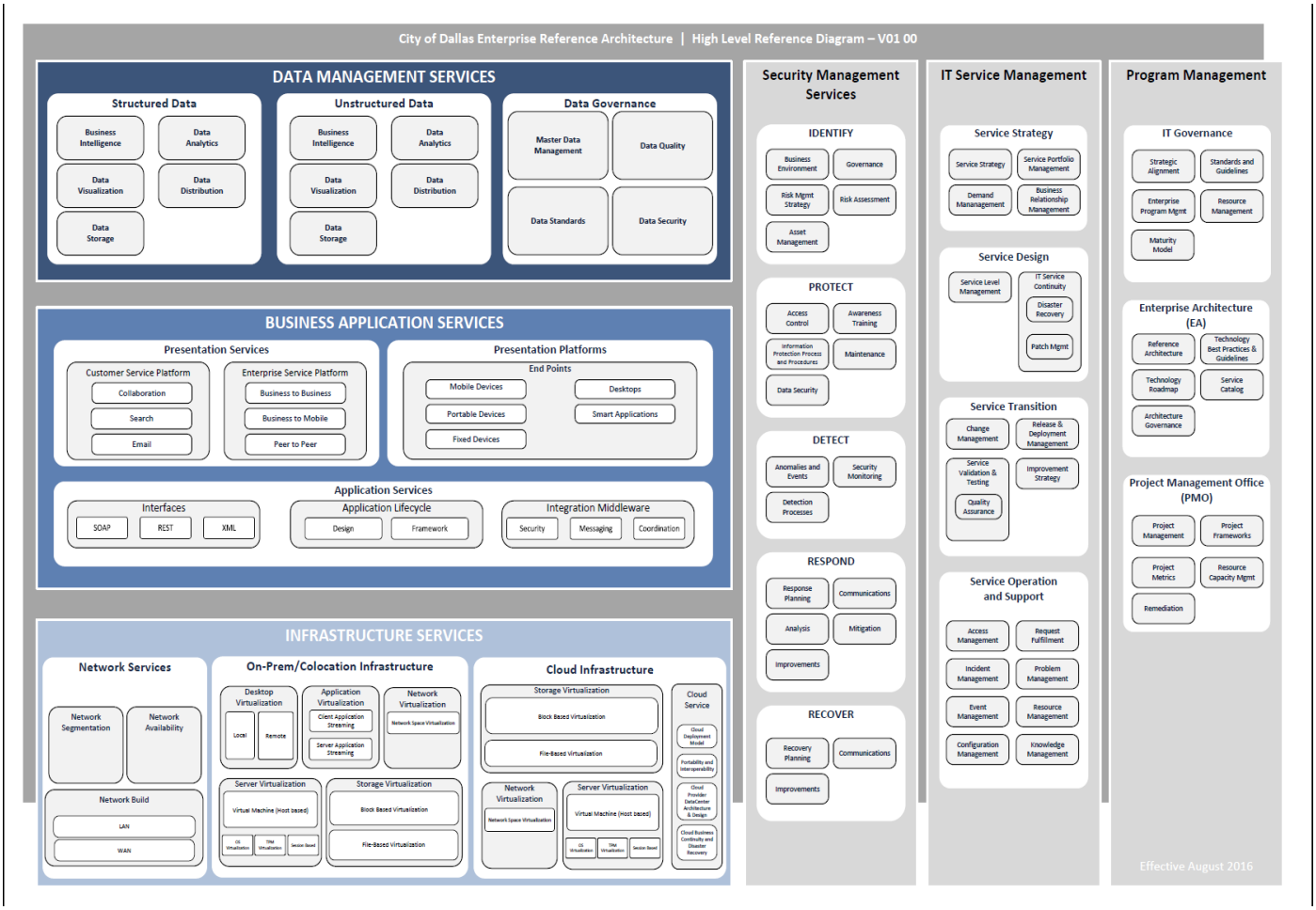


Figure 1 City of Dallas Technology Reference Architecture (TRA)

http://dallascityhall.com/departments/ciservices/Pages/reference-architecture.aspx

The TRA is constructed of six interdependent functional domains that support service delivery. The TRA elements are:

- Data Services
- Application Services
- Infrastructure Services
- Security Services
- IT Service Management
- Program Management

Services and solutions deployed in support of City of Dallas operations are to be in alignment with the goals and objectives of the TRA. Proposers offering services and solutions to the City of Dallas are expected to be compliant with the TRA; responses to the TRA checklist should be provided in the excel document format provided. Proposers are expected to provide documentation that illustrates both the High-Level Design (HLD), including the architecture of the solution with the main components and their interfaces, and the Low-Level Design (LLD) which should include both the logical and functional detailed architectures of the solution. Any change requires updated documentation to be submitted along with the Architecture Change Request.

TRA goals and objectives are supported using City adopted technology frameworks and standards. The following appendices of this document identify and communicate City technology frameworks and standards for Proposer consideration. For the requisite industry standards, proposers will be expected to provide Statements of Compliance upon request.

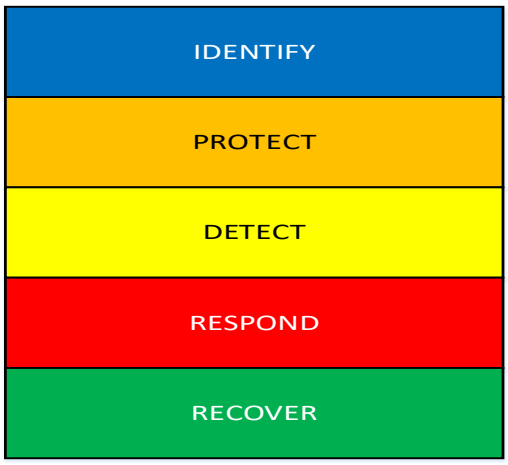
The identified technology frameworks and standards are seen as a minimum for the delivery of service at the City of Dallas.

2. *Appendix B - City of Dallas RFCSP Enterprise Security Framework and Standards*

Enterprise Security Framework and Standards

To enable a common understanding of the security needs of the City of Dallas, an enterprise security framework was constructed. The framework relies upon readily recognizable operational security principles to facilitate communication.

Security Principles



The security principles upon which the Enterprise Security Framework organize basic cybersecurity activities at their highest level. The principles are Identify, Protect, Detect, Respond, and Recover.

These principles were selected to aid an organization in expressing its management of cybersecurity risk by organizing information, enabling risk management decisions, and addressing threats.

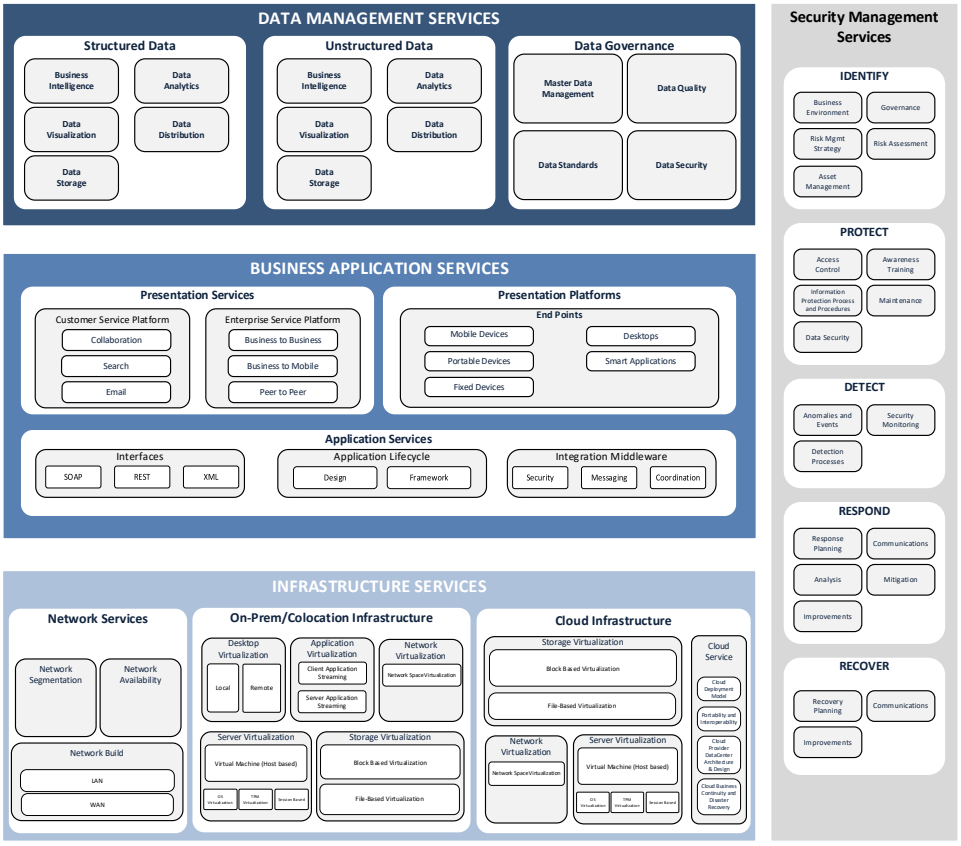
City of Dallas Security Principles

To assist in communication, these principles have been defined as follows:

- Identify – Develop the organizational understanding to manage cybersecurity risk to systems, assets, data, and capabilities
- Protect – Develop and implement the appropriate safeguards to ensure delivery of critical infrastructure services
- Detect – Develop and implement the appropriate activities to identify the occurrence of a cybersecurity event
- Respond – Develop and implement the appropriate activities to take action regarding a detected cybersecurity event
- Recover – Develop and implement the appropriate activities to maintain plans for resilience and to restore any capabilities or services that were impaired due to a cybersecurity event

1. Enterprise Security Framework

The Enterprise Security Framework relies upon a generalized layered approach to focus attention to areas of concern to the City of Dallas. The four domains of the Security Framework are illustrated as follows:



- Data Management Services is dedicated to focusing on and protecting organizational data. All proposed technology solutions must map their data-centric security mechanisms to this layer as appropriate.
    - Structured Data
    - Unstructured Data
    - Data Governance

- Business Application Services is focused upon the secure and authorized delivery of data and information to achieve desired business outcomes. All proposed technology solutions that address infrastructure elements must map their security mechanisms to this layer as appropriate.
    - Presentation Services
    - Presentation Platforms
    - Application Services
- Infrastructure Services is dedicated to the protection of infrastructure elements supporting business applications. All proposed technology solutions that address infrastructure elements must map their security mechanisms to this layer as appropriate.
    - Network Services
    - OnPrem/Colocation Infrastructure
    - Cloud Infrastructure

- Security Services is focused upon the governance, management and operation of security mechanisms within the City. Standards and Compliance Services performs those activities such as risk assessment and risk management, threat and vulnerability management, infrastructure protection and security monitoring. All proposed technology solutions directly impacting or complementing security activities must map their security mechanisms to this layer as appropriate.
    - Identify
    - Protect
    - Detect
    - Respond
    - Recover

All four domains of the Enterprise Security Framework are directed to the one goal of the protection of data and information. As with most security frameworks, the primary information security goals of the framework are Confidentiality, Integrity and Availability. These terms are defined as:

- Confidentiality – preserving authorized restrictions on access and disclosure, including means for protecting privacy and proprietary information.
- Integrity – guarding against improper information modification or destruction and includes ensuring information non-repudiation and authenticity.
- Availability – ensuring timely and reliable access to – and use of – information.

When mapping security mechanisms to a domain, Proposers are encouraged to provide responses within the context of the previously identified security principles which underpin the City's Enterprise Security Framework.

2. Enterprise Security and Privacy Standards

Enterprise Security and Privacy Standards have been identified as necessary elements of any Security and Privacy Program for the City of Dallas and as such are designated as appropriate standards for use at the City of Dallas.

The following enterprise security standards are categorized by major frameworks or groupings for the convenience of Proposers that provide solutions and services within known frameworks or groupings of standards. All standards noted are applicable to all solution and services deployed and operated for the benefit of the City of Dallas.

Federal Risk and Authorization Management Program (FedRAMP) National Institute of Standards and Technology (NIST) Standards

- Special Publication (SP) 500-292: NIST Cloud Computing Reference Architecture
- SP 800-34 Revision 1: Contingency Planning Guide for Federal Information Systems
- SP 800-37 Revision 1: Guide for Applying the Risk Management Framework to Federal Information Systems: Security Life Cycle Approach
- SP 800-39: Managing Information Security Risk: Organization, Mission, and Information System View

- SP 800-53 Revision 4: Security and Privacy Controls for Federal Information Systems and Organizations
- SP 800-53a Revision 4: Guide for Assessing the Security Controls in Federal Information Systems and Organizations, Building Effective Security Assessment Plans
- SP 800-60 Revision 1, Volume 1: Guide for Mapping Types of Information and Information Systems to Security Categories
- SP 800-60 Revision 1, Volume 2: Appendices to Guide for Mapping Types of Information and Information Systems to Security Categories
- SP 800-61 Revision 2: Computer Security Incident Handling Guide
- SP 800-86: Guide to Integrating Forensic Techniques into Incident Response
- SP 800-92: Guide to Computer Security Log Management
- SP 800-94: Guide to Intrusion Detection and Prevention Systems (IDPS)
- SP 800-115: Technical Guide to Information Security Testing and Assessment
- SP 800-122: Guide to Protecting the Confidentiality of Personally Identifiable Information (PII)
- SP 800-128: Guide for Security-Focused Configuration Management of Information Systems
- Federal Information Processing Standard (FIPS) 140-2: Federal Information Processing Standard (FIPS) 140-2: Security Requirements for Cryptographic Modules
- FIPS 199: Standards for Security Categorization of Federal Information and Information Systems
- FIPS 200: Minimum Security Requirements for Federal Information and Information Systems
- FIPS 201: Personal Identity Verification (PIV) of Federal Information and Information Systems
- Office of Management and Budget (OMB) A-130: Managing Information as a Strategic Resource

City of Dallas Extensions to FedRAMP

- SP 800-30, Revision 1: Risk Management Guide for Information Technology Systems
- SP 800-31: Intrusion Detection Systems
- SP 800-35: Guide to Information Technology Security Services
- SP 800-50: Building an Information Technology Security Awareness and Training Program
- SP 800-55, Revision 1: Performance Measurement Guide for Information Security
- SP 800-64: Security Considerations in the Information System Development Life Cycle
- SP 800-82: Guide to Industrial Control Systems (ICS) Security
- SP 800-83: Guide to Malware Incident Prevention and Handling for Desktops and Laptops
- National Institute of Standards and Technology Interagency or Internal Report (NISTIR) 8062 (DRAFT): Privacy Risk Management for Federal Information Systems

3. *Appendix C - City of Dallas RFCSP Data Management Strategy*

Data Management Strategy

The City of Dallas requires access to its data whether stored on site, in a hosted or cloud-based solution or maintained by a third party. To this end, the City requires compliance with data management standards and requirements to facilitate continued cost-effective access to all forms of City data.

Data Management Standard Framework:

The City has adopted the Data Management Association's Guide to Data Management Body of Knowledge (DM BOK) as its data management framework.

Data Governance

Data Governance aspects for all data managed on-site or off-site must minimally include consideration for:

- Data Operations including backup, recovery, monitoring, performance, Disaster Recovery, and Business Continuity as related to database activity.
- Data Security including access control, encryption as required, data upload, data download, Health Insurance Portability and Accountability Act of 1996 (HIPAA), PII, Criminal Justice Information Services (CJIS), and other possible administrative or legal requirements
- Data Quality including use of City Geo verification, City Geographic Information System (GIS) districts, use of City Shape files, and overall data consistency and integrity
- Data Master Data including use of standard look up data
- Data Meta Data including providing a Data Dictionary, an Entity Relation Diagram, and relevant data descriptions
- Data Availability including data reporting, extraction, inspection, review, migration, End of Contract data resolution, and identification and agreement regarding the final disposition of City data end of contract.
- Data Architecture

Database Management Systems

The City requires, where needed, that the vendor provide an industry standard Relational Database Management System that meets the needs of all other requirements within this document. These include but are not limited to:

- Security
- Data Integrity
- Backup and recovery ability to meet provided requirements for Service Level Agreement (SLA) and Disaster Recovery

- Backup and Recovery to within SLA for data incidents where data recovery is required
- Performance characteristics to meet the required application SLAs as provided
- The ability to provide scheduled and ad hoc data extract requests
- The ability, if requested, to provide a periodically updated full copy of the database solution for storage and full data access at a location of the City's choosing
- The data should be available at the end of the contract period as an industry standard supported backup file type to allow the City to recover the data on a City location and have full access and use of the data within the database system.

The City understands that there is a multiplicity of database types now available that are not considered to be standard Relational Database Management Systems. Not Only Structured Query Language (SQL) or Non-SQL (NoSQL) are non-relational systems and may be presented as part of the proposal where their function is required to provide the required City service.

The City requires Proposers to provide:

- An Entity Relationship Diagram (ERD)
- A Data Dictionary including table name, column name, data type, length, any constraints, and default values, primary key/foreign key (to what tables and columns), how used in support of the solution.

Depending on data access parameters, other database technology solutions may be considered, if City data is accessible to its employees and delegates.

4. *Appendix D - City of Dallas RFCSP Enterprise Standards for Information Systems and Infrastructure*

Enterprise Standards for Information Systems and Infrastructure

The following standards have been identified as necessary elements of any Networking and Infrastructure Framework and Program and as such are designated as appropriate standards for use at the City of Dallas.

Cellular Communications

- 3rd Generation Partnership Project (3GPP) – Long Term Evolution (LTE) – Wireless Mobility
- 3GPP – LTE Adv: Long Term Evolution Advanced – Wireless Mobility
- Next Generation Mobile Networks Alliance (NGMNA) – 5G: 5th Generation Wireless Mobile Network – Wireless Mobility

Institute of Electrical and Electronics Engineers (IEEE) Communications Standards

- IEEE 802.3 Series – Ethernet Standards
- IEEE 802.11 Series – Wireless networking standards – Wireless Data; including
- IEEE 802.11s – Wireless Mesh
- IEEE 802.15 Series – Bluetooth – Personal Area Networks

International Telecommunication Union (ITU) Standards for Wavelength Division Multiplexing (WDM) – Optical Carrier Multiplexing (ITU spacing standards)

- ITU-T G.694.1: "Spectral grids for WDM applications: Dense Wavelength Division Multiplexing (DWDM) frequency grid"
- ITU-T G.694.2: "WDM applications: Course Wavelength Division Multiplexing (CWDM) wavelength grid
- ITU-T G.651: “Characteristics of 50/125 µm Multimode Graded-index Optical Fiber”
- ITU-T G.652: "Transmission media and optical systems characteristics – Optical fiber cables”
- ITU-T G.653: “Characteristics of Single-mode Dispersion Shifted Optical Fiber and Cable”
- ITU-T G.654: “Characteristics of Cut-off Shifted Single-mode Optical Fiber and Cable”
- ITU-T G.655: “Characteristics of Non-zero Dispersion Shifted Single-mode Optical Fiber and Cable”
- ITU-T G.656: “Characteristics of Non-zero Dispersion Shifted Fiber for Wideband Transport”
- ITU-T G.657: “Characteristics of a Bending Loss Insensitive Single-mode Fiber for Access Networks”

Internet Engineering Task Force (IETF) and International Organization for Standardization (ISO) Routing Protocols

- Request for Comments (RFC) 2328 Open Shortest Path First (OSPF Version 2 – applies to IPv4)
- RFC 5340 Open Shortest Path First (OSPF Version 3 – applies to IPv6)
- RFC 2453 Routing Information Protocol (RIP) Version 2 (RIPv2)
- RFC 7868 Cisco's Enhanced Interior Gateway Routing Protocol (EIGRP)
- ISO/International Electrotechnical Commission (IEC) 10589:2002 Intermediate System to Intermediate System (IS-IS)

Internet Engineering Task Force (IETF) RFC

- RFC 1883 – The Internet Protocol (IP) version 6 Specification
- RFC 791 – IP version 4 Specification

5. *Appendix E - City of Dallas RFCSP Enterprise Standards for Business Applications and IoT*

Business Applications:

The following standards and reference documents have been identified as necessary elements for Business Applications deployed at the City of Dallas:

- The Open Group Architecture Framework (TOGAF) to Define and Govern Service-Oriented Architectures, 1-931624-95-X, G113, The Open Group, May 2011
- Technical Standard Service Oriented Architecture (SOA) Governance Framework, 1-931624-82-8, C093, The Open Group, August 2009
- Open Group Standard SOA Reference Architecture, 1-937218-01-0, C119, The Open Group, November 2011
- Reference Architecture for SOA Version 1.0 Public Review Draft 1, sao-ra-pr-01, Organization for the Advancement of Structured Information Standards (OASIS), 23 April 2008
- Cloud Computing Service Metrics Description, Special Publication 500-307, NIST, 2015.

Smart City & Internet of Things (IoT) Standards

While the IoT and Smart City industry does not have a fully mature body of standards, there are several organizations developing standards and the City of Dallas places a strong emphasis on interoperability across our IoT and Smart City acquisitions. The Proposer should respond to the standards in the other sections of this document for all IoT and Smart City solutions the City looks to acquire, and in addition the Proposer should provide a concise statement regarding which standards and specifications the Proposed solution supports for the following including why the value provided by that standard justifies investment by the City:

- IoT Device and Data Integrity
- IoT Security
- Device Management
- Smart Cities & IoT Framework
- Data Protocols
- Semantic
- Identity Management & Federation

Currently, the City of Dallas prefers the following as applicable:

- Device Management - Open Mobile Alliance Device Management 1.2.1
- IoT Framework – Internet Protocol for Smart Objects (IPSO) Application Framework, IEEE P2413, and Open Mobile Alliance (OMA) LightweightM2M (LWM2M) v1.0.

NIST

- NIST 800-145 - The NIST Definition of Cloud Computing; Sept 2011
- NIST 800-146 - Cloud Computing Synopsis and Recommendations; May 2012
- NIST Cloud Computing Reference Architecture (version 1); March 2011
- SP 800-48 Rev. 1: Guide to Security Legacy IEEE 802.11 Wireless Networks, July 2008, Gaithersburg, MD.
- NISTIR 8062 (DRAFT): Privacy Risk Management for Federal Information Systems, NIST May 2015, Gaithersburg, MD.

6. *Appendix F - City of Dallas RFCSP Enterprise Geographical Information Systems (EGIS)*

EGIS

This appendix is intended to give GIS standards that will be adhered to on all bids, Request for Proposals (RFPs), RFCSPs, grant programs, volunteer non-profit efforts for the City and any other business partners solution leveraging location based GIS technology. These standards are intended for all parties submitting data and/or delivering geospatial solutions that will, or potentially could have, a reliance and/or dependency on the City of Dallas GIS.

Minimum GIS Standards

The City of Dallas GIS standards are a group of standards outlined for City of Dallas geospatial datasets, datasets that include spatial attributes, infrastructure, services, resources and applications.

Conformance to these standards is required by all parties including vendors, business partners and contractors alike. Any and all proposed solutions will conform to the standards.

Conformance to these standards will ensure that proposed spatial solutions will seamlessly integrate the City's GIS and other business systems in a consistent and sustainable manor.

GIS Metadata:

The City of Dallas requires Federal Geographic Data Committee (FGDC) compliant documentation for all data to be included in the City of Dallas GIS database.

The FGDC Content Standard for Digital Geospatial Metadata (CSDGM) has been adopted by the City of Dallas as the documentation or "metadata" format for all data included in the City of Dallas GIS database. Participating parties are responsible for providing documentation in FGDC compliant metadata format for geospatial data products.

FGDC metadata is the required documentation of all geospatial data products produced through partnerships, vendors, grants or contracts. Departments collecting or producing geospatial data, either directly or indirectly (e.g., through grants, partnerships, vendors or contracts with other entities), are required to ensure, prior to obligating funds for such activities, that data will be collected in a manner that meets all relevant standards adopted through the FGDC process.

Projection (Coordinate System) Requirement

All geospatial data will be delivered in the City of Dallas standard projection (coordinate system). State Plane North American Datum 1983, North Central Texas, FIPS 4202, Geodetic Reference System 1980 (GRS 80) Spheroid, Units feet Spatial Reference System Identifier (SRID) 2276.

Digital GIS Data

Digital data submitted for inclusion in the City of Dallas GIS database will be topologically clean and free of errors. All points, lines, and polygons will have a single unique user-id number (Long Integer).

Data will have:

- No overshoots
- No slivers
- No open polygons (e.g., undershoots)
- No label errors
- No unresolved node errors
- No unresolved line segment intersections
- Contiguous features should be edge matched or closed
- Line segments (arcs) that intersect the boundaries of a coverage/layer must be accurately edge matched with corresponding datasets
- Map features should not extend beyond prescribed dataset boundaries
- Advance RISC Computing (Arcs) must not extend beyond (overshoot) nor fall short of (undershoot) the dataset boundary

Raster (Image) Data

All Geospatial image (raster) data delivered will be in the one of the following formats:

- Ortho Rectified Tag Image File Format (TIFF) or (.TIF) with accompanying TFW World text file (.TFW)
- Ortho Rectified Joint Photographic Experts Group (JPEG) or (.JPG) with accompanying JGW World file (.JGW)
- Ortho Rectified Multi-Resolution Seamless Image Database (Mr. SID) or (.SID) with accompanying SDW World file (.SDW)

Attribute Coding Accuracy

If data is deemed by the City of Dallas to contain errors it will be the data provider's responsibility to correct the data attribute errors.

It is the responsibility of the producing agency or City of Dallas department that has entered into a contract with the producing agency to verify that the data has been encoded within the accuracy limits set by the standards. The City GIS Services division {Enterprise GIS/Information and Technology Services (ITS)} will not verify attribute accuracy of the delivered data. It is the responsibility of the data provider to confirm the accuracy.

Attribute Coding Requirements:

- Data and codes should be consistent and the descriptions well documented in the metadata or data dictionary
- Attribute coding schemes should be well defined and in common use
- Names of new datasets should not be the names of existing datasets in the City of Dallas GIS database unless replacing that dataset
- Begin all dataset names, item names, and attribute codes with a letter.
- Eliminate punctuation, including hyphens, pound signs, and periods, from dataset names, item names and attribute codes
- Define items according to intended use, i.e., numeric data types for statistical data or for data that will be used for calculation, characters data types where these functions are not anticipated.
- Eliminate the use of the Boolean values 0 and 1 as attribute codes
- Wherever practicable utilize character attribute codes, i.e., previously defined acronyms or abbreviations in common use.
- Any physical property (street) address (Address Format) will be broken into its component fields as follows:
    - Street Address Number
    - Street Prefix direction
    - Street Name (make sure they are spelled correctly)
    - Street Type - US Postal Service (USPS) abbreviations required. USPS Publication 28, Section C.
    - Street Suffix direction
    - City
    - State
    - USPS ZIP Code

Address Validation Requirements

Validation of addresses and geocoding, all parties will use the City of Dallas approved standard locator service(s) only, per the business requirements for the application. The Uniform Resource Locator (URL) for the locator service(s) will be provided upon request by the Purchasing Agent.

City of Dallas GIS Infrastructure and Associated Technical Requirements:

- The vendor shall leverage City of Dallas Enterprise GIS infrastructure without modification (as-is). This includes the edition that the City of Dallas is leveraging at the time of the implementation.
    - The City of Dallas standard for data sharing for applications is the Aeronautical Reconnaissance Coverage Geographic Information System (ArcGIS) Representation State Transfer (REST) Application Programming Interface (API)* or comparable technology.
    - The City of Dallas public REST endpoint (catalogue URL) is: http://gis.dallascityhall.com/wwwgis/rest/services
    - The configuration of City of Dallas Enterprise GIS infrastructure will not be modified to support the technical requirements of a proposed application or

system. If any customization is required, an instance of GIS web application and/or database software is required separate and apart from the Enterprise GIS infrastructure. Further, the cost of a stand-alone instance for GIS application and/or database software and associated hardware must be included in the proposal as separate line items. The City of Dallas cannot supply dedicated GIS licensing or hardware to support an application.

- If the proposed application requires the editing of data via the application, the data must be hosted on a database separate and apart from Enterprise GIS infrastructure.
- If the proposed application requires an ArcGIS Online subscription or access to ArcGIS Online * or comparable technology, the vendor must provide the subscription and adequate Names Users as part of the proposal. This cost must be included in the proposal as separate line items. The City of Dallas cannot use its ArcGIS Online Organizational account to support a third-party system.
- Under no circumstances, shall it be assumed that Enterprise GIS will make allowances to support a proposed system without prior affirmative commitment from the GIS Manager, the ITS Executive over Enterprise GIS, or the Chief Information Officer (CIO).
- The publication of dedicated standard read-only REST services to support a business need may be requested for the implementation of proposed system, provided that the City has the data to support the services and the services do not require any custom functionality or non-standard configurations.

Questions from Vendors on Solutions adhering to GIS Standards

If there is a question about whether a technical requirement or specification of a proposed system may not conform to City of Dallas GIS standards, the proposer should forward the question through the Purchasing Agent assigned to the bid for handling.

Comparable products will be reviewed by the City of Dallas Enterprise GIS/ITS group and determination of compatibility will be made. If compatibility of given solution is not equal or above the identified City requirement the City of Dallas Enterprise GIS/ITS group has the right to exclude the solution from consideration.

The City of Dallas leverages FGDC Geospatial Standards. These published standards can be seen at

https://www.fgdc.gov/resources/download-geospatial-standards.

The City of Dallas reserves the right to require adherence to FGDC Geospatial standards in the absence of internally published City of Dallas geospatial standards.

7. *Appendix G - City of Dallas RFCSP Web Accessibility and Development*

Web Accessibility

The City of Dallas makes every possible effort to make sure its websites and applications are accessible to everyone. Our goal is to make content accessible to a wide range of people with disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity and combinations of these. We adhere to two standards, Section 508 and Web Content Accessibility Guidelines (WCAG) 2., to ensure these requirements are met.

Section 508: https://www.section508.gov/

Section 508 requires Federal departments and agencies that develop, procure, maintain, or use Information and Communication Technology to assure that these technologies provide access to information and data for people with disabilities.

WCAG 2.0: https://www.w3.org/TR/WCAG20/

WCAG 2.0 covers a wide range of recommendations for making Web content more accessible.

Web Development & User Experience

The City focuses on the user experience of its users and strives to achieve solutions which serve their needs. We utilize industry standards to ensure that all users are able to achieve their desired goal.

User Experience (UX)

UX focuses on having a deep understanding of users, what they need, what they value, their abilities, and also their limitations. It also considers the business goals and objectives of the group managing the project. UX best practices promote improving the quality of the user's interaction with and perceptions of your product and any related services. User Interface Design, Content & Language, and User Interaction are among several components that should be accounted for.

HTML (Hypertext Markup Language)

HTML is the language for describing the content of web pages, including heading, lists, and images. It should not include Cascading Style Sheets (CSS) and JavaScript but should instead reference external resources. Version: HTML5

CSS

CSS is the language for describing the presentation of Web pages, including colors, layout, and fonts. CSS Should be used to control the layout and overall style of any websites and web applications. CSS should be maintained in a separate document if possible. Version: CSS3. Frameworks: Bootstrap

JavaScript

JavaScript is the scripting language of web pages and is used to dynamically control elements. JavaScript should be maintained in a separate document if possible. Frameworks: Angular. Libraries: JQuery

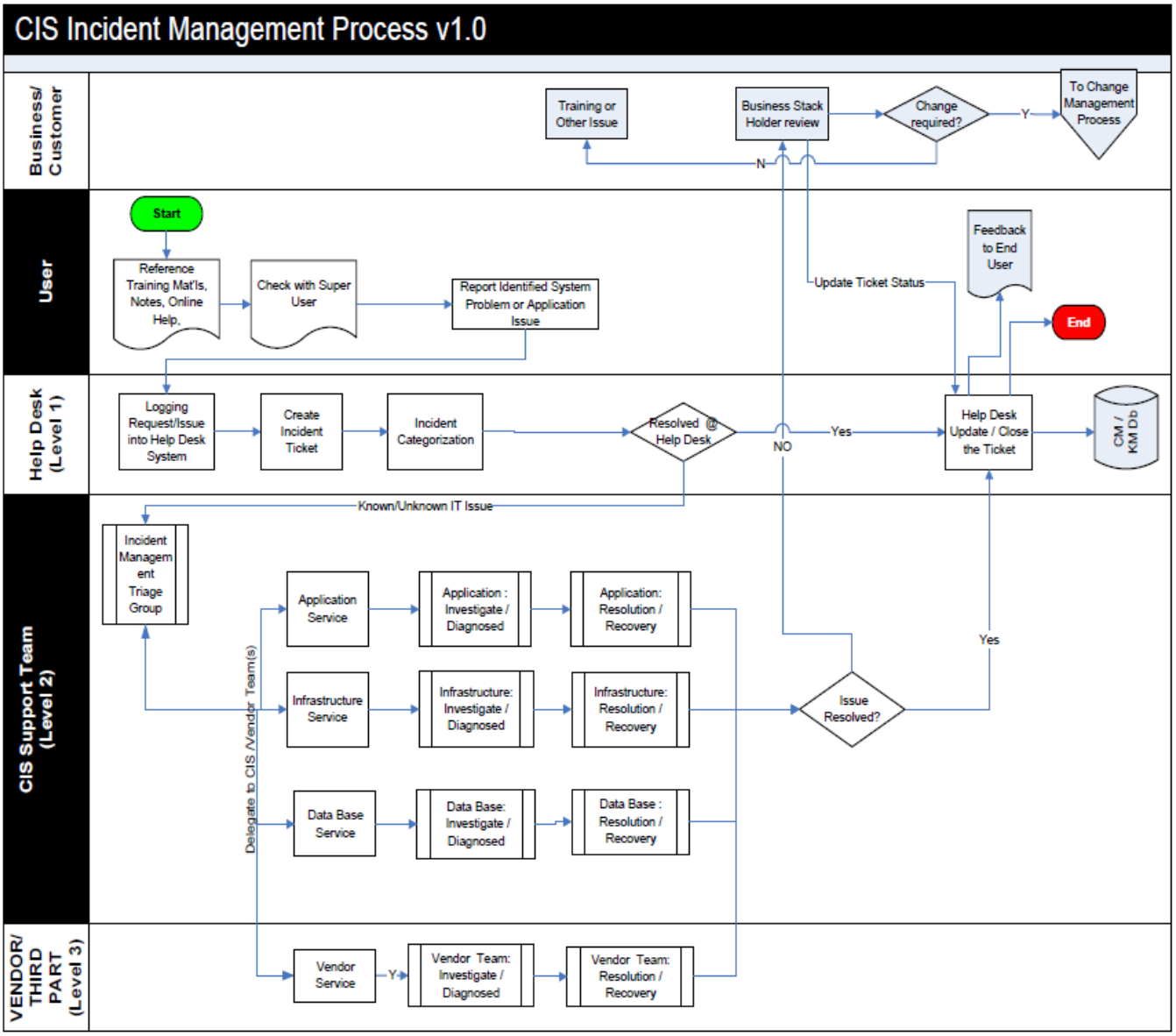
8. *Appendix H - City of Dallas RFCSP Information Technology Infrastructure Library (ITIL) Process and Project Management Standard*

ITIL V3 Process

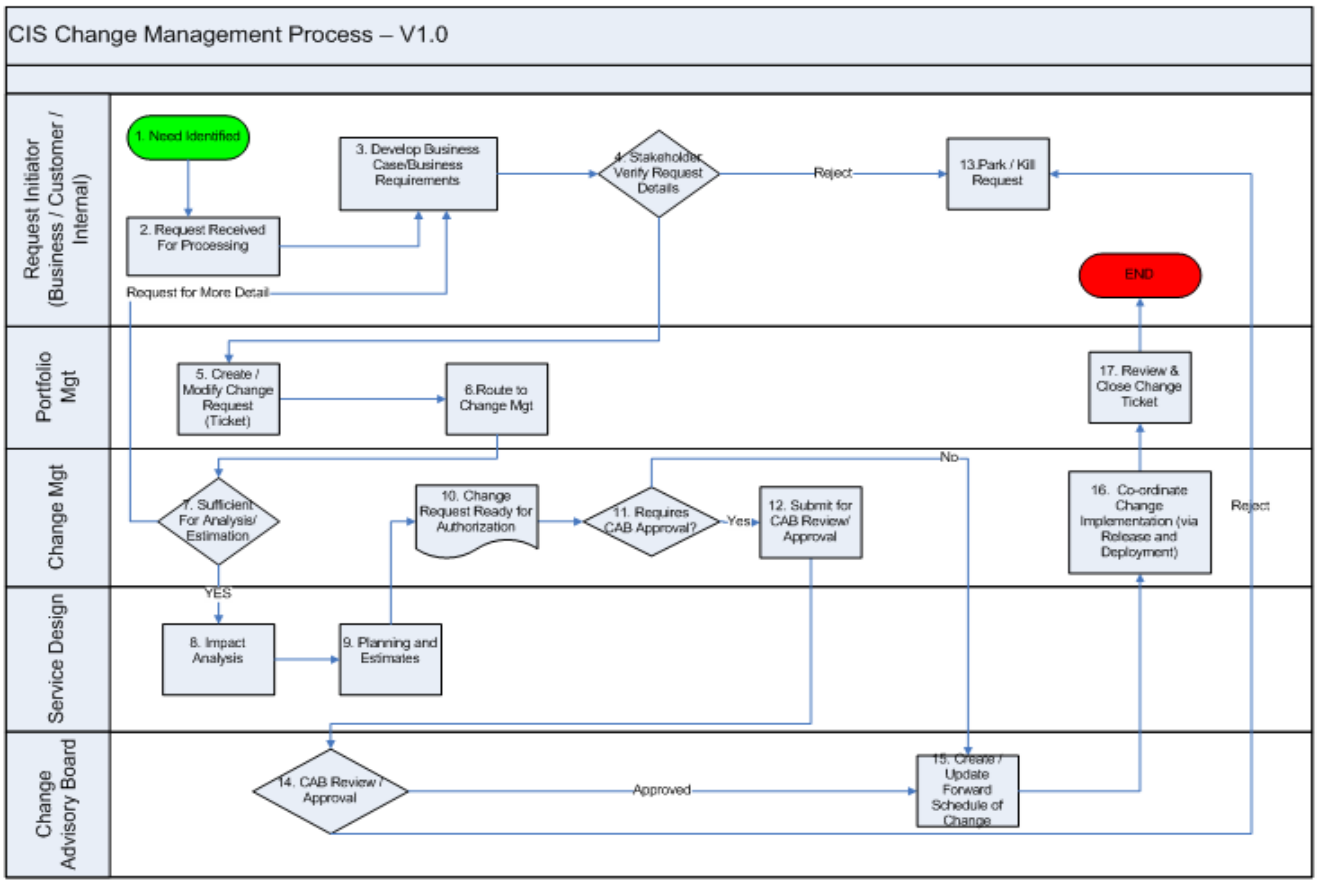
Proposers are required to interoperate and be compliant with City IT Service Management Standards including but not limited to:

- Incident Management
- Change Management
- Release and Deployment Management

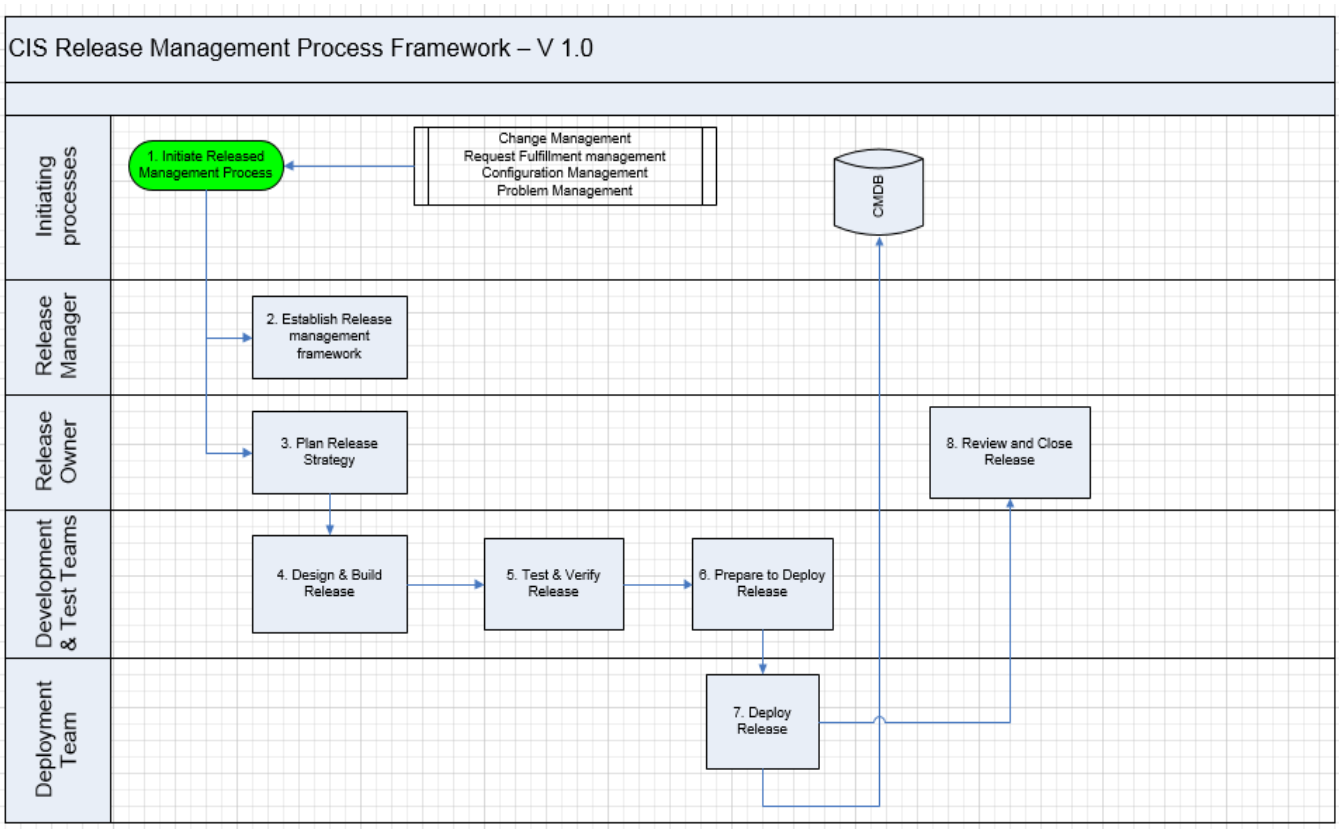
City Incident Management Framework 1.0+



Change Management Framework 1.0



Release & Deployment Framework 1.0



Project Management Methodology

Project Management Methodology is the formal methodology for the management and delivery of Information Technology projects performed by ITS Project Management Methodology (PMM) 2014 utilizes the Project Management Institute (PMI) Project Management Body of Knowledge (PMBOK) as its guiding framework. Developed internally by a team of ITS subject matter experts, this specific methodology is approved by ITS executive management.

Design of PMM 2014 includes the following objectives:

- Easy to understand and easy to use.
- Includes comprehensive documentation to assist in the user's understanding and effective use of the Methodology.
- Agile and flexible based on the characteristics of each project.
- Includes a mechanism to assist and engage the ITS Assistant Director(s) responsible for IT project delivery to confirm / enforce its adoption and use.
- Includes a mechanism to assist and engage the ITS Project Management Office in its performance of active project management oversight of all ITS projects throughout the life cycle of each project.
- Provides a common format for all Project Status Reporting regardless of the intended audience of the report.

9. *Appendix I - City of Dallas RFCSP Business Continuity/Disaster Recovery Plan*

Business Continuity/Disaster Recovery Plan

The primary objective of the City of Dallas Disaster Recovery Program is to enable the organization to survive a Service Interruption, natural or manmade, and to reestablish normal business operations in a reasonable timeframe. ITS, as the centralized manager of IT, must assure that critical operations can resume normal processing within a reasonable time frame. To this end, the main goals of the ITS Disaster Recovery Program are: 1) Identify risk and weaknesses developing solutions to mitigate those risk and weaknesses; 2) Assist in the reduction of complexity of the recovery effort; 3) Facilitate effective coordination of IT recovery task; and 4) Minimize the duration of a disruption to business operations.

The City supports operations through a mixture of On-Premise, Hosted, Hybrid, Infrastructure as a Service (IaaS), Software as a Service (SaaS), and Platform as a Service (PaaS). Regardless of delivery mechanism, the proposer must identify and propose how City Business Continuity (including data backups) and Disaster Recovery goals are to be supported by the proposed solution. The City has an annual Disaster Recovery Test requirement. Please provide content that details how the testing can be accomplished in your solution.

The City has local, county, state and federal government data retention requirements, that impact business continuity, for various types of data the City captures and maintains. The Proposer should provide the Disaster Recovery Strategy. Please provide the Standard Disaster Recovery Procedures including the Response Phase, Resumption Phase, Escalation and Internal or External Dependency Recovery. Please included the proposed landscape design and or any other supporting network mapping or applicable API design.

The City owns and maintains its data and all proposed solutions (including SaaS) must identify and propose how City data will be supported for Business Continuity and Disaster Recovery operations. The Proposer should identify how data retention is accomplished for a proposed solution based upon the data types and required retention schedules identified in the functional requirements for this procurement opportunity. If such information is not identified within the functional requirements of this document, the Proposer must identify data types and relevant data retention requirements and include methods of recovering this data to support business continuity and disaster recovery operations of the City.

As stated, the City owns its data and at the termination of any solution shall be required to preserve data retention. Especially for externally hosted solution the proposal would need to include consideration for return of the data for the City to maintain those internal and external retention requirements. The proposal should include a detailed method and explanation of how data reclamation or migration would occur. As well, please include the timeframe and methodology the proposed solution would include to support that recovery.

In addition, the City may be required by internal requirements and external regulations to audit controls and standards. The proposal should allow such for measures that may be required for all types of operations, including Hosted, Hybrid, IaaS, SaaS, and PaaS solutions. The Proposer should provide details of any limitations concerning the City's ability to conduct audits or assessments.

10. *Appendix J - City of Dallas RFCSP Audit/Compliance Requirement*

Audit/Compliance Requirement

Audit and Compliance is a key component in the City's evaluation and selection process. The proposer is expected to provide audit/compliance details as pertains to the following areas (provide as much information as possible):

Audit and Compliance is a key component in the City's evaluation and selection process for proposed solution(s). The proposer is expected to provide audit/compliance details as pertains to the following areas (provide as much information as possible):

- Security Operations Center (SOC) -2 Type II
- Statement on Auditing Standards (SAS) -70 Type II
- Federal Information Security Management Act (FISMA)
- ISO 27001
- NIST Standard 800 -034r1 Contingency Planning
- NIST Standard 800-37r2 Risk Management
- NIST Standard 800-39 Security Risk
- NIST Standard 800 -050 Security Awareness and Training
- NIST Standard 800 -053r4 Security and Privacy Controls
- NIST Standard 800 -084 IT Testing, Training, and Exercises
- NIST Standard 800-181 Cybersecurity Workforce Framework
    - http://www.isaca.org/Knowledge-Center/Standards/Documents/IT-Audit-Assurance-Guidance-1March2010.pdf
    - https://www.ready.gov/business/implementation/IT
- Payment Card Industry (PCI) Data Security Standard (DSS)
- HIPAA
- CJIS
- FedRAMP
- Children's Online Privacy Protection Rule (COPPA)

11. *Appendix K – City of Dallas RFCSP SLA*

SLA Requirements

Proposer agrees to the following SLA performance standards and associated credits for non-performance.

Each month, the Proposer will submit to the City a set of reports assessing Proposer's performance against the SLAs. Certain exceptions will be allowed for City initiated issues such as power outages in City facilities. The following will be the performance standards for the SLA:

Standard	Metric Description	Metric Definition	Performance Standard
Availability	Solution is available for all users 7 days a week, 24 hours per day	Solution is defined as all hardware, software and application software that enables the day-to-day operation of the City's Solution. Solution should be available 7 days per week, 24 hours per day. Periodic scheduled downtime for maintenance will be coordinated with City and will be excused from this Standard.	Minimum monthly uptime performance during Core Business Hours (7am to 6pm Monday through Friday central time zone) of 99.5%. Minimum monthly uptime performance during non-core business hours of 99.0%.
Service Desk Availability	Average Call Wait	Elapsed time from initial ring tone to actual service desk person on the phone	Monthly average of 30 seconds.
Service Desk Incident Response	Receipt, response and resolution approach approved	From time/date of receipt of incident, resolution approach is determined, communicated to City and agreed by City.	Each Incident ticket carries the following times for the resolution approach to be determined: Priority 1 - 1 hour Priority 2 - 24 hours or next business day Priority 3 - 72 hours or 3 business days. The attached Incident Management process describes how Priorities are set.
Application Support	After response, receipt and resolution approach is approved, the time required to actually repair	These times exclude the timings noted in Service Desk Availability and Response above. This timing is based upon the return of City to	For Each Incident: Priority 1: excluding workarounds or temporary fixes, the correct fix will be transmitted and implemented within 4 continuous hours including testing at Service Provider's site.

	and restore City to a normal working status.	normal pre-incident status.	Priority 2; excluding workaround or temporary fixes, the correct fix will be transmitted and implemented within 12 continuous hours inclusive of testing at Service Providers site. Priority 3; the correct fix can be included in the next software release or next scheduled monthly maintenance time.
Root Cause Analysis	Proposer shall prepare Root Cause Analysis Report for all incidents including: financial and customer service impact, mitigation steps, prevention strategies and any outstanding issues.	Root cause analysis reports are due to the contract administrator: Within 1 business day for P1 incidents ; Within 3 business days for P2 incidents; Within 5 business days for P3 incidents	Proposer shall brief the Contractor Administrators of the incidents cause and corrective actions as soon as reasonably possible after the root cause has been determined.
# and Age of Service Desk Tickets Created and Closed per Month by Priority	Receipt and tracking	Service Desk will be available 24/7/365 to receive and respond to user issues and requests	Provider will track the number of incidents by priority, change requests and service requests created and report upon their open and closed on a monthly bases including aging report.