THE CITY OF NEW YORK
DEPARTMENT OF INFORMATION
TECHNOLOGY AND TELECOMMUNICATIONS
(The “Agency”)

REQUEST FOR PROPOSALS (RFP)

FOR

Next Generation 9-1-1 Emergency Services

Bill de Blasio
Mayor

Anne Roest
Commissioner

IT IS ILLEGAL TO ENGAGE IN PRACTICES THAT COULD UNDERMINE OR PREVENT THE FAIR AWARD OF A CONTRACT RELATED TO THIS SOLICITATION.

The Comptroller of the City of New York is charged with the audit of all New York City contracts. Any Contractor who believes that there has been unfairness, favoritism or impropriety in the Application process should inform the Comptroller of the City of New York, Office of Contract Administration, One Centre Street, Room 835, New York, New York 10007; Telephone number 212-669-2797.
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AUTHORIZED AGENCY CONTACT PERSON

Proposers are advised that the Authorized Agency Contact Person for all matters concerning this Request for Proposals is:

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<tr>
<th>Name</th>
<th>Paul Simms</th>
<th>Telephone #:</th>
<th>(212) 788-6274</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Contract Manager</td>
<td>E-Mail Address:</td>
<td><a href="mailto:psimms@doitt.nyc.gov">psimms@doitt.nyc.gov</a></td>
</tr>
<tr>
<td>Mailing Address</td>
<td>255 Greenwich Street, 9th Floor New York, NY 10007</td>
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I. TIMETABLE
The timetable below outlines the major milestones for this RFP and tentative dates for each. A summary is given in Section E., Table 1 below.

A. Release Date of this Request for Proposals:
   **Date:** Tuesday, June 13, 2017

   All questions and requests for additional information concerning this RFP should be directed to Paul Simms, the Authorized Agency Contact Person at:

   **Telephone:** (212) 788-6274
   **Email Address:** psimms@doitt.nyc.gov

B. Mandatory Pre-Proposal Conference
   **Date:** Monday, June 26, 2017

   - **Session 1**
     - **Time:** 9:00AM (0900 hours) Eastern Standard Time
     - **Location:** Public Safety Answering Center-2 (PSAC2) 350 Marconi Street, Bronx, NY 10461
   - **Session 2**
     - **Time:** 2:00PM (1400 hours) Eastern Standard Time
     - **Location:** Public Safety Answering Center-1 (PSAC1) 11 MetroTech Center, Brooklyn, NY 11201

**NOTE:** ATTENDANCE IS MANDATORY FOR ALL PROSPECTIVE PROPOSERS AND IS A MATERIAL COMPONENT TO RESPOND TO THIS REQUEST FOR PROPOSALS (RFP). ATTENDEES MUST CONFIRM THEIR INTENT TO ATTEND THE PRE-PROPOSAL CONFERENCE BY NOTIFYING THE AUTHORIZED AGENCY CONTACT PERSON BY EMAIL, NO LATER THAN JUNE 21, 2017. FOR SECURITY PURPOSES, ATTENDEES MAY BE REQUIRED TO PROVIDE PERSONAL AND COMPANY INFORMATION PRIOR TO THE DATE OF THE CONFERENCE; THOSE DETAILS SHALL BE PROVIDED BY THE AUTHORIZED AGENCY CONTACT ONCE NOTIFIED OF THE INTEREST TO ATTEND.

TO ENSURE SUFFICIENT MEETING SPACE, ATTENDANCE WILL BE LIMITED TO NOT MORE THAN TWO (2) PERSONS REPRESENTING EACH ORGANIZATION OR COMPANY. VISITORS FOR WHOM ATTENDANCE WAS NOT CONFIRMED BY THE SPECIFIED DATE (“ABSENTEE”) WILL NOT BE PERMITTED TO ACCESS THE EVENT. ANY PROPOSAL RECEIVED FROM AN ABSENTEE PROPOSER WILL ULTIMATELY BE DEEMED NON-RESPONSIVE. TRANSPORTATION TO/FROM AND BETWEEN CITY FACILITIES WILL BE THE RESPONSIBILITY OF EACH ATTENDING ORGANIZATION OR COMPANY. PROPOSALS SUBMITTED BY CONFIRMED ATTENDEES SHALL BE ACCEPTED, PROVIDED ALL OTHER MATERIAL ASPECTS OF THE RFP HAVE BEEN SATISFIED.
C. **Deadline for Submission of Questions**

   **Due Date:** Monday, July 3, 2017

   All questions must be submitted in writing to the Authorized Agency Contact Person listed in this Request for Proposals. The Agency will assemble all questions and publish the official response in the form of an addendum shortly after the deadline.

D. **Proposal Due Date, Time and Location**

   **Date:** Tuesday, August 8, 2017
   **Time:** 3:00 P.M. ET
   **Location:** 255 Greenwich Street, 9th Floor, New York, NY  10007

   E-mailed or faxed proposals will **not** be accepted by the Agency.

   Proposals received at this Location after the Proposal Due Date and Time are late and shall not be accepted by the Agency, except as provided under New York City’s Procurement Policy Board Rules. The Agency will consider requests made to the authorized Agency contact person to extend the Proposal Due Date and Time prescribed above. However, unless the Agency issues a written addendum to this RFP which extends the Proposal Due Date and Time for all Proposers, the Proposal Due Date and Time prescribed above shall remain in effect.

E. **Anticipated Project Start Date**

   **Date:** December, 2018

   **Note:** The City requires various levels of approvals and time to register a contract prior to any work being done on the project. Selected Contractor(s) shall mobilize their teams to begin performance on the contract as soon as authorized by the Agency.

### Table 1 - Project Timetable Summary

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
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<tbody>
<tr>
<td>Release of RFP</td>
<td>June 13, 2017</td>
</tr>
<tr>
<td>Mandatory Pre-Proposal Conference</td>
<td>June 26, 2017</td>
</tr>
<tr>
<td>Deadline for Submission of Questions from Proposers</td>
<td>July 3, 2017</td>
</tr>
<tr>
<td>Proposal Submission Due Date</td>
<td>August 8, 2017</td>
</tr>
<tr>
<td>Anticipated Timeframe for Project Start</td>
<td>December, 2018</td>
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II. SUMMARY OF THE REQUEST FOR PROPOSALS

This Section of the RFP provides a high-level overview of the City’s requirements. Section III contains the detailed requirements.

A. Purpose of the RFP

The City of New York (The City) has completed the construction and technology fit-up of Public Safety Answering Center 2 (PSAC2). The City began answering live 9-1-1 calls from this facility in June 2016. PSAC2 is a purpose-built, hardened facility that is capable of handling the peak 9-1-1 call volumes of the City. PSAC2 works in tandem with PSAC1, however PSAC2 can be completely self-sufficient with respect to answering calls to 9-1-1.

The next phase of the modernization of the City’s 9-1-1 system is the update and upgrade of 9-1-1 call processing. Early in 2016, the City issued an RFI to gather information about Contractor abilities to deliver Next Generation 9-1-1 (NG9-1-1) capabilities. The information available to the City because of that RFI, combined with additional analysis of the City’s operational requirements, have led to the decision to migrate to a NG9-1-1 system.

Ultimately, the City will replace the existing DMS-100 tandem switches, the call handling equipment and all associated network facilities. This RFP will focus on the replacement of the DMS-100 tandem switches, with a NG9-1-1 Emergency Services IP Network (ESInet) and NG9-1-1 Core Services. A separate RFP will be issued for a replacement of the current Call Handling Subsystem.

The City seeks a solution that includes the NG9-1-1 ESInet and Core Services, NG9-1-1 Logging and Recording (L&R) and NG9-1-1 Geographic Information System (GIS).

Proposers have the option of providing proposals that cover any one, or up to all three, of the following classes (each defined as a subsystem):

- **Class 1:**
  - **A. NG9-1-1 Emergency Services IP Network (ESInet)** - This work may be subcontracted.
  - **B. Core Services** – The scope consists of the following:
    - Border Control Function (BCF)*
    - Emergency Call Routing Function (ECRF)*
    - Emergency Service Routing Proxy (ESRP)*
    - Location Information Server (LIS)*
    - Legacy Selective Router Gateway (LSRG)*
    - Location Validation Function (LVF)*
  
  Services annotated with an asterisk “*” above must be fully assumed by the prime Contractor. Allowable subcontracting in this area is limited to ancillary services such as electrical work; cabling; staging and assembly.

- **Class 2: NG9-1-1 Logging and Recording (L&R)** - Subcontracting for ancillary services such as electrical work; cabling; staging and assembly; and specialized consulting services are permitted under Class 2, where it will allow for delivery of a wholly cohesive solution.
- **Class 3: NG9-1-1 Geographic Information System (GIS)** - Subcontracting for ancillary services such as electrical work; cabling; staging and assembly; and specialized consulting services are permitted under Class 3, where it will allow for delivery of a wholly cohesive solution.

Proposers may respond for more than one Class. When responding, the Proposer must submit a separate proposal (technical and pricing) for each Class addressed. The City may award up to three (3) contracts resulting from this RFP.

**For Class 1, the Proposer shall provide all ESInet and Core Services.** For Class 2 and 3, the Proposer must show evidence of its capability to directly provide the main NG9-1-1 systems and/or services for the proposed Class. Such evidence may include, but is not limited to, record of providing robust NG9-1-1 systems and/or services in operational environments that are relevant to New York City.

Each Proposer must provide, and price, full integration services for each Class for which it submits a proposal, in order to integrate its subsystem/components with other classes and with other subsystems, so that a complete end-to-end solution is achieved. The City will act as the primary Systems Integrator for the selected Contractor(s); however, each Proposer is required to generate subsystem test plans and procedures for it subsystem, and to actively participate in integration activities associated with its subsystem’s external interfaces. The City requires that the Contractor’s team, in coordination with the other subsystem/component vendors, will work together to generate the bulk of the integration documentation (test plans, test procedures, and reports) with support and oversight by the City.

**B. Anticipated Contract Term**

The City intends to enter into an agreement with each selected Proposer(s) which covers the design, implementation and migration to a fully integrated NG9-1-1 system and then provides a managed service for five (5) years. The City also reserves the right to two (2) five-year options to renew the contract. Each renewal option will be the City’s sole discretion. The target for steady-state operations is no later than July 31, 2021, resulting in the estimated end of the term for the managed service contract of July 31, 2036.

**C. Anticipated Payment Structure**

The City will pay Non Recurring Costs (NRC) for hardware, software and other purchased items at acceptance of agreed upon payment milestones during the initial implementation and migration. Regarding Non Recurring Costs for third-party hardware/software, Proposer may charge a markup up to 5% between actual cost to Proposer and charge to the City. Once the fully integrated NG9-1-1 system is in steady-state operations, the City will pay a Monthly Recurring Cost (MRC) to cover maintenance, upgrades, operations, management and monitoring and all services related and required to support and maintain the subsystems. Included in the base charges will be pricing for enhancements, Moves, Adds and Changes (MACs).

**D. Minimum Requirements**

The minimum requirement(s) listed below must be met for each proposal to be considered. Certification that all submission requirements (including attendance to the mandatory pre-proposal conference as described in Section I.B. of this RFP) have been met must be included in the cover letter (see Attachment A – Proposed Cover Letter).

If a proposer is responding as a Joint Venture entity, it must show evidence of its existence for a minimum of five (5) years as described in Section III.M. of this RFP.
III. SCOPE OF SOLUTION / SERVICES

This Section of the RFP provides the City’s goals and objectives, assumptions, an overview of the technical solutions required, and detailed technical requirements that Proposers must meet. The City has also included additional guidance, requirements, and protections for adherence by all Proposers.

A. Agency Goals and Objectives for this RFP

The City's objective is to replace the two (2) DMS-100 tandem switches and all associated networking facilities that are currently in-service supporting E9-1-1 call delivery, with standards-compliant NG9-1-1 ESInet and Core Services, along with L&R and GIS. As a consequence of this in-service migration, the City has the following additional objectives for the selected Contractor(s) as applicable per class:

- Migration of all Originating Service Providers (OSPs) currently providing services to subscribers in the City to new NG9-1-1 call aggregation points.
- Interconnection and seamless integration with other systems including:
  - twenty (20) neighboring 9-1-1 jurisdictions
  - the existing ancillary systems and the Public Switched Telephone Network (PSTN) to include, but not limited to, EANs, Tie lines, ERS/BARS, VOIP, Ring Down, voice alarm, 6-Wire, legacy voice, 311, 10 digit numbers, SolarCell, LinkNYC, L&R eSubpoena (NICE Investigate),
  - the existing Interim Text to 9-1-1 system via its Terminating Text Control Center (T-TCC),
  - the NG9-1-1 Call Handling subsystem and its vendor – jointly with the City
  - the existing legacy L&R subsystem which will continue to support the City’s Radio efforts and other analog 911 telephony subsystems
- Implementation of a system that meets or exceeds the performance, availability objectives established for the NG9-1-1 system of systems per Appendix F and the Availability Section III.D.2.
- Implementation of a system that is fully compliant with all NG9-1-1 standards developed under the auspices of the National Emergency Number Association (NENA), the Internet Engineering Task Force (IETF), the Alliance for Telecommunications Industry Solutions (ATIS), and the other standards listed in Appendix H.

The City's intent is to realize a robust, integrated, and coordinated NG9-1-1 solution where the City acts as the lead and overall systems integrator. However, the City requires the Contractor(s) to provide key integration services with each of the other classes and their corresponding subsystems. Each Proposer should therefore price integration services into their proposal, assuming an undetermined but capable selected Proposer for the other scopes of work. Additionally, each Proposer is encouraged to quantify any cost savings for integration services in the case where they are also the selected Proposer for other scopes of work they have proposed.

B. Agency Assumptions Regarding Proposer Approach

1. Proposer’s Capabilities

The City seeks a Proposer that is strong financially, has a demonstrated track record of delivering large, complex projects in general and NG9-1-1 systems in particular. Proposers and their selected
team members must have a long-term commitment to NG9-1-1 and have the organizational structure, staff expertise and commitment to provide good project management practices which will together successfully meet the City’s needs.

2. **Proposer’s Role**

Proposers are encouraged to propose a complete solution for each Class (Class 1 – ESI.net and Core Services, Class 2 – L&R, Class 3 – GIS) using all of their own products and services. Alternatively, where subcontracting is allowed (see II.A), Proposers may provide a Prime / Subcontractor relationship which selects best in class subcontractors who collectively provide all necessary products and services. The City is open to all proposals that meet the RFP requirements within each scope of work; however, the City does require a detailed explanation of the roles and responsibilities of the Proposer and all subcontractors.

3. **Proposer’s Financial Stability**

Proposers must demonstrate the financial strength to fulfill the requirements of each class of the RFP. The successful Proposer will have a track record of profitability at the corporate level in addition to the operating unit responsible for NG9-1-1 products and services. The successful Proposer will also have sufficient working capital to procure the necessary equipment and staff the project.

4. **Proposer’s Successful Track Record in NG9-1-1**

Proposers must demonstrate a successful track record in installing NG9-1-1 systems, migrating OSPs from E9-1-1 to NG9-1-1, interconnecting with neighboring 9-1-1 jurisdictions, adapting to IP-based and legacy ancillary systems, interfacing with NG9-1-1 Call Handling Subsystems and managing the full system during steady-state operations – as appropriate and relevant for each Class.

5. **Proposer’s Long-Term Commitment to NG9-1-1**

Proposers must demonstrate a commitment to NG9-1-1 and specifically to products and services for Government customers, as demonstrated by active participation in standards development organizations, participation in industry forums, especially NENA and the NENA Industry Collaboration Events, hiring and developing of staff with 9-1-1 experience and Emergency Number Professional (ENP) credentials and active participation in the evolution of regulatory regimes applicable to NG9-1-1 at the state and federal levels. The Proposer’s long-term commitment to NG9-1-1 should also be evidenced by the R&D investments they make on an annual basis.

6. **Business Continuity Plan**

The selected Contractor(s) and all subcontractors must have a business continuity plan in place. This plan shall include major threats and risks to business operations, impact analysis of the threats, and preventive and recovery planning to minimize the potential harm. The plan shall include steady-state operations of the system as well as during the development and implementation of the NG9-1-1 solution / services. Parts of the plan that deal specifically with products or services required by the City shall be identified in the plan that will need to be submitted 30 days after contract award.
7. **Proposer’s Protection of the City’s Information**
Detailed information about the City's E9-1-1 system today and projections as to the City’s plans are highly sensitive. It is very important to the City that Proposers and their subcontractors have policies and procedures in place to protect the information provided by the City as well as information developed as part of the contract based on each scope of work. A Nondisclosure Agreement (NDA) with the Prime Contractor is required prior to the contract award. Additionally, any subcontractor identified shall be required to complete a NDA with the Contractor and the City prior to the start of work.

8. **Contract Terms**
The City has provided its standard provisions governing contracts for consultants, professional, technical, human and client services in Attachment I. Supplemental provisions governing technology projects are set forth in Attachment I-1. Most of the terms and conditions set forth in Attachment I are mandatory and non-negotiable. The City will take into consideration and evaluate markups to Attachment I and Attachment I-1 as part of its evaluation for selection. An addendum may be issued by the City to provide a draft agreement with additional terms.

C. **Technical Solution Overview**
The successful Proposer(s) will implement Next Generation 9-1-1 (NG9-1-1) scopes of work consistent with the latest public safety industry standards and regulations as published by NENA, the Internet Engineering Task Force (IETF), the Alliance for Telecommunications Industry Solutions (ATIS), and the other standards listed in Appendix H). The City requires the selected Contractor(s) to work cooperatively such that the City achieves a robust, integrated, and coordinated NG9-1-1 solution. The required solution will replace two existing system components; the redundant and diverse pair of DMS-100 tandem switches and Automatic Location Information (ALI) service. The NG9-1-1 system will also replace all TDM network facilities used in the current system. The selected Contractor(s) will provide a managed solution to the City, once the subsystems become operational.

The NG9-1-1 system will accept and aggregate all 9-1-1 calls originating in any of the five NYC boroughs, along with transferred calls from neighboring jurisdictions. The NG9-1-1 system will deliver such calls to a new, NG9-1-1 Call Handling Subsystem that supports call takers in the two (2) Public Safety Answering Centers serving the City. The Contractor(s) will be responsible for all aspects of the transition from the current E9-1-1 call routing and call aggregation subsystem to the NG9-1-1 system.

The Contractor(s) shall deliver a subsystem that must be highly available and meet stringent performance, reliability and capacity requirements per Appendix F and the Availability Section III.D.2. Physical and cyber security of each NG9-1-1 subsystem is also of vital importance to the City. Many aspects of the design of the NG9-1-1 solution for the City will be left to the selected Proposer but the City shall provide oversight and approvals. The successful Proposers must demonstrate how its solution meets the standards set by the City.

1. **Current E-911 Subsystem**
The E-911 subsystem that will be in place and operational at the time of the migration to the NG9-1-1, is shown in Figure 1 below. It aggregates all 9-1-1 calls at two (2) geographically diverse DMS-100 tandem switches. These DMS-100 tandem switches, acting as a Centrex system, deliver the calls to the E9-1-1 call handling workstations used by the NYPD Call Takers. All Automatic Call
Distribution (ACD) functionality is provided by the DMS-100 tandem switches; the current E9-1-1 call taking system does not provide any additional or secondary ACD functionality.

The current E-911 subsystem depends upon data from the ALI database uploaded to the DMS-100 tandem switches for the routing of calls to call queues. The database is provided by a subcontractor to the City's 9-1-1 System Service Provider (SSP). All wire line OSPs populate the ALI database with records that lead directly or indirectly to a dispatchable physical address. Wireless and VoIP OSPs populate the ALI database with Pseudo Automatic Number Identifications (pANIs). The ALI database uses the pANIs to query the wireless carrier's Mobile Positioning Center (MPC) and the VoIP service provider’s VoIP Positioning Center (VPC) for a dispatchable location. The location information in all ALI records from wire line OSPs have been validated against the Master Street Address Guide (MSAG) managed by the 9-1-1 SSP's ALI service provider.

All OSPs interconnect with both DMS-100 tandems using multiple T1s from each of their end office switches in a redundant, diverse and resilient configuration. All OSPs currently use SS7 or PRI for those interconnections. Also connected to the DMS-100 tandem switches are trunks used to support the City's Emergency Reporting System. The City’s interim text to 9-1-1 system, which is planned to be in operation in 2017, also uses the DMS-100 tandem switches. The City’s planned Terminating Text Control Center will use the tandems to assign a call taker to a specific incoming text message and to take them out of the pool of available call takers for new calls. Calls from the City's Solar Cell and LinkNYC systems are delivered through the DMS-100 tandem switches as well. Currently, all call transfers to neighboring 9-1-1 jurisdictions are accomplished using a 10-digit number over the Public Switched Telephone Network (PSTN). However, by the time of the migration to NG9-1-1, all transfers will be accomplished using tandem-to-tandem transfers.

The current system relies on two (2) primary Public Safety Answering Centers (PSACs) and several secondary locations (e.g. 1PP, Fire COs) to handle all 9-1-1 calls originating within the five (5) boroughs of New York City. PSAC2 is a state-of-the-art, purpose-built facility, dedicated to emergency communications. Similarly, PSAC1 is has been retrofitted to provide the secure, highly available facilities required for a communications center and is also home to the Solutions Development Environment (SDE). Each facility is designed and provisioned to handle the entire emergency call volume of the City, should the other PSAC become unavailable. The extremely high call volume in the City makes mutual aid agreements utilized in other jurisdictions to take calls from the City unworkable. For this reason, the City must be completely self-sufficient.

Figure 1 below shows a graphic representation of the E9-1-1 call flow architecture that is anticipated to be in place at the time of the migration to NG9-1-1.
Figure 1 - E9-1-1 Logical Call Processing Architecture

Legend:
- Blue lines show voice path, black lines show data path.
- NYC TCC is a T-TCC. West / Intrado and TCS TCCs not shown.
- Details of VoIP OSPs and MLTS Operators simplified

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2. Envisioned NG9-1-1 System

The high level logical depiction of the envisioned “to-be” system, including the basic (non-inclusive) responsibilities of the selected Contractor(s), is shown in Figure 2 below. The selected Contractor(s) will be responsible for implementing the integrated, coordinated NG9-1-1 system logically shown in Box 1, per the industry and City standards of Appendix H. The NG9-1-1 system must interconnect with all the subsystems depicted in Boxes 2, 3, 4, 5 and 6. The subsystem interconnections must support the transport of all media types including voice, text, photos, video and data. Starting on the left and working clockwise:

- In the box labeled “2”, establish interconnections with the legacy SS7 and SIP-capable OSPs operating in the City. This interconnectivity includes the OSPs’ network(s) to transport the media (voice, text, photos, etc.) and to transport subscriber information such as dispatchable location.
- In the box labeled “3”, establish interconnections with the 9-1-1 and NG9-1-1 SSPs servicing Public Safety Answering Points (PSAPs) in adjacent 9-1-1 jurisdictions.
- In the box labeled “4”, interconnect with other systems that are currently capable of initiating an emergency call.
- In the box labeled “6”, interconnect with a new NG9-1-1 Call Handling Subsystem, and with the City’s CAD systems if required by the design phase of this project.
- In the box labeled “5”, integrate with the existing/legacy Logging and Recording subsystem which will continue to log Radio dispatch events. This interconnection is shown in more detail in Figure 3.

The selected Contractor(s) shall each provide the proper interfaces and integration to one another and to each of these subsystems to ensure the proper call routing.

Figure 2 - NG9-1-1 Logical Call Processing Architecture
Notes:
- This RFP covers the full range of responsibilities of the selected Contractor(s) in the area labeled "1", including Systems Integration
- Details pertaining to the area marked "2" can be found in APPENDIX A - DETAILS RELATED TO OSP INTERCONNECTIONS
- Details pertaining to the area marked "3" can be found in APPENDIX B - DETAILS RELATED TO INTERCONNECTION WITH NEIGHBORING 9-1-1 JURISDICTIONS
- Details pertaining to the area marked "4" can be found in APPENDIX C - DETAILS OF INTERCONNECTION WITH ANCILLARY SYSTEMS
- Details pertaining to the area marked "5" can be found in APPENDIX D - DETAILS OF LOGGING AND RECORDING INTERFACE REQUIREMENTS
- Details pertaining to the area marked "6" can be found in APPENDIX E – DETAILS OF INTERCONNECTION WITH CALL HANDLING SUBSYSTEM

Figure 3 shows a logical high level representation of the scope of the L&R subsystem interfaces.

**Figure 3 - NG9-1-1 Logical Logging and Recoding Architecture**

The NG9-1-1 L&R subsystem proposed by the Proposer must:

1. implement full NG9-1-1 Logging and Recording per the NENA standards.
2. interface with the ESI.net and Core Services Functional Elements, the Call Handling Subsystem and T-TCC.
3. interface to the existing Radio L&R subsystem.
The NG9-1-1 provisioning and reporting systems are also of significant interest to the City. How these systems are deployed, how they are accessed, their physical and cyber security and the functionality and their ease of use provided to the system users are generally not addressed in the NG9-1-1 standards. As such, the capabilities provided to the City by Proposers can vary widely. As with every 9-1-1 jurisdiction implementing a new NG9-1-1, the City has no experience in using these new interfaces. It is incumbent on Proposers to provide a complete description of all interfaces and a detailed description of the user experience provided by the Proposer’s proposed Graphic User Interfaces (GUI). Figure 4 below shows a logical depiction of the provisioning and reporting systems required in this RFP.

Figure 4 - Logical NG9-1-1 Provisioning and Reporting Architecture

Notes:

1. Boxes and color-coding is consistent with the previous two figures; however, not all areas are involved in provisioning and reporting.
2. The diagram shows five GUIs to be provided to the City. These are shown as separate interfaces to reflect the possibility of the City selecting three Proposers. The City has a strong preference for a unified interface for accessing all provisioning and reporting functions.
The intent of this RFP is for the City to realize an integrated, coordinated solution where the City intends to play an active role in the oversight and assurance of the overall system meeting its needs. Proposers must provide real-time or near real-time access to the ESInet and Core Services and L&R subsystems performance data as part of its proposal. The two points of interface to accomplish this are the City’s trouble ticketing system and the Proposer’s Reporting and Statistics Capture (RSC) Portal. Figure 5 below provides a logical representation of this requirement.

Figure 5 - Logical NG9-1-1 Reporting and Statistics Capture (RSC) Interface Architecture

Notes:

1. The City’s ITIL compliant trouble ticketing/helpdesk system is the system of record for all change management, incident management, problem management, configuration management, SLA tracking etc. The City-provided monitoring system provides monitoring services for all subsystems via SNMPv3 traps and informs, and is the foundation for the City supplied Network Operating Center (NOC). The City-provided Security Event and Incident Management (SEIM) services include event correlation, and syslog collection. The SEIM and is the foundation for the City-supplied Security Operations Center (SOC) and associated services. The City provided Enterprise Services provides backups, inventory, DNS, NTP, remote access, configuration management, etc. Proposers are required to integrate to, and use the City’s trouble ticketing/helpdesk, NOC, SOC, and enterprise services directly through a City provided interface. In addition, the Proposer must offer a help desk contact interface accessible to the City’s Public Safety Help Desk, Originating Service Providers and neighboring jurisdictions so that the Proposer’s helpdesk staff, who are required to be available 24x7x365 can be reached (e.g. 800 number, email, paging).
2. The interface to the Proposer’s RSC portal must provide access to real-time or near real-time system performance data.

3. The subsystems shall provide functionality for an Application Programming Interface (API) which supports SQL database queries by an autonomous authenticated external computer, which shall be made available for each SQL database in the subsystem (i.e. for both the L&R or ESInet and Core Services subsystems).

4. A GUI shall be provided to permit an operator to manually enter and execute SQL database queries for each SQL database in the subsystem (i.e. for both the L&R or ESInet and Core Services subsystems).

The City requires the physical deployment of the NG9-1-1 and L&R subsystem, shown in box “1” in Figure 2 above, to be within PSAC1 and PSAC2, as well as within an optional third site. Deployment of a NG9-1-1 and L&R subsystem in the City Solution Development Environment (SDE) is also mandatory. A description of the SDE configuration and requirements can be found in Section III.D.9.

If the Proposer has additional alternatives, the City will consider them. The primary considerations for the physical deployment of the functional elements are: 1) system availability, resiliency, redundancy and diversity, 2) Physical security, 3) cyber security and protection of data and 4) compliance to requirements and standards and 5) future expansion of store, network capacity and the eventual interconnection with NG9-1-1 systems deployed elsewhere in New York State.

Note that the City requires the call aggregations functionality, ESInet, gateways and all core services to be physically located within the two PSACs.

Proposer pricing note: The City will cover the cost of power, cooling and cabinet/racks for any of the Proposer’s equipment hosted at the SDE, either PSAC, or the optional third site. Additional pricing guidance for equipment placed at the SDE can be found in Section III.D.9. Except as otherwise noted, all network facilities and WAN connections required by the Proposer’s proposal must be included in the price proposal. WAN connections between PSAC1, PSAC2, and the SDE must be included for the purposes of this proposal and must be priced. WAN connections and equipment to all OSPs, either temporary or permanent, must also be priced.

The Proposer shall address each requirement by stating its full, partial or non-compliance to these and other requirements, or possibly not applicable when appropriate, by filling out the Requirements Compliance Matrix (RCM), which is contained in ATTACHMENT J. Proposers shall provide comments, state the reason for non-compliance, and possibly provide rewording of the requirement in an adjacent column of the RCM if the intent is unclear or technically incorrect. Points awarded for requirement compliance are given as part of the scoring process. If the Proposer has a valid reason for not satisfying any given requirement, (e.g. the requirement is worded badly, is ambiguous, or not applicable, perhaps because the Proposer proposes an alternative strategy), the City will not necessarily deduct points from their technical proposal score with respect to that particular requirement. The City will expect any noncompliant requirement response to be followed by a clear explanation of how their solution meets the City’s intent, which could justifiably result in the full point score being awarded with respect to that specific requirement. Requirement changes that the Proposer feels must be resolved before the
proposal due date should be brought to the attention of the City during the Questions phase of the RFP process identified in Section I. The City will provide corrections on an as-needed basis to the RCM before scoring, via answers to such questions.

3. **NG9-1-1 ESI-net and Core Services Planning and Implementation Roles and Responsibilities**

The City requires an integrated, coordinated solution encompassing all aspects of the NG9-1-1 system described above and detailed further below. The City intends to be actively involved in the systems engineering lifecycle, configuration, transition to operations, and in monitoring the day-to-day operations of the system. The solution required from the successful Proposer(s), for each class as applicable, and the City is summarized in Table 2 below.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Successful Proposer’s Role</th>
<th>The City’s Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Design</td>
<td>Initial design that fulfills the requirements established in the RFP</td>
<td>Final review and approval of the design</td>
</tr>
<tr>
<td>Development of a project schedule</td>
<td>Development of a project schedule including milestone payments</td>
<td>Final review and approval of the schedule</td>
</tr>
<tr>
<td>Development of a Statement of Work (SOW)</td>
<td>Initial draft developed in collaboration with the City</td>
<td>Final review and approval of the SOW</td>
</tr>
<tr>
<td>Build out and testing of the network and deployment of the Fes</td>
<td>Lead role consistent with the approved design and SOW. Milestones shall be documented and submitted for approval.</td>
<td>Oversight on all steps and sign-off on all testing</td>
</tr>
<tr>
<td>Interconnection with OSPs (Box 2 in Figure 2)</td>
<td>Lead role in establishing interconnection agreements and in network migration</td>
<td>Oversight and approval on all steps</td>
</tr>
<tr>
<td>Interconnection with neighboring 9-1-1 jurisdictions (Box 3 in Figure 2)</td>
<td>Lead role in establishing interconnection agreements and in network migration</td>
<td>Oversight and approval on all steps</td>
</tr>
<tr>
<td>Interconnection with Ancillary systems (Box 4 in Figure 2)</td>
<td>Lead role in connecting and/or adapting the systems to the NG9-1-1 system</td>
<td>Active role and approval, especially in interconnections with the TCC, ERS, Automated Alarms and telematics and other data sources</td>
</tr>
<tr>
<td>Interconnection with the new NG9-1-1 Call Handling Subsystem</td>
<td>Shared responsibility with the City</td>
<td>Shared responsibility with the successful Proposer</td>
</tr>
</tbody>
</table>

Remainder of this page intentionally left blank
D. Detailed Technical Requirements

The Proposer must understand and follow the over-arching guidelines / instructions given below before drafting the narrative for their Technical Proposal:

- The City will be actively involved in the requirements, design and test phases of the project. The City - in its sole discretion - will provide approval of the requirements baseline, final design, formal testing and transition to operations, to ensure the solution meets the City's needs. Once the capability in this RFP becomes operational, the project will become a managed service for the remainder of the contract period.
- The Proposer must address all the requirements that are included throughout the narrative of this RFP, referenced in a website, or referenced in the Appendices and Attachments. Note: The selected Proposer and/or City may revise the wording of any requirement during the design phase as required to implement a proper solution.
- The City has included some high-level requirements to the RCM that are referenced, but may not be fully or formally quoted in the text of the RFP. The City requires the Proposer to state their compliance to the overall intent of these requirements and reference the specific section number of their proposal narrative in the RCM.
- The RCM in ATTACHMENT J is the initial requirements baseline. Once contracts are awarded, the requirements definition subphase will result in the final requirements baseline.
- If there is any conflict between the wording of a requirement in the narrative in this RFP and the RCM, the requirements stated in the RCM take precedence.
- If there is any conflict between the intent of the requirements stated in this RFP and those included in standards or on a referenced website, the requirements stated explicitly in this RFP take precedence.
- In the RCM, indicate if the proposal meets (or exceeds) each requirement, the aspects of the requirements it does not meet, or alternatives proposed. Any exceptions to the requirements must be clearly stated as such, within the Proposer’s proposal with alternatives clearly stated within the response as applicable.
- If the Proposer has a unique solution, or part thereof, that clearly meets or exceeds the intent of the requirements in this Section, then the City encourages the Proposer to propose the solution and provide sufficient details for the City to understand and evaluate it.
- For purposes of this RFP and design hierarchy, the ESInet and Core Services together are called a subsystem, the GIS solution is also called a subsystem and the L&R solution is also called a subsystem. The term 'system' may be used in this document as a general term to denote a higher level in the architecture.

1. Systems Engineering Methodology and Required Artifacts

Proposers must use rigorous Systems Engineering and Project Methodologies that yield artifacts required by the City and provide early assurances that the solution will meet the City’s needs.

a) Use of PSAC1, PSAC2, SDE Cabinets

The City will make sufficient cabinet space available to the Proposer within the two PSAC data centers, and optional 3rd site (if required) in accordance with specifications proposed by Proposer and agreed to by the City. PSAC1 and PSAC2 data centers are to be considered to be Tier 4 data centers for the purpose of this RFP and therefore will meet all the availability,
hardening and security requirements for the building, and electric power within the two
cilities. The Proposer shall be responsible for the managed service cost of WAN circuits
between OSPs. Cost associated with WAN services to the optional 3rd site should not be priced
at this time.

The City requires that the Call Routing Facilities (CRFs) and Call Aggregation Functions be hosted
within PSAC1, PSAC2, and the optional 3rd site (if required).

The City will provide pre-installed cabinets, data center floor space, standard 3-phase power
drops provided under the floor, and infrastructure level data center connectivity between
cabinets. The City provided cabinets will be ready for use by the Proposer to host equipment
required by the Proposers design at PSAC1, PSAC2, the optional 3rd site (if required), and the
SDE. However, if there are special requirements for the cabinets and/or power, then special
arrangements can be made during the negotiation/design phase of the project. The Proposer
is responsible for racking equipment and cabling equipment within their cabinets and to their
adjacent cabinets, while the City takes care of cabling to the cabinet at more distant location in
the data center via preinstalled building infrastructure cabling (i.e. overhead/below floor CAT6a
and fiber optic cables). WAN connectivity/transport to the SDE and between PSACs would be
the Proposer’s responsibility.

b) Deliverable Format
The City uses Microsoft Office products for all technical deliverables. These include Word,
PowerPoint, Excel, Access, Outlook, Visio and Project. The Proposer shall submit all technical
deliverables using these Microsoft Office tools. The Proposer shall send all deliverables to the
City Document Manager (contact to be provided) directly via an email attachment and also
hand-delivered or mailed. The Document Manager will then place them on the City shared site
dedicated to the project. The Proposer shall print three copies for each formal technical
document delivery outlined below.

c) Project Milestones and Deliverables
The following projected project milestones and deliverables are anticipated, subject to change
by mutual agreement.

Table 3 - Projected Milestones and Deliverables

<table>
<thead>
<tr>
<th>Document Name</th>
<th>Project Phase</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOW</td>
<td>Negotiation</td>
<td>Selected Proposer takes the lead</td>
</tr>
<tr>
<td>Contract</td>
<td>Negotiation</td>
<td>City will provide a first draft</td>
</tr>
<tr>
<td>WBS</td>
<td>Project Initiation</td>
<td>N/A</td>
</tr>
<tr>
<td>Org Chart</td>
<td>Project Initiation</td>
<td>N/A</td>
</tr>
<tr>
<td>Baseline Schedule</td>
<td>Project Initiation</td>
<td>N/A</td>
</tr>
<tr>
<td>Quality Assurance Plan</td>
<td>Project Initiation</td>
<td>N/A</td>
</tr>
<tr>
<td>PowerPoint slides and meeting notes</td>
<td>Project Initiation</td>
<td>N/A</td>
</tr>
<tr>
<td>Project Contact list with phone numbers and email addresses</td>
<td>Project Initiation</td>
<td>N/A</td>
</tr>
<tr>
<td>SDE Critical Design document (MS Word),</td>
<td>SDE design phase</td>
<td>N/A</td>
</tr>
<tr>
<td>SDE Requirement document,</td>
<td>SDE design phase</td>
<td>N/A</td>
</tr>
<tr>
<td>Document Name</td>
<td>Project Phase</td>
<td>Comment</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>--------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SDE combined requirements/Preliminary/Critical presentation slides</td>
<td>SDE design phase</td>
<td>N/A</td>
</tr>
<tr>
<td>SDE final set of block diagrams, wiring diagrams, rack elevations,</td>
<td>SDE design phase</td>
<td>N/A</td>
</tr>
<tr>
<td>SDE list of technical risks</td>
<td>SDE design phase</td>
<td>N/A</td>
</tr>
<tr>
<td>SDE BOM</td>
<td>SDE design phase</td>
<td>N/A</td>
</tr>
<tr>
<td>SDE preliminary test plan.</td>
<td>SDE design phase</td>
<td>N/A</td>
</tr>
<tr>
<td>Subsystem Requirement Document (SRD)</td>
<td>Requirement Definition Phase</td>
<td>Containing final set of requirements, initial RVTM and draft block diagrams.</td>
</tr>
<tr>
<td>Subsystem Requirement Review (SRR) Slides and meeting notes/actions</td>
<td>Requirement Definition Phase</td>
<td>N/A</td>
</tr>
<tr>
<td>Outlines for Test Plan, Implementation plan, Transition plan to DMS-100s,</td>
<td>Requirement Definition Phase</td>
<td>Outline of final document</td>
</tr>
<tr>
<td>Integration plan and Cutover plan.</td>
<td>Requirement Definition Phase</td>
<td>Outline of final document</td>
</tr>
<tr>
<td>Preliminary Design Document (PDD)</td>
<td>Preliminary Design phase</td>
<td>With draft RVTM, final block diagrams, detailed external interface definitions, SDE details, gateways and test tools such as call generators</td>
</tr>
<tr>
<td>PDR Slides and meeting notes/actions</td>
<td>Preliminary Design phase</td>
<td>N/A</td>
</tr>
<tr>
<td>Draft documents for Test Plan, Implementation plan, Training plan, Transition plan to DMS-100s, Integration plan and Cutover plan.</td>
<td>Preliminary Design phase</td>
<td>N/A</td>
</tr>
<tr>
<td>Critical Design Document (CDD)</td>
<td>Critical Design Phase</td>
<td>N/A</td>
</tr>
<tr>
<td>Final documents for Test Plan, Implementation plan, Training plan, Transition plan to DMS-100s, Integration plan and Cutover plan.</td>
<td>Critical Design Phase</td>
<td>N/A</td>
</tr>
<tr>
<td>Subsystem documentation Including IP layer 1, 2and 3 technical drawings, Rack Elevation Drawings, wirelists and drawings at the cabinet and inter cabinet level, complete Bill of Materials.</td>
<td>Critical Design Phase</td>
<td>May be included as part of the CDD. Note: Source Visio drawings and spreadsheets should be made available separately but can also be provided in an Appendix to the final design document.</td>
</tr>
<tr>
<td>CDR Slides and meeting notes/actions</td>
<td>Critical Design Phase</td>
<td>N/A</td>
</tr>
<tr>
<td>As-built documentation</td>
<td>Build Phase</td>
<td>As-builts are updates to the CDR documentation set.</td>
</tr>
<tr>
<td>QA Report</td>
<td>Build Phase</td>
<td>will minimally include a 100% check of the as-built documentation (cabinet elevations, wire diagrams, cabling diagrams and Configurations) for 10% of the cabinets</td>
</tr>
<tr>
<td>Approved Factory Acceptance Test Procedures</td>
<td>Test Phase: FAT</td>
<td>N/A</td>
</tr>
<tr>
<td>FAT TRR Slides and meeting notes/action</td>
<td>Test Phase: FAT</td>
<td>N/A</td>
</tr>
<tr>
<td>Document Name</td>
<td>Project Phase</td>
<td>Comment</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>-------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>FAT Dry Run results</td>
<td>Test Phase: FAT</td>
<td>Final hand annotated notes on approved test procedures</td>
</tr>
<tr>
<td>FAT Test Report</td>
<td>Test Phase: FAT</td>
<td>The test report will contain all TDRs, notes on their resolution and an appendix containing the official scanned test procedures with original annotations and witness signatures.</td>
</tr>
<tr>
<td>Approved SAT Acceptance Test Procedures</td>
<td>Test Phase: SAT</td>
<td>N/A</td>
</tr>
<tr>
<td>SAT TRR Slides and meeting notes/action</td>
<td>Test Phase: SAT</td>
<td>N/A</td>
</tr>
<tr>
<td>SAT Dry Run results</td>
<td>Test Phase: SAT</td>
<td>Final hand annotated notes on approved test procedures</td>
</tr>
<tr>
<td>SAT Test Report</td>
<td>Test Phase: SAT</td>
<td>The test report will contain all TDRs, notes on their resolution and an appendix containing the official scanned test procedures with original annotations and witness signatures.</td>
</tr>
<tr>
<td>Approved OSP Transition Acceptance Test Procedures</td>
<td>Test Phase: Transition to DMS-100</td>
<td>N/A</td>
</tr>
<tr>
<td>Transition TRR Slides and meeting notes/action</td>
<td>Test Phase: Transition to DMS-100</td>
<td>N/A</td>
</tr>
<tr>
<td>Transition Dry Run results</td>
<td>Test Phase: Transition to DMS-100</td>
<td>Final hand annotated notes on approved test procedures</td>
</tr>
<tr>
<td>Transition Test Report</td>
<td>Test Phase: Transition to DMS-100</td>
<td>The test report will contain all TDRs, notes on their resolution and an appendix containing the official scanned test procedures with original annotations and witness signatures.</td>
</tr>
<tr>
<td>Approved Integration Acceptance Test Procedures in an appendix to SAT</td>
<td>Test Phase: Subsystem integration</td>
<td>N/A</td>
</tr>
<tr>
<td>Integration TRR Slides and meeting notes/actions</td>
<td>Test Phase: Subsystem integration</td>
<td>N/A</td>
</tr>
<tr>
<td>Integration Dry Run results</td>
<td>Test Phase: Subsystem integration</td>
<td>Final hand annotated notes on approved test procedures</td>
</tr>
<tr>
<td>Integration Test Report</td>
<td>Test Phase: Subsystem integration</td>
<td>The test report will contain all TDRs, notes on their resolution and an appendix containing the official scanned test procedures with original annotations and witness signatures.</td>
</tr>
<tr>
<td>Approved Integration with Call Handling Acceptance Test Procedures appendix to SAT</td>
<td>Test Phase: system integration with call handling</td>
<td>N/A</td>
</tr>
<tr>
<td>Integration with Call Handling TRR Slides and meeting notes/action</td>
<td>Test Phase: system integration with call handling</td>
<td>N/A</td>
</tr>
</tbody>
</table>
**Document Name** | **Project Phase** | **Comment**
--- | --- | ---
Integration with Call Handling Dry Run results | Test Phase: system integration with call handling | Final hand annotated notes on approved test procedures
Integration with Call Handling Test Report | Test Phase: system integration with call handling | The test report will contain all TDRs, notes on their resolution and an appendix containing the official scanned test procedures will original annotations and witness signatures.
Approved NLST/Performance testing with Call Handling Acceptance Test Procedures appendix to SAT | Test Phase: NLST/Performance testing with Call handling | N/A
NLST/Performance testing with Call Handling TRR Slides and meeting notes/action | Test Phase: NLST/Performance testing with Call handling | N/A
NLST/Performance testing with Call Handling Dry Run results | Test Phase: NLST/Performance testing with Call handling | Final hand annotated notes on approved test procedures
NLST/Performance testing with Call Handling Test Report | Test Phase: NLST/Performance testing with Call handling | The test report will contain all TDRs, notes on their resolution and an appendix containing the official scanned test procedures will original annotations and witness signatures.
User Training Course Material | Training Phase | N/A
Final As-Builts | Subsystem cutover | N/A

d) **Project Management Office (PMO) Meetings**
Weekly meetings with the City’s Project Management Office (PMO) team with status schedules, risks and adjudicate project action items are required. The Contractor shall deliver an updated project schedule at least monthly. The Contractor shall provide an agenda two days before the meeting and meeting notes within three business days after each meeting. The meeting notes shall include action items, due dates and current status as a minimum. The City may, on a monthly basis, request a more formal presentation in place of a weekly meeting. These presentations, perhaps to higher-level City management, will be conducted via PowerPoint slides. The slides will then be delivered to the participants via email along with the meeting notes and actions.

e) **Technical Management Meetings**
Weekly meetings with the City’s Technical Integration team (to include the New York City Police Department (NYPD) and the New York City Fire Department (FDNY) members when necessary) to show status of progress, risks and adjudicate project action items are required. The Contractor is required to provide an agenda two days before the meeting and meeting notes
within three business days of each meeting. The meeting notes shall include action items, due
dates and current status as a minimum. Any formal presentation will be done via PowerPoint
slides which will be delivered to the City via email.

f) Requirements Control Board (RCB)
The Proposer shall allocate personnel hours to participate in the Requirements Control Board
made up of Contractor and City team members. The RCB approves all new requirements with
respect to technical content, testability and requirement quality and will approve requirements
that are modified, added or deleted after the SRR baseline is established. To streamline the
process, the Contractor may choose to implement an internal requirements review board within
its team such that the City sees a set of requirements that has been preapproved from the
Contractor’s perspective.

g) Test Review Board (TRB)
The Contractor shall allocate personnel -hours to participate in the Test Review Board made up
of Contractor and City team members. The TRB is responsible for setting the severity,
monitoring and tracking the resolution and actions associated with Test Discrepancy Reports
(TDR) generated during the test phases of the project. The Contractor is responsible for the
creation of Test Discrepancy Reports (TDRs) and for entering the TDRs into a problem tracking
system.

h) Technical Project Phases
The City requires that the selected Contractors participate in the City’s structured design
process which adheres to Systems Engineering methodologies and good project management
procedures. The technical phases of the project are outlined below, but may overlap as
required. For the purposes of this RFP, the ESInet, Core Services, L&R, and GIS engineering and
PMO services requested by this RFP will be listed in the integrated master schedule as
independent projects, and will be referenced as a “project” below.

Each project is subject to the design process outlined herein, and will participate as described
with the following technical project phases:

1) Negotiation Phase (all projects)
2) Project Initiation Phase / Project Kickoff (all projects)
3) Design Phase (all projects)
   a. SDE Design Phase / Combined Design Review (SDER)
   b. Requirements Design Phase / Subsystem Requirement Review (SRR)
   c. Preliminary Design Phase / Preliminary Design Review (PDR)
   d. Critical Design Phase / Critical Design Review (CDR)
4) Build and Configure Phase (all projects)
   a. SDE Order, Delivery, Inventory, Build, Configure, Component level Testing
   b. ESInet Core Subsystem Order, Delivery, Inventory, Build, Configure, Component
      level Testing
   c. L&R Subsystem Order, Delivery, Inventory, Build, Configure, Component level
      Testing
d. GIS Subsystem Order, Delivery, Inventory, Build, Configure, Component level Testing

e. Call Handling Subsystem Order, Delivery, Inventory, Build, Configure, Component level Testing

5) Subsystem Test Phases (applies to ESInet, Core, GIS, L&R, NG Call Handling projects)

a. SDE Test (SDET)

b. Factory Acceptance Testing (FAT)

c. Subsystem Acceptance Testing (SAT)

6) Integration, Test, Migration Phases

a. Internal integration and test of the ESInet with Core components and external WAN interfaces, including:
   i. WAN lines and equipment to OSPs
   ii. WAN connections and equipment between PSACs

b. Integration and test of the ESInet and Core and NG L&R subsystems to the City SEIM/Security Operating Center (SOC)
   i. Integration and test of the BCF firewall or equivalent into the City SOC;
   ii. opening firewall ports as required

c. Integration and test of the ESInet Core and NG L&R subsystems to the City Network Operations Center (NOC)/Enterprise services, to include:
   i. NOC manager-of-managers and monitoring functionality, including all trap forwarding and configuration of alarm and alert thresholds
   ii. Integration and test of the City provided Monitoring Functionality (IBM Netcool Omnibus)
   iii. Use of backup services
   iv. Inventory management
   v. Configuration Management
   vi. collection and forwarding of syslogs to the City supplied log collection
   vii. Integration and test to the City’s DNS and Active Directory
   viii. Packet capture
   ix. Remote access

d. Integration and test of the ESInet Core and NG L&R subsystems to the City ITIL compliant Helpdesk/CMDB Software

e. Integration and Test of ESInet Core with GIS

f. Integration, test, and cutover of OSPs to SIP including the interface of the SIP to SS7 gateway which in turn feeds the DMS-100 tandem switches with a goal of no operational impacts to the Legacy Call Handling subsystem

g. Integration and test of the ESInet Core and NG L&R with Ancillary subsystems, to include: EANs, Tie Lines, ERS/BARs, Voice Alarm, Order Wire, Ringdown, Admin Phones, Text to 911, solarCell and LinkNYC, NYC 311

h. Integration and test of NG L&R with Legacy Radio L&R subsystem and NICE Systems Investigate (eSubpoena)

i. Integration and test of ESInet and Core to the integrated L&R subsystem
j. Integration and Test of NextGen Call Handling with integrated ESInet and Core, GIS, and L&R Subsystems
k. Integration and test with Neighboring NG9-11 Jurisdictions
l. Integration of all projects to City reporting subsystem
m. Integration and test of the ESInet and Core call queues and any remaining external interfaces

7) System Level Testing (Proposers in support roll)
   a. Systems Integration Test (SIT) with Call Handling and other interfaces external to proposed subsystem
   b. System Level Network Large Scale Testing (NLST) / Performance testing of ESInet/Core Services Subsystem with Call Handling Subsystem

8) User Acceptance Test (UAT) of ESInet/Core Services Subsystem with Call Handling
   a. Early UAT in SDE – to be executed as soon as possible
   b. Formal UAT

9) User Training Phase (to be completed before cutover)
   a. Training plan with schedule
   b. Training Class Outline
   c. Training Class Booklets and PowerPoint slides
   d. Training of Users

10) Operational Cutover of ESInet/Core Services Subsystem with Call Handling Subsystem
11) 30-Day FSAT of ESInet/Core Services Subsystem with Call Handling Subsystem
12) Operational Support Phase of ESInet/Core Services Subsystem with Call Handling Subsystem

Each project phase and the deliverables associated with the phase are described in more detail below.

(1) Negotiation Phase
Upon notice that the Proposer(s) has(have) been selected, the City will enter the negotiation Phase of the project. In addition to the normal effort required to come to agreement on cost and contract terms, the Proposer is required to take the lead in the generation of an agreed Statement of Work (SOW) for its project, along with the generation of the first preliminary schedule. The SOW will include the relevant text of this RFP (as a starting point) with input from the Contractor’s proposal. City personnel will be working in tandem with the Proposer to generate the deliverables for this phase.

An additional goal of this phase is to clarify any requirements and to provide the opportunity for the inclusion of any new requirements, needs and scope not already included in the RFP. The Proposer will bring any substantive changes into the negotiation process and will have the opportunity to incorporate and update their notional design. Discussion may also occur around the need for any long lead items and other risk mitigation strategies such as an early purchase of parts to support an accelerated SDE buildout.
(2) **Project Initiation Phase**
The project initiation phase is intended to be of short duration. During this time period, a few critical meetings will be conducted to kick off the project. The selected Contractor(s) will present the organization chart, introduce key personnel, discuss the WBS, finalize and present the baselined schedule, generate and discuss the Quality Assurance Plan, describe known project risks, discuss, agree, and document the reporting lines to be followed between the organizations in the form of a Communication Plan and provide a more detailed view of the schedule for the next three months.

**Deliverables:** Presentation slides (PowerPoint), WBS (Excel), baseline schedule (MS Project), organization chart (Visio), list of initial risks (Word), Quality Assurance plan, Communications plan, contact list with phone number for team, meeting notes.

(3) **Design Phase**
The purpose of the design phase is to:

- ensure that good engineering processes are followed,
- to ensure that all aspects of the proposed design are adequately engineered,
- to facilitate technical discussion, generate agreed plans, and ensure adequate integration between organizations and projects (e.g. ESInet, Core, L&R, and GIS)
- to generate the necessary engineering artifacts required to support the design after the subsystem is operational and
- to get formal “buy-in” and approval from the City at each stage of the design

Within ten business days of a formal review meeting, the City will provide notice if it approves of the design and if any contingencies exist, e.g. the closure of formal punchlist/action items that were mutually agreed at the time of a design review.

The design phase is broken into subphases which are concluded by a formal Critical Design Review. The goal to complete the design phase shall be six months after the Notice to Proceed is issued by the ACCO; this supports the goal for the entire project to be integrated, tested, training completed, and the scopes of work (subsystems) ready for operational cutover with the Call Handling Subsystem no later than July 31, 2021. The Contractor shall maintain a schedule which will meet the target date, taking note of any notional timelines provided in the narrative below.

Note that the Contractor is required to meet with their technical and programmatic counterparts on a weekly basis; hence no significant parts of any design review should be completely unexpected by the lead City engineers and City PMO.

(4) **Design Phase – Integration and Coordination**
The City will act as the primary System Integrator for the subsystems and will be responsible for the System Integration Test (SIT) phase. In particular, there will be only one Integrated Master Schedule (IMS), one design review process, and one integrated subsystem design package generated. Therefore, the Contractor must integrate their
schedule baseline along with all other projects (ESInet, Core, GIS, L&R, NG Call Handling) and must include the required integration and test phases on their baseline schedule.

The Proposer must coordinate and organize technical and PMO meetings on a weekly basis to ensure proper communication and to see that project level milestones will be achieved per plan. The Proposer in conjunction with the City will integrate its project schedule with the City’s Integrated Master Schedule (IMS), participate in Technical Interchange Meetings (TIMs) with other projects (at least once per month) to ensure that the designs between vendors are compatible, that the external interfaces communicate correctly, that their project level design is integrated and works with the other Proposers, and that their project is integrated with the Public Safety System-of-Systems (e.g. integrated with the NOC/SOC/Helpdesk/Enterprise services and City edge firewalls).

External interface coordination, integration, and test with other project vendors will be facilitated by the City; however, Contractor should take the lead to coordinate meetings to drive progress whenever possible. Interface documentation, integration test plans, test procedures, test reports shall be a shared responsibility between Proposers and the City. The City expects that the majority of the integration work to be accomplished through joint discussions/agreements/documentation with their counterparts on other projects. Note: The City has document templates for most document types, which will be available to the Contractor’s team when needed.

(5) SDE Design Phase
The primary programmatic goal for the SDE design phase is to accelerate and complete the SDE project build phase approximately 6 months before the project equipment is available for integration and test at the PSACs. The rationale is to provide the SDE with a full set of project equipment and test equipment which could be utilized to reduce the technical, interface, performance and schedule risk of the project by doing some tasks earlier than would otherwise be possible during the normal design cycle for the operational PSACs. Given the operational need to get the subsystem online by the given date, and given that this date is not expected to change or be flexible, any reduction in the schedule and technical project risk may be prudent to implement. More specifically, the Contractor is requested to implement an accelerated deployment of the SDE - the outline of the accelerated design process is provided below. This is subject to some change, based on the Contractor’s narrative for this section. The City’s agreement to the Contractor’s proposed changes to the SDE Design will be formally addressed during the negotiation phase of the program, however the Contractor should document their suggestions and requested changes in their proposal narrative.

The essence of the SDE accelerated design phase is to address all SDE design topics in the first month (or two) after contract signing. Long lead items are identified ASAP (ideally in the first week if possible), a long lead BOM is created, approved by the City and ordered quickly. If possible the SDE block diagram, long lead items, and the initial SDE BOM could be created during negotiations period so that the BOM can be authorized and released to the Contractor’s purchasing in the first week after contract
signing. The first payment milestone might be negotiated to include the long lead items for the SDE.

Within the first month, the Contractor would generate the SDE requirements, create a preliminary design, followed by a SDE design document. An SDE only, abbreviated Critical Design Review would occur and the funds could then be released by the City for the purchase of the remaining SDE materials. The goal of an independent SDE design phase would be to demonstrate to the City that sufficient engineering artifacts exist to purchase, build, configure and test the SDE. The design review ensures that all parties have sufficiently discussed and mutually understand the technical merits of the design and have agreed to the overall design approach before the design is finalized and the equipment is ordered. The City will formally approve the SDE CDR material and agree to proceed to the next phase of the design process.

Details and changes to this design phase (and to the design phase process in general), will be more completely defined during the negotiation phase of the project and will hence become part of the project SOW.

The SDE build, test and integration phase would continue in parallel with the design process that is occurring for the main ESInet and Core Services subsystem. Potentially two teams of engineers will be required to implement this parallel deployment. The Contractor should plan accordingly. During the main subsystem design process, additional test equipment and/or changes to the subsystem at PSAC1/PSAC2 may be discovered. Any retrofit required to make the SDE match the PSAC1/PSAC2 baseline will be addressed when the BOM for the PSAC1/PSAC2 is created and authorized for purchase by the City, or the changes can proceed via the normal change control process.

Hence the technical goal of SDE design phase, is to produce for each project a set of requirements, block diagrams, rack elevations, wiring diagrams, risks, risk mitigation plans, external interface definitions, SDE test plans and long range external interface and performance test plans. This set of documents may be an abbreviated version of the more comprehensive and complete set of documentation to be provided as part of the PSAC1/PSAC2 deliverables described below. Updates to this initial documentation set may be required by the City before the final project CDR documentation is approved.

Deliverables: SDE Critical Design document (MS Word), SDE requirement document, SDE requirements, combined Requirements/Preliminary/Critical Design Review and presentation slides, final block diagrams, floor plan, wiring diagrams, rack elevations, list of technical risk, BOM and SDE preliminary test plan.

(6) Requirement Definition Subphase
To ensure timely completion of this requirements phase, the Contractor’s RFP technical design is required to be as complete as possible when proposed. The City has provided with this RFP a set of project draft requirements (an initial requirement baseline), ATTACHMENT J – Requirements Compliance Matrix (RCM), with the intent of reducing the time it takes to generate the final testable requirements baseline, and to provide a list of technical requirements for use in the scoring of the Proposer’s technical proposal.
During the project requirement definition subphase, the selected Contractor may add, modify and/or delete from the ATTACHMENT J – Requirements Compliance Matrix (initial requirement baseline) to fix inaccuracies, to more accurately match their proposal to the approved requirements and to augment the ATTACHMENT J with important requirement additions, notes, allocations and other details that have not been captured by the City in ATTACHMENT J. Any change to the RCM must be to meet the City’s intent and needs, and will need to be approved by the Requirements Control Board. In particular, the Proposer shall add relevant / important functional requirements from the referenced documents in APPENDIX H, especially the NENA specifications which are not currently included in ATTACHMENT J.

The goal of the Requirement Definition Subphase is to generate a complete set of requirements, including external interface requirements, that apply to the ESInet and Core Services subsystem design and to agree to the draft block diagram components and external interfaces for this subsystem in the context of the greater system and its interfaces. These requirements are all expected to be verified during the test phases of the project. Both functional and performance requirements shall be defined and included. Note: Component level, protocol level and internal interfaces subsystem requirements do not necessarily need to be specified and tested. Only subsystem level requirements are mandated. Hence all requirements in the referenced NENA document set will not be tested directly. Only those requirements agreed to during the Requirement Definition Subphase will be tracked and formally tested during the test phase of the project.

Requirements are to be stored via a formal requirements management tool; the City uses Jama Contour. All allocation details and test details shall be transferred to the City’s Jama Contour database. The City’s strong preference is for the Contractor’s team to directly utilize the City’s Contour tool from the City’s MetroTech office located in Brooklyn. The City will provide user accounts to access Jama Contour to the Contractor’s staff subject to the City’s network usage policy. The draft requirements baseline shown in ATTACHMENT J will already be populated in the City’s Jama Contour database.

During this initial design phase, the vendor will make a preliminary allocation as to how the requirements will be verified, i.e. allocation of requirements to analysis, demonstration, test, inspection. An initial allocation of the requirements to subsystem components (e.g. LNG, ECRS, BCF, LVR, etc.) and to the test phases (FAT, SAT, Integration and Test, SIT) will also be done during this period. Requirement approval/changes/deletes will take place via the Requirements Control Board (RCB), which the City chairs and is a voting member. All requirements in the technical baseline go through the requirements management process to be approved. The RCB will send approved requirements modifications/additions that affect the project cost baseline to the City Change Control Board (CCB)/Steering Committee who will approve or reject funding. In the event that the CCB rejects the funding, the requirements will be rejected and returned to an unapproved status in the requirement database. The RCB/CCB is the vehicle by which the City and vendor agree to a material contract change (Change Order).
The Proposer shall delete/update/modify/augment the initial requirements baseline, extracted from the content of this RFP in ATTACHMENT J and the other referenced technical documents found in the Appendices. A starter Requirements Compliance Matrix (RCM) is included as ATTACHMENT J of this RFP and serves as a starting point for an initial Requirements Verification Traceability Matrix (RVTM). The RVTM, when complete, includes the complete allocation and traceability of the requirements, including the source document reference, e.g. the SOW section; NENA document reference, the requirement allocation to “how verified” (analysis, inspection, demonstration, test), the reference to at least one test case and the final trace to one or more test steps of the test procedures. The RVTM must be updated and become an appendix to the Requirement Design Document, which is the primary deliverable from this design phase. The RVTM is not expected to be complete at the conclusion of the Requirement Design phase since many of the test allocations and traces will not be complete until later design phases. Hence, the RVTM will be a deliverable of all the design phases - incrementally improved - until it is complete. The City can provide templates and examples of previous project RVTMs, test plans, and test procedures during the design phases of the project.

The finalized set of requirements generated by the Requirement Definition subphase are considered by the City to be the project’s formal technical baseline, hence the successful verification and validation of these technical requirements during the test phase(s) of the project will satisfy the technical requirements of the project contract. The Contractor(s) will revise design documents after the requirements phase is complete; the City will review them at the Preliminary Design Review stage and approve after the Critical Design Review stage. Several of the project payment milestones are completed through the successful delivery of design and test documentation such as a test report, that traces back to the approved requirements in this design stage as defined in the project RVTM.

In addition to the generation of the RVTM, the Contractor shall document the business processes in the form of use cases. Each external interface with another subsystem shall be documented via an Interface Control Document (ICD), one per external interface. The City will provide the ICD template.

For reference only: The City uses JAMA Contour for requirements and defect management and Sparx Enterprise Architect for use cases and architecture. The Proposer will work with the City to update the existing Sparx architecture to include the new subsystem interfaces and subsystem elements, however the City’s system architect will do the actual updates to the Sparx dataset.

(7) **Subsystem Requirements Review (SRR)**  
The project requirement subphase is concluded by a formal Subsystem Requirements Review (SRR) which acts as a technical design gate. The SRR walks the City through the established requirement baseline, requirement allocations and describes how the subsystem block diagram components will meet all the established requirements. The Contractor shall discuss known technical and related project risks at the SRR. At the successful conclusion of the meeting, the City will send formal agreement to proceed to
the next design subphase. Permission to proceed to the next design phase may be predicated upon the agreed future completion of the SRR action items.

Deliverables: Presentation slides (PowerPoint), Subsystem Requirements Document (SRD) to include requirement allocations (to components and how verified) and an updated Requirements Verification Tractability Matrix (RVTM) which can be generated via Contour once the database fields are populated. Deliverables also include the outline for Test Plan (including FAT, SAT, SIT), outline for Implementation plan, outline for Training plan, outline for integration plan, to include OSP transition to DMS-100 tandem switches and for integration of all connected subsystems, outline for cutover plan to operations. The outlines specified above are intended to drive schedule design progress, ensure significant communication at this stage of the design with all stakeholders and permit the City to understand the evolution and progress of the planning process. The PowerPoint slides/presentation will include all aspects of the preliminary design and must cover the required outlines and initial planning activities. Schedule progress and known technical risks will also be provided.

(8) Preliminary Design Subphase
The goal of the Preliminary Design subphase is to mutually agree to a complete preliminary design for the project that meets all the defined requirements of the project, agree to the final block diagram and internal components and finalize the external interfaces for each subsystem/component in the context of the greater system and its interfaces. It will begin to describe all the work associated with the specific configuration of databases, start the documentation of external interfaces, and provide details of any customization of the Contractor’s Software/Hardware/Architecture required to meet the requirement baseline approved in the Requirement Design subphase. The PDR ensures that all parties have sufficiently discussed and mutually understood the technical merits of the design and have agreed to the overall design approach before the design details are finalized. At the PDR, the Contractor must provide an updated availability analysis to be approved before the next design phase is authorized.

During the Preliminary Design, the Contractor is expected to describe how the performance requirements will be verified. In particular, any test equipment such as call load generators or gateways will be identified. The test plans (not the detailed step by step procedures) will be created from test cases outlined in the test plan. Requirements will be allocated to test cases and the RVTM updated accordingly.

(9) Preliminary Design Review (PDR)
The Preliminary Design subphase is concluded by a formal Preliminary Design Review (PDR) which acts as a technical design gate for the project. The PDR review walks the City through the established Preliminary Design, provides an overview of any additional requirements formally added to the requirement baseline by the RCB since the SRR and describes how the subsystem block diagram components will meet all the established requirements. Known technical and project risks are discussed with methods to track and reduce these risks provided by the Contractor. At the successful conclusion of the meeting, the City will send formal agreement to proceed to the next design subphase.
The Contractor shall provide an outline for the Critical Design Review design document. Permission to proceed to the next design phase may be predicated upon the agreed, future completion of the PDR action items.

Deliverables: Presentation slides (PowerPoint), Preliminary Design Document (PDD), updated RVTM, Draft version of all required plans including Draft Training Plan, Draft OSP transition Plan, Draft Integration Plan, draft operational cutover plan. The approved outline for the CDR document. Draft engineering documentation is created for block diagrams, floor layouts, wiring diagrams, IP layer 1,2,3 documentation, configuration setting, etc.

SDE design details/updates, SDE test procedures and RVTM requirement allocation, or changes, if not already provided in the SDE design phase.

(10) Critical Design Subphase
The goal of the Critical Design subphase is to create the final design project artifacts and to flush out the remaining details not completed as part of the preliminary design. The plan for all software and hardware configuration changes shall be understood, planned and completed. The critical design must meet all the defined requirements of the subsystem - it must provide the required documentation and the implementation plan shall be finalized showing how the design will be built, configured and tested at the proposed facility. Depending on the scope of the specific project, the Critical Design Document may describe the use of gateways, describe the integration with the other subsystems, reference the IP diagrams and explain their contents (e.g. routing details, DNS, active directory, security details), specify where cabinets will be located on the datacenter floor, reference all final plans developed during this phase, specify dates for equipment arrival, specify how the OSPs are transitioned with the DMS-100 tandem switches, and describe the plan to cut over the external interfaces for this subsystem in the context of the greater system and its interfaces.

During the Critical Design, the Contractor is expected to finalize all required plans and provide the details of the integration and test phases. In particular, any test equipment such as a call load generators or gateways must be specified and contained in the BOM.

(11) Critical Design Review (CDR)
The Critical Design Subphase is concluded by a formal Critical Design Review (CDR) which acts as a payment milestone and technical design gate. The CDR is a key decision gate in the City’s engineering process. The primary objective of CDR is to convince the City reviewers that the design is mature enough to build and then go into operation. All elements of design shall be compliant with functional and performance requirements. Plans shall be described to build, integrate and test the subsystem and to prove its functionality and performance prior to the build phase. This shall include specific sections describing the impact to operations and how these impacts, if any, have been or will be communicated to all affected parties. All design artifacts necessary for the long-term support of the project shall be complete and on hand for view at the design review. The City requires review and preapproval of the CDR design document by the Contractor.
before the CDR. New risks (and potential mitigation) shall also be presented. This is the final decision gate where the City gives the project a "GO" or "NO GO" before purchasing the equipment and proceeding to the Build phase. Permission to proceed to the next phase may be predicated upon the agreed completion of the CDR action items.

Deliverables: Presentation slides (MS PowerPoint), Critical Design Document (CDD), final Subsystem Test Plan (FAT, SAT and SIT), test cases allocated to requirements, implementation plan (defines the build phase), integration plan (defines integration phase to other subsystems), OSP transition plan (defines the cutover of OSPs through the use of gateways), draft SIT plan (system level testing with all subsystems from the ESInet/Core Services perspective), Training Plan (defines user training), Draft OSP Transition Plan, Operation cutover plan (including how to decommission the interim Text to 911 subsystem), IP layer 1,2 and 3 technical drawings, Rack Elevation Drawings, wire lists and drawings at the cabinet and inter cabinet level, complete Bill of Materials to include any required purchase. SDE design details, changes and updates, if not already provided in the SDE design or PDR design phase, shall also be included.

(12) **Build Phase**

During the Build phase, the component parts for the project are ordered by the Contractor per the CDR Bill of Materials. The piece parts are ordered and their delivery is tracked. The progress is assessed on a weekly basis and provided to the City’s PMO. Upon receipt of the items at the Contractor’s factory, the serial number and asset tags shall be entered into the help desk for maintenance purposes or otherwise captured. The individual hardware subsystem parts are assembled and racked into larger component assemblies per the CDR drawings. Racks and wires are labeled, configuration details such as router configurations and databases are downloaded and completed. Component level tests are executed on an as-needed basis by the Contractor’s team without formal witness by the City. As-built documentation is created from the original CDR baseline. The Contractor’s quality assurance issues a report to the City showing the level of QA inspections sufficient to ensure the overall system quality is satisfactory, but will minimally include a 100% check of the as-built documentation (rack elevations, wiring diagrams and cabling diagrams) for a random 10% of any racks. Significant quality issues are to be reported to the City PMO as soon as discovered. The City reserves the right to send its own team of Quality Assurance (QA) personnel to the Contractor’s facilities to view, compare and otherwise determine its own QA findings. The Contractor’s QA function should not report to the Contractor’s project manager directly, but shall report to a higher level in the Contractor’s management chain to ensure a level of independence of the Contractor’s QA team.

Any risks/issues that are encountered, either technically or programmatically during the build phase, shall be communicated to the City during the Contractor’s weekly PMO and technical team meetings with the City. Note that some portions of the build and test phase will be overlapping as described below.

Deliverables: As-built documentation and a QA report of inspections. Detailed test procedures required to meet scheduled deliverables.
(13) Integration and Test Phases

The City is providing this integration and test overview from their current perspective. It may be modified by the Contractor during the design phase, if the City agrees to the Contractor’s proposed changes. The Integration plan and Test plan created by the Contractor during the design phase will contain the agreed integration and test details that will be executed during this project phase.

The Contractor’s proposal and completed Integration and Test plan shall factor in material contained in “NENA-INF-008.2-2013 NENA - NG9-1-1 Transition Plan Considerations Information”. The document’s scenarios and requirements shall be reviewed and incorporated into their approach. The Contractor is invited to suggest alternative integration methods and an alternative sequencing of tasks within their RFP interface narrative, based on their experience.

The goal of the Integration and Test phase is to execute the OSP integration, test and cutover plans described by the Contractors during the Critical Design Review. These plans, executed by the selected Contractors, will consist of several parts, however not all test and integration steps will exist for each scope of work. Formal test steps include:

1) Subsystem Test Phases (applies to ESInet, Core, GIS, L&R, NG Call Handling projects)
   a. SDE Test (SDET)
   b. Factory Acceptance Testing (FAT)
   c. Subsystem Acceptance Testing (SAT)

Integration and cutover steps apply to the SDE, both PSAC2, and the optional 3rd Site (if required):

2) Internal integration and test of the ESInet with Core components and external WAN interfaces, including:
   a. WAN lines and equipment to OSPs
   b. WAN connections and equipment between PSACs

3) Integration and test of the ESInet and Core and NG L&R subsystems to the City SEIM/Security Operating Center (SOC)
   a. Integration and test of the BCF firewall or equivalent into the City SOC;
   b. opening firewall ports as required,

4) Integration and test of the ESInet Core and NG L&R subsystems to the City Network Operations Center (NOC)/Enterprise services, to include:
   c. NOC manager-of-managers and monitoring functionality, including all trap forwarding and configuration of alarm and alert thresholds
   d. Integration and test of the City provided Monitoring Functionality (IBM Netcool Omnibus)
   e. Use of backup services
   f. Inventory management
   g. Configuration Management
   h. collection and forwarding of syslogs to the City supplied log collection
i. Integration and test to the City’s DNS and Active Directory
j. Packet capture
k. Remote access

5) Integration and test of the ESInet Core and NG L&R subsystems to the City ITIL compliant Helpdesk/CMDB Software
6) Integration and Test of ESInet Core with GIS
7) Integration, test, and cutover of OSPs to SIP including the interface of the SIP to SS7 gateway which in turn feeds the DMS-100 tandem switches with a goal of no operational impacts to the Legacy Call Handling subsystem
8) Integration and test of the ESInet Core and NG L&R with Ancillary subsystems, to include: EANs, Tie Lines, ERS/BARs, Voice Alarm, Order Wire, Ringdown, Admin Phones, Text to 911, solarCell and LinkNYC, NYC 311
9) Integration and test of NG L&R with Legacy Radio L&R subsystem and NICE Systems Investigate (eSubpoena)
10) Integration and test of ESInet and Core to the integrated L&R subsystem
   a. Integration and Test of NextGen Call Handling with integrated ESInet and Core, GIS, and L&R Subsystems
11) Integration and test with Neighboring NG9-11 Jurisdictions
12) Integration of all projects to City reporting subsystem
13) Integration and test of the ESInet and Core call queues and any remaining external interfaces
14) Integration and test at a system level (i.e. during the System Integration Test or SIT)

Deliverables for the integration phase include: reporting of the Integration progress weekly, reporting of Severity 1 and 2 TDRs that are encountered to the Test Review Board, on a weekly basis, ensuring that all TDRs are recorded in the City’s TDR reporting tool.

(14) Test Phase Details
The formal definitions of the test phase, how Test Discrepancy Reports (TDRs) are tracked and the role of the Test Review Board are described in Appendix I. This section of the RFP is provided to set expectations as to how the test milestones are planned, executed and to outline the degree of day-to-day interaction that the City will be expecting during phases of testing.

The draft FAT/SAT Test plan for the entire subsystem is due at the PDR, while the final Test plan is due at the CDR. The Test Plan incorporates the final RVTM mapping of requirements to Test Cases. Draft Detailed Test procedures must be available at least 6 weeks before they are to be utilized for the formal dry run, but must include one round of redlining either on the SDE equipment or on the actual subsystem hardware.

The final test procedures for FAT, SAT and SIT are created and finalized in parallel with the Critical design and build phases. The projected task start and projected end date for the test procedure rough draft (not deliverable to the City) will be shown and tracked on the baseline schedule.
SIT planning and testing is led by the City but is supported by ESInet, Core, L&R, GIS, the NG 911 Call Handling Contractor(s) to meet the City’s seamless integration intent, in conjunction with the City integration team.

The Contractor will provide test plans and test procedure steps for functionality that is traced to the approved requirement baseline created during the Requirements phase. The test procedures follow from the approved Test plan which outlines the test cases and the requirements linked to the test cases via the RVTM.

The Draft test procedure, created in Microsoft word, are required to be redlined by running the procedures on SDE or the actual subsystem equipment. The incorporated redlines can then be submitted to the City for initial approval. The test procedures undergo a complete annotated dry run on the actual subsystem equipment which may be witnessed by the City at its discretion. The annotated dry run procedures are scanned in and submitted to the City as proof that the dry run has been completed. The test procedures, are updated to incorporate dry run changes with “track changes” turned on in Microsoft Word, and then the City provides final approval for the final test procedures. The test procedures will be formally executed and witnessed by the City, NYPD, FDNY Fire, FDNY EMD and the Contractor personnel.

To facilitate timely approval of final test procedures, the test procedures shall be broken up as necessary into logical parts and City approval will be granted on each test procedure subset. For example, the test procedures might be partitioned by subsystem: FAT, SAT, Performance, Subsystem Integration, SIT. Note that the test plans may also be broken out into subsections, however an overall subsystem test plan including FAT, SAT, and integration would, in this case, be required.

Each Test Case will satisfy one or more requirements and is a description of the logical series of test steps that are detailed in the Test Procedures (Note: if you have a test case but no requirements associated with the test case, it means you missed a requirement, the requirements must then be updated as necessary). At the time of the CDR, the Test Cases have been described and the required personnel and test equipment has been outlined but the actual detailed test steps have not yet been created and redlined. Test Procedures are organized by Test Case and contain the detailed test procedure steps that were only outlined in the test plan. The test procedures also contain a reference to the requirement and the test step where they are verified. The City will provide a test plan template to jump start the creation of the test procedures.

Entry into a project test phase (e.g. FAT or SAT), requires the Contractor to successfully pass the corresponding Test Readiness Review (TRR) and one of the important entry criteria tracked at the Test Readiness Review is the City’s approval of the test procedures and the completion of a dry run (the TRR cannot be successfully completed without approved test procedures and a Dry run). The City requires a minimum of three weeks to review the initial test procedure draft (after redlines complete), at least one week for the Contractor to address the City’s concerns, one week for a final review by the City and one week for Contractor to address the City’s final set of comments and for the City to receive and read the final (6 weeks total). The City will consolidate the comments from the
agencies (FDNY, NYPD) and City’s Integration team whenever possible. The Contractor will issue the dry run set of Test Procedures after addressing all City comments, and the City will in turn indicate that the Test Procedures are approved. At this point the test procedures undergo a semi-formal dry run and are given a final approval by the City as described in the previous paragraph.

This document review cycle time (three weeks for initial review by City, one week for the Contractor to incorporate changes, one week for the City to agree to changes, and one week for the final document changes) applies to all Contractor test procedures (e.g. FAT, SAT, SIT) required by this RFP and also to the other formal design documents (SRD, PDD, CDD and plans) created during the design phase. During this process, the Contractor will provide track changes to the document revisions, provide revision history, update revision numbers and upload the various releases on the City’s SharePoint. The Contractor is required to create schedule milestones within the baseline schedule to account for the Design Reviews, document outlines/drafts, the first document release, City review time, revision time by the vendor, the final review and required formal document releases. Also included on the schedule shall be the TRR, redlines to the initial draft test procedures, dry runs and time for the test procedure review cycle (potentially in parts).

Deliverables in the test phase include approved Test procedures, TRR slides and meeting notes, dry run results, formal TDR log and a Test Report.

(15) Performance Testing

a) Subsystem Level Performance Testing
Each subsystem will undergo subsystem level performance testing as outlined and agreed in their test plan for the subsystem. The performance test procedures should be an appendix to the SAT test procedures that may be approved separately by the City. This subsystem level test is required to ensure that the system level performance testing is successful.

b) System Level Performance Testing
At the system level, the selected Contractor will work with other vendors and the City to help generate a set of SIT performance test procedures – under City oversight - which shall include verification of the system level performance requirements with, as a minimum, the integrated ESInet, Core, L&R subsystem, GIS subsystem, and Call Handling subsystems. These procedures will require the aid of a call generator dedicated to that purpose. This call generator equipment will primarily be provided by the Core Services subsystem provider, however the Contractor of each scope of work will be required to provide all test equipment, test software, test data with their delivery of the subsystem to the City that is required to fully test their requirements and their allocated system level requirements.

The subsystem will undergo performance stress/endurance/burn-in tests for a period of no less than 30 days and will include 8 hour periods at full maximum
load, followed by 16 hours with loads simulating more normal operational conditions and at least one 2-day period at the full rate system load for both PSACs per Appendix F. The TRB will govern all aspects of this period and may request the 30-day period to restart if the original testing does not conclude without Severity 1 or 2 Test Discrepancy Reports. Details of NLST/Performance testing will be the subject of the Formal Design Reviews and the Test Review Board.

Deliverables: Approved performance test procedures (Appendix to SAT), and the Contractor’s contribution to SIT as applicable and agreed with the City. TRR Slides and meeting notes, Dry run results, Formal TDRs, Test Report. Delivery of TDRs, i.e. ensuring that all TDRs are recorded in the City’s TDR reporting tool. Reporting the test progress weekly at a suitable schedule granularity, reporting the status of all TDRs that are encountered to the Test Review Board on a weekly basis. Working with the TRB to develop suitable regress plans, retests, work arounds and for planning and scheduling updates, fixes, patch to fit in with the overall test schedule. Working with the City test team to fill out the TDRs including information such as impact, root cause, when fixed. Signing off regressing tests and TDRs as appropriately.

(16) System Integration Test (SIT)
A final System Integration Test (SIT) of system level functionality with Legacy L&R, NG911 L&R, Call Handling, Reporting, GIS, NOC/SOC/Helpdesk and all external interfaces will be executed under City approval. The Contractor will be coordinating the generation of agreed test procedures with other subsystem providers and the City integration team. The Contractor will also be responsible for contributing to, and reviewing, the final SIT test report. This test period is anticipated to last approximately four weeks in addition to the system level performance test described above.

Deliverables: Final (all) As-built documentation, contribution to the joint SIT test procedures, review of the final Test Report.

(17) User Acceptance Test
The User Acceptance Test (UAT) validates that the subsystems meet the users’ needs. UAT will be coordinated by the Agencies and the City with the Contractor providing support. For pricing purposes, this testing is expected to last 3 weeks.

(18) User Training
To support the training phase of the project, the Contractor shall create a Training plan with outline due at SRR, a draft Training plan due at the project PDR, and the final to be completed for the CDR. The training plan will undergo an approval process in the same manner as described above for the Test Procedures.

The training plan will minimally contain an overview of all courses to be taught, a detailed description and outline of content for each course, the number of times a particular course will be taught, the maximum number of students per class and have agreed
location and time if possible. The training plan will be presented to the City via PowerPoint slides at the CDR.

The Training Course Material will undergo an approval process in the same manner as described above for the Test Procedures and other documents (a six-week process). Complete student and teacher course material is to be complete at least six weeks before the training is to commence (or as required and agreed with the City) and will be submitted to the City for approval. In addition, six weeks before start of class, all class times and locations shall be finalized and provided in a memo to the City.

The Contractor will provide all user training before the subsystem becomes operational or as otherwise agreed to by the City.

(19) Operational Cutover
The City Integration team and other subsystem vendors will work with the Contractor to transition the OSPs away from the DMS-100 tandem switches and their transition of SIP to SS7 LNG gateways and into full operations, as agreed upon in the contract’s Design Phase – Integration and Coordination. The interim Text to 9-1-1 subsystem will also need to be transferred over to the new ESInet and Core Services subsystem and the new NG911 Call Handling Subsystem. This will occur one OSP at a time until all OSP calls have been transitioned without Severity 1 or 2 Test Discrepancy Reports (TDRs) and a work-off plan is agreed to for any remaining Severity 3 or 4 TDRs. Within the scope of work of the Contract the Contractor shall ensure an in-service migration from the legacy system to the NG9-1-1 system – in steps or stages as appropriate - such that there is no system downtime for live 911 operations

(20) 30-Day FSAT
Following the formal operational cutover period, the Contractor’s team will be responsible for 24x7 operational support for a 30-day period. All issues will be governed by the formal TRB, tracked through TDRs, and promptly resolved. Severity 1 or 2 TDRs will result in the potential restart of the 30 day FSAT clock. This period will also be governed by the City chaired TRB.

(21) Operational Support Phase
Following the formal 30-day FSAT, the warranty period will start and the Contractor will begin service support and SLA tracking. The Contractor shall deliver an operations support / management plan in the form of a Responsible - Accountable - Consulted – Informed document (RACI), due a minimum of 60 calendar days before start of operations. The RACI is subject to City approval and the six-week document review process described for test procedures.

2. Subsystem Availability and Required Analysis

a) Purpose, Primary Requirement, and Background
Availability requirements of the ESInet and Core and the next generation Logging and Recording (L&R) subsystem are among the most important technical requirements for this RFP. This section provides a brief introduction to these topics, along with the requirements that the
Contractor shall meet. The Contractor shall provide a thorough Availability engineering analysis.

**Note:** For purposes of this RFP, the ESInet is considered a “subsystem” and the next generation L&R solution is also considered a “subsystem”. PSAC1 and PSAC2 are each independently considered systems, while the combinations of all systems and subsystems as a whole is the system-of-systems. Elements within a subsystem are generally referred to as components within this RFP. ESInet and Core at a given location, are collectively known as a Call Routing Facilities (CRFs). To be more specific, the CRFs are the ESInet and Core components which must be deployed at PSAC1, PSAC2, SDE and the optional third disaster recovery site.

This RFP subsection specifies requirements that are more stringent than NENA 08-506 V1 section 3.4 which requires only five nines inherent availability for the entire subsystem. This section requires a minimum of 6-nines operational availability (99.9999% availability – no more than 31.5 seconds downtime per year on average) for the ESInet and Core and L&R subsystems (or at least five nines in at least two locations - PSAC1, PSAC2). The material contained herein is otherwise compatible and complementary to NENA 08-506 section 3.4, however this document requires a more detailed availability analysis of the Contractor’s design. The City’s preference is for a hardware design solution that approaches 6 nines at both PSAC1 and PSAC2 independently. The majority of the mission critical equipment already in service within the public safety system-of-systems already meets the 6 nines availability requirements described below. The intent of the following paragraphs is to have the Contractor systematically define the availability design of their solution on a subsystem basis, on a per PSAC basis, and on a functional basis within a given PSAC. Note that the City requires separate independent availability analysis for the ESInet and Core and a separate analysis for the L&R subsystem, each of which meet the six-nines minimum. The architecture and availability of PSAC2 should be the same as PSAC1, which should be the same as the optional 3rd site. Any two sites should generate 6-nines operational availability overall.

**Note:** For this RFP, scheduled and break-fix down time is intended to be mitigated by redundant equipment sets that are required within any of the ESInet and Core / L&R Subsystems such that maintenance, fixes, upgrades, repairs, and patches can be performed on one set of redundant equipment within a PSAC while the second set of redundant equipment is operational. Hence, all maintenance, upgrade, repair, patch activity can be performed without taking the operational service down at any PSAC. The SDE is intended to test and create operational procedures for maintenance, upgrade, and repair on the non-production environment before the steps are executed in the production environment.

b) **Functional Decomposition and Block Diagrams**

The Proposers are required to provide a functional decomposition of each subsystem that they plan to propose, consisting of the Mission Critical Functional Elements (MCFE) and non-Mission Critical Functions of the subsystem, where the MCFE of the subsystem are defined as those functional elements which will cause a break (downtime) in the operational receipt and processing of the emergency calls, if all MCFEs of a given type fail at any given PSAC. The City requires this decomposition to be visually depicted in a functional block diagram and to be described in the Proposers technical narrative. In addition, the City requires hardware and
software block diagrams with significant internal and all external interfaces to also be provided and described in terms of their relationship to the MCFEs in the Proposers narrative.

The Proposer is required to provide overall availability for their subsystem scope of work in terms of the individual availability of the Mission Critical Functional Elements defined in their block diagram. The end result is a requirement for the Proposer to provide analytic proof of the overall availability of the PSACs and the individual availability of each Mission Critical Function in the PSACs.

Combined Hardware / Software Operational Availability

The majority of the analysis to be provided in this section is based on hardware only, however the City requires a report to be generated to understand the combined Hardware (HW)/Software (SW) operational availability at existing Proposer sites. This report should be based on site HW/SW uptime on real deployed facilities that the Proposer and the Proposer’s subcontractors have jointly deployed. The Proposer shall provide a combined hardware/software Availability report based on uptime data collected from operational PSAPs and which includes downtime due to hardware and software. The report should include the downtime due to HW failures, down time due to SW, and the downtime due to Maintenance activities. Any scheduled downtime excluded from the hardware/software availability calculation should be described in full.

Down time should be converted to subsystem operational availability (see definition of operational availability below). The Proposer would then describe how the proposed design for NYC, which may have a higher level of redundant equipment, or perhaps a SW revision to address previous defects, would be expected to perform.

In the event that the Proposer will propose the GIS components of this RFP (which is software only), the Proposer is required to generate the independent availability reports for the SW that they propose to deliver, based on the uptime of previously delivered SW at operational sites. HW failures should be excluded in this case. The report should be based on downtime due to SW failures, downtime due to required upgrades/patches, or where the Proposers SW was forced to be restarted due to memory growth or for other similar reasons.

The integrity/validity of the data used in this availability analysis should be justified by the Proposer. The source of data used in the report, applicability of the data and method of arriving at the final combined hardware/software availability shall be fully explained in the report. Additional details on availability in general can be found in NENA 08-506 section 3.4.

c) Operational Availability

The subsystem level Operational Availability (Ao) shall be based on the subsystem decomposition into subsystem sites, external interfaces (WANs) and Mission Critical Functions (described below) and the hardware availability associated with these pieces, combined in an appropriate serial or parallel manner along with the appropriate Mean Downtime (MDT) as described/defined in more detail below (Software availability is excluded here, but is addressed in a subsequent section).
Ao is defined as the probability that a component or subsystem will operate satisfactorily at a given point in time, when used in an actual or realistic operating environment. It factors in logistics time, ready time, waiting or administrative downtime and both preventive and corrective maintenance downtime.

Mean Downtime (MDT) is the average time that a system element is non-operational. It includes downtime associated with identification and recovery time, fault detection and isolation, parts procurement, system element repair, preventive maintenance, system element upgrade and patching, self-imposed downtime and any logistics or administrative delays.

Ao is equal to the Mean Time Between Failure (MTBF) divided by the sum of MTBF plus the MDT. This measure extends the definition of availability to elements controlled by the logisticians and mission planners such as quantity and proximity of spares, tools and manpower to the hardware items.

Other definitions to be utilized in the Proposer’s requested availability analysis are shown in Figure 6 and described below.

- **Mean-Time-Between-Failure (MTBF):** the mean elapsed time between the failure of a part or service, from the Restoration of a failure to the Detection of the next failure.

![Figure 6 - Availability Definitions](Image)
- **Mean-Time-To-Repair (MTTR):** the mean elapsed time to repair a configuration item or IT service, from the Detection of a failure to its Repair.

- **Mean-Time-Between-System-Incidents (MTBSI):** the mean elapsed time between Detection of two consecutive incidents.

- **Mean-Time-To-Restore-Service (MTTRS):** the mean elapsed time from the Detection of a service failure to its full Restoration.

1. **Hardware Only Operational Availability**

   The Proposer shall provide a subsystem hardware-based Operational Availability analysis based on the content and requirements of this section. The Proposer shall provide sound justification for the MDT design parameters utilization. The Proposer shall provide an independent analysis for the ESInet and Core Subsystem and another for the L&R subsystem.

2. **Subsystem Operational Availability Requirements**

   The ESInet and Core Services and NG911 L&R Subsystems shall be available 24 hours per day, 7 days per week and 365 days a year, with a subsystem level operational Availability, including all WAN interface Availability (internal and/or external), of at least 99.9999 % ("six nines availability").

   Note: the intent of including the WAN in the analysis is to ensure that the WAN circuits ordered by the Contractor do not become the weakest link in an otherwise satisfactory design.

d) **Subsystem Hardware Availability Modeling and Analysis**

   Subsystem Availability is calculated by modeling the subsystem as an interconnection of components, subcomponents and elements in series and/or parallel. The same rules apply to each level of the subsystem decomposition. That is, an individual piece of equipment, a set of redundant equipment in a CRF or L&R Site, or the CRF/L&R Site itself should be combined in either series or parallel to obtain the next high level of availability.

   Specifically, the following rules are used to decide if components, subcomponents, or elements availability are combined in series or parallel:

   If failure of a component leads to a combination becoming inoperable, the two components are placed in series

   If failure of a component leads to the other part taking over the operations of the failed component, the two components are placed in parallel.

   See NENA 08-506 section 3.4 for more details on how combining components and subcomponents.

   Subsystem Availability should be computed based on the availability of the components in a given CRF (i.e. at PSAC1, PSAC2, or optional 3rd site) and should include any external WAN interface availability between sites, i.e. it must include connectivity between PSAC1 and PSAC2. Hence, this availability should include the external interface availability which includes the...
ESInet WAN availability, which in turn is based on contracted SLAs that are proposed by the Proposer. The Availability of the external interfaces to the OSP should be calculated and reported separately. The composite availability of the subsystem should be provided with the OSP WAN connections.

e) Subsystem External Interfaces and WAN Availability
The ESInet/Core Subsystem shall provide all LAN/WAN connectivity for all subsystem external interfaces which shall minimally include the following:

1. Call Handling Subsystem
2. Logging and Recording subsystem – legacy
3. Logging and Recording subsystem – next generation
4. Public Safety NOC/SOC/HELPDESK
5. PSAC1/PSAC2 ESInet and Core Dashboards
6. Connectivity to PSAC1/PSAC2 and an optional 3rd site if it exists
7. OSP external interfaces/WANs

Note: this requirement defines the ESInet/Core provider as being responsible for the WAN subsystem external interfaces.

The ESInet/Core Subsystem operational availability shall include the operational availability of all Mission Critical external interfaces and any mission critical internal interfaces not already included with the CRF Site availability calculations. The operational availability of external WAN interfaces shall be based on the SLA contracted with the WAN service provider for uptime, MTTRS and overall MDT. When multiple WAN lines are used to service a single external interface, the operational availability computation shall be fully described.

f) Mission Critical Functions
The Proposer shall describe and include all Mission Critical Functions Elements (MCFE) of the ESInet/Core Subsystem in their architectural design documentation, including, but not limited to:

1. LNG - Legacy
2. BCF - Border Control Function
3. ESRP - Emergency Service Routing Proxy
4. LSRG
5. LP - Legacy PSAP Gateway
6. Database services (VPC, MPC, LIS/ALI, ECRF, etc.)
7. ESINET Network equipment (WAN and LAN)

Note: power is excluded since it is being provided by the PSACs and is not under the control of the Proposer.

Similarly, the Proposer shall describe and include all Mission Critical Functional Elements of the L&R Subsystem in their architectural design documentation, including, but not limited to:

1. Logging Service (SRS)
2. Recording playback Service
3. Database services
**Note:** Proposer must define additional Mission Critical Functional Elements not provided above by the City so as to realistic depict their subsystem internal design and block diagrams. Any redefinitions may be acceptable but should be explained in detail and used in the analysis of the CRF and the L&R Site operational availability.

**g) Database Service Availability**
The ESInet/Core and L&R Subsystem internal databases shall provide active-active replication within a subsystem Site, such that all database copies are kept synchronized by ensuring that any change to one database copy is propagated automatically to all other copies within the site without human intervention.

The subsystem databases at differencing Sites shall provide active-active database replication between subsystem Sites, such that all database copies in all subsystem Sites are kept synchronized by ensuring that any change to one copy is propagated automatically to all other copies without human intervention.

The Proposer shall estimate the required BW to provide active-active database replication between sites.

**h) Disaster Scenario Availability Requirements**
Part of the operational concept for the ESInet and L&R subsystem (and all other NYC public safety subsystems) is to provide the redundant mission critical functionality for all services in at least two independent locations such that a 9/11-like event generating a “smoking hole” at one location will not take mission critical functions down. Therefore,

The ESInet and Core or L&R services at any one site, shall be completely independent of any the subsystem equipment at any other Site, such that if any, or all other Sites, are completely disabled (i.e. in a “smoking hole” scenario), then the surviving Site can provide all subsystem services, where a site in this context is defined as PSAC1, PSAC2, or the optional 3rd Site.

ESInet and Core or L&R subsystem Mission Critical Functions at any given site (PSAC1, PSAC2, or the optional 3rd Site) shall be continuously available in the event of a smoking hole or other site-wide outage at one or more of the other subsystem sites, and shall provide functionality to ensure:

(a) No momentary down time due to the event
(b) No necessary HW or SW configuration changes or updates due to the event
(c) No database reloads or updates required due to the event

ESInet and Core or L&R subsystem Mission Critical Functions at any given site (PSAC1, PSAC2, or the optional 3rd Site) which has been offline for an extended period of time, defined as greater than 8 hours shall be capable of resynchronizing all databases with any currently operation site within 1 hour or less.

ESInet and Core or L&R subsystem Mission Critical Functions at any given site (PSAC1, PSAC2, or the optional 3rd Site) which has been offline for less than 8 hours shall be capable of resynchronizing all databases with any currently operation site within 10 minutes or less.
The Proposer shall describe in their proposal any manual, non-automatic steps, necessary to keep the subsystem mission critical functionality operational should one or more CRFs or L&R Sites become completely unavailable.

i) Availability Analyses Guidelines and Requirements

1. The ESInet and Core and L&R subsystems’ Mission Critical Functional Element (MCFE) shall be hosted on a hardware architecture design consisting of at least two sets of redundant, physically separable HW equipment at any given location (PSAC1, PSAC2, or optional 3rd site).

2. Each set of ESInet and Core and L&R subsystem redundant equipment shall be capable of providing all Mission Critical functionality at the sustained full subsystem rated load per Appendix F.

3. The ESInet and Core (including GIS and L&R) subsystem’s redundant components hardware within any given site (PSAC1, PSAC2, or optional 3rd Site) shall be physically separated within the site datacenter in opposite corners of the datacenter.

4. The ESInet/Core & L&R Subsystems Subsystem at any given site (PSAC1, PSAC2, or optional 3rd Site) shall consist of independent hardware / software and external interfaces, which are capable of providing all subsystem mission critical functions autonomously. Note that it is acceptable and expected that the CRF and the L&R Sites will be co-located at all sites (PSAC1, PSAC2, and the optional 3rd Site). Hence a given CRF will also contain a set of L&R equipment.

5. The ESInet and Core and L&R subsystems shall be designed to provide concurrent, load-shared service between PSAC1 and PSAC2 and the optional third site.

   Note: the architecture described above requires at least 4 complete sets of redundant hardware - two in each PSAC. All existing operational mission critical subsystems within PSAC1/PSAC2 have similar availability specifications. High availability provided in this manner ensures that any given PSAC can be taken off line for a technical refresh of one or more subsystems and ensures that a single 911 scenario can be accommodated. The optional third CRF/L&R Site would provide a total of 6 sets of redundant equipment and would accommodate two 911-like disaster scenarios. The requirement for two or more sets of HW located in a PSAC are required to increase the overall site availability and to permit the physical separation of the equipment sets in order to minimize the effect of physical damage from say a broken pipes or accidents like a forklift truck running into a set of racks on one side of the room.

6. The Proposer shall provide an independent analysis for each subsystem which shall include operational availability at the Subsystem level, PSAC/Site level, and MCFE level based on the Proposer’s MCFE block diagram decomposition within a given Site.

7. The Proposer shall describe the method and rationale for their redundant equipment calculations in relationship to the MCFEs within a given site and subsystem.

8. The Proposer shall describe the rationale/justification for the overall Mean Down Time (MDT) utilized in the operational availability calculation and should include:
   a. time to diagnose incident problems and come up with a repair approach
   b. time to repair hardware per the plan
   c. time to restore software/firmware images if required
   d. any other time required to restore service or functionality to the downed component (e.g., transferring operational data, or rebooting one or more servers)
   e. the contracted service level (SLAs) of chosen suppliers to provide parts and/or to response to incidents on site within the specified MDT
9. The necessary 24x7 staff levels for tier 1, 2, & 3 technical staff on site and / or at the NOC to ensure that the chosen MDT is appropriate and applicable.

10. The need for any on-site spares required to justify the MDT.

11. The Subsystem MDT shall be no greater than 4 hours.

12. MTBF used in the calculation of operational availability shall be based on manufacturer’s data, or if the component is provided in-house, via statistically significant/justifiable operational field failure and uptime data.

3. Emergency Services IP Network (ESInet) and Core Services

   a) Emergency Services IP Network and Core Requirements

      An initial ESInet design and block diagrams must be submitted and described as part of this technical proposal. The City’s current depiction of the high level block diagram is shown in Figure 6. below.

      **NG 911: ESInet + Core**

      ![Diagram of NG 911: ESInet + Core](image)

      **Figure 7 - ESInet and Core Subsystem with OSPs.**

      This design will be finalized through the formal design process, which may not necessarily modify the RFP design proposal in any significant way if all requirements are met, and the City is agreement with the approach.

      The proposed ESInet must conform to NENA 08-506, Emergency Services IP Network Design for NG9-1-1 (ESIND) and other standards referenced in APPENDIX H - APPLICABLE STANDARDS, unless
superseded by City requirements provided in the Requirements Compliance matrix (RCM). Contractors shall build and test the ESInet prior to, or in parallel with, the build and test of NG9-1-1 Core Services. The Contractor shall plan tasks for the internal integration and joint testing of the NG9-1-1 Core Services with the ESInet. Once the ESInet is placed into service, the Contractor is responsible for all maintenance and repair of all components that comprise the ESInet/Core subsystem. Operational cutover will occur as described in section III.D.1.h.(19) and/or as modified by the design phase process. The Proposer should provide suggestions in their technical narrative for modification to the RFP integration and test subsections in III.D.1.h that they believe are in the best interests of the City.

Prior to steady-state operations, Contractor shall provide as built drawings, architectural diagrams, design documents, rack layouts, wiring diagrams and configuration files in electronic form.

The ESInet shall be designed and implemented with no single points of failure by using a highly reliable, redundant, resilient and diverse architecture and provide automatic failover in response to any outages. It shall be designed to provide the availability detailed in Section III.D.2. Additional requirements for the reliability design of the ESInet shall be guided by the FCC Report and Order FCC 13-158 - Improving 9-1-1 Reliability and Reliability and Continuity of Communications Networks, Including Broadband Technologies. Proposer shall provide a narrative describing how the required availability will be achieved in the ESInet design as described in Section III.D.2.

The ESInet and Core Services shall be designed and implemented to meet the capacity, performance requirements detailed in APPENDIX F - SUBSYSTEM PERFORMANCE AND CAPACITY. Note that the total capacity required includes bandwidth for all media (voice, text, photo attachments and video attachments), SIP signaling (subscribe/notify, etc.) and Logging and Recording (signaling, event logging and media recording). Also note, that to meet the system availability requirements, bandwidth capacity must be adequate to carry increased traffic if segments of the ESInet are unavailable. Proposer shall provide a narrative describing how each performance and capacity requirement will be met.

The ESInet and Core Services subsystem shall have the ability to automatically reroute traffic to alternative routes in order to bypass network outages and equipment failures. The ESInet shall also provide Quality of Service (QoS) to prioritize critical traffic by importance of applications and users as required by the NENA specifications.

Proposer must provide network at a minimum, depict the physical and logical design including path diversity, ingress and egress points, planned bandwidth for each segment, interconnection locations including 9-1-1 call aggregation points, PSAC1, PSAC 2, the optional 3rd site and other network nodes as applicable.

Physical and cyber security is critical to the NG9-1-1 system and the ESInet in particular. All security requirements identified in Appendix H – Applicable Standards must be met. Proposer must provide a narrative describing the physical and logical security measures to be taken to protect the ESInet. This narrative must discuss how:

(a) unauthorized individuals will be prevented from accessing the network,
(b) data theft will be prevented, detected, and tracked
(c) intrusion prevention encompassing all seven (7) layers of the OSI model is implemented and achieved throughout the network

The narrative must also include how the Proposer shall conduct periodic assessments of vulnerabilities, how security incidents are identified, reported, mitigation plans are implemented and how security documentation is maintained.

Proposer must describe the application of the 256-bit Advanced Encryption Standard (AES) in their solution.

The ESInet must support both private and dedicated IP Version 4 (IPv4) and IP version 6 (IPv6) address space for routing for City Agencies. Proposers must describe how their solution will support both versions and how the platform shall be managed and monitored to avoid potential errors.

The ESInet will be interconnected with other networks managed by the City. To avoid potential conflicts for address space, Proposers must document and provide a report of all proposed subnets. The City will provide address assignments.

b) NG9-1-1 Functional Elements (FEs)

The NG9-1-1 Functional Elements (FEs) listed below must be included in the solution and discussed in the Proposer’s proposal.

(1) Border Control Functions (BCFs)

BCFs must be deployed at all SIP-based ingress and egress points. This includes interconnections with the OSPs, neighboring NG9-1-1 jurisdictions, Call Handling Subsystems and all other SIP-based systems.

Many of the OSPs currently operating in the City have expressed a commitment to interconnect with the NG9-1-1 system via SIP. Details of the number and type of OSPs interconnecting via SIP and the number of end offices and trunks anticipated can be found in APPENDIX A - DETAILS RELATED TO OSP INTERCONNECTIONS. For this reason, BCFs are required in the Proposer’s proposal.

BCFs proposed must comply with the appropriate NENA standards including and especially STA-010.2-2016. Of particular importance to the City is the role BCFs play in the overall security of the NG9-1-1 system. The Proposer shall detail their design philosophy, which shall comply with the City’s strict security requirements in the narrative below. The firewall functionality of the BCF should be certified to, or justifiably equivalent to, Common Criteria EAL4 or higher.

If the BCF is the first functional element in the system to process a call, it must assign a unique incident ID and report this ID to the Logging and Recording system and all other elements in the system consistent with the NENA standards. It is extremely important that the City is able to track a call from entry into the system to the arrival of a first Proposer on scene. The ESInet and Core Services components of the end-to-end system
must anticipate this requirement, even though the call handling and computer aided
dispatch systems play a role.

Proposers must describe the BCFs being proposed with special emphasis on the role they
will play in addressing denial of service attacks, distributed denial of service attacks and
other security threats. The Proposer must also describe their proposed physical
deployment of the BCFs. The Proposer must identify the entity providing the BCFs.

The subsystem availability is of utmost importance. To have confidence that the
availability requirements can be met, Proposers shall provide an operational availability
analysis/report for BCFs, of the hardware alone and then also for combined hardware and
software if applicable. An Availability analysis / report is based on uptime data collected
from operational PSAPs and which includes downtime due to hardware and software.
Any scheduled downtime excluded from the availability calculation shall be described in
full. The source of data used in the report, applicability of the data and method of arriving
at the final combined hardware and/or software availability shall be fully explained in the
report. The Proposer shall provide sound justification for the mean downtime (MDT)
design parameter. See Section III.D.2 for more details on Availability requirements.

(2) Legacy Network Gateways (LNGs)
Some of the OSPs operating in the City cannot interconnect with the NG9-1-1 system via
SIP and will therefore be limited to interconnecting via SS7 or PRI. OSPs names and
interconnection notes via SS7 or PRI can be found in APPENDIX A - DETAILS RELATED TO
OSP INTERCONNECTIONS. An update to
Appendix A may be provided, as further detail become known to the City.

LNGs proposed must comply with the appropriate NENA standards including STA-010.2-
2016. Of particular importance to the City is the role LNGs play in overall security of the
NG9-1-1 system. Physical deployment of LNGs are required to be located at both PSAC1
and PSAC2.

If the LNG is the first functional element in the system to process a call, it must assign a
unique incident ID and report this ID to the Logging and Recording system and all other
elements in the system consistent with the NENA standards. It is extremely important
that the City is able to track a call from entry into the system to the arrival of a first
Proposer on scene. The ESInet and Core Services components of the end-to-end system
must anticipate this requirement even though the call handling and computer aided
dispatch systems play a role.

Proposers must describe the LNGs being proposed with special emphasis on the role they
will play in addressing security threats. The Proposer must identify the entity providing
the LNG functionality overall, and in particular the Network Interwork Function (NIF), the
Protocol Interwork Function (PIF) and the Location Interwork Function (LIF). The Proposer
must also discuss the physical deployment of the LIF, NIF and PIF.

The subsystem availability is of utmost importance. To have confidence that the
availability requirements can be met, Proposers shall provide an operational availability
analysis/report for LNGs, of the hardware alone and then also for combined hardware and software if applicable. An Availability analysis/report is based on uptime data collected from operational PSAPs and which includes downtime due to hardware and software. Any scheduled downtime excluded from the availability calculation shall be described in full. The source of data used in the report, applicability of the data and method of arriving at the final combined hardware and/or software availability shall be fully explained in the report. The Proposer shall provide sound justification for the mean downtime (MDT) design parameter. See Section III.D.2 for more details on Availability requirements.

(3) **Legacy Selective Router Gateways (LSRGs)**
Several of the neighboring 9-1-1 jurisdictions that the City’s NG9-1-1 system must interconnect with are still serviced by legacy selective routers. For this reason, LSRGs are required.

LSRGs proposed must comply with the appropriate NENA standards including and especially STA-010.2-2016. Of particular importance to the City is the role LSRGs play in overall security of the NG9-1-1 system.

LSRGs shall be physical deployment at both a PSAC1 and PSAC2 and at the optional 3rd site if required.

If the LSRG is the first functional element in the system to process a call, it must assign a unique incident ID and report this ID to the Logging and Recording system and all other elements in the system consistent with the NENA standards. It is extremely important that the City is able to track a call from entry into the system to the arrival of a first Proposer on scene. The ESInet and Core Services components of the end-to-end system must anticipate this requirement even though the call handling and computer aided dispatch systems play a role.

Proposer must provide a description their LSRGs and in particular, the capabilities they have in addressing security threats.

To have confidence that the availability requirements can be met, Proposers shall provide an operational availability analysis/report for LSRGs, of the hardware alone and then also for combined hardware and software if applicable. An Availability analysis/report is based on uptime data collected from operational PSAPs and which includes downtime due to hardware and software. Any scheduled downtime excluded from the availability calculation shall be described in full. The source of data used in the report, applicability of the data and method of arriving at the final combined hardware and/or software availability shall be fully explained in the report. The Proposer shall provide sound justification for the mean downtime (MDT) design parameter. See Section III.D.2 for more details on Availability requirements.
Emergency Services Routing Proxy (ESRP)

Since there are only two (2) PSACs, and a possible (optional) 3rd site to be supported by the NG9-1-1 Core Services, the role of the ESRP is somewhat simplified in the City's NG9-1-1 system. However, the ESRP will play a role in routing calls to neighboring 9-1-1 jurisdictions including those that are implementing NG9-1-1 systems of their own. For this reason and to fully implement the NENA standard, the City requires an ESRP.

The ESRPs must comply with NENA standards especially STA-010.2-2016. Of particular importance to the City is the role the ESRP plays in overall system security including the options available when calls are marked by the BCF as suspicious.

The FDNY has published 10-digit numbers for reporting a fire. The City requires these numbers to be directed and route through the ESRP. Other 10-digit emergency numbers, and point to point circuits, will also be required to route through the ESRP.

Other functionality of interest to the City involves routing of "calls" that have media types other than voice and text. Specifically, the City would like to implement and understand via the Proposer’s Narrative, routing options for certain types of media (e.g. pictures and video) where by the attachments are stripping off and made available on an as-requested basis. The Proposer’s narrative should describe their plans and architecture to strip off incoming attachments and to store the them in a data repository that is compliant with the capacity and volume requirements of Appendix F.

Full support for routing Emergency Incident Data Documents (EIDDs) is also required as described in the latest release of NENA/APCO Emergency Incident Data Document (EIDD) Information Document.

If the ESRP is the first functional element in the system to process a call, it must assign a unique incident ID and report this ID to the Logging and Recording system and all other elements in the system consistent with the NENA standards. It is extremely important that the City is able to track, and provide statistics for, a call from its entry into the system to the arrival of a first Proposer on scene. The ESInet and Core Services components of the end-to-end system must anticipate this requirement even though the call handling and computer aided dispatch systems play a role.

The ESRP must also be capable of load balancing between the two PSACs, and the optional 3rd site (if required by the City). This shall be accomplished by monitoring the multiple queues established for each of the PSACs via the subscribe/notify feature document in the standards.

Proposer must describe their ESRPs and in particular, the capabilities it has in addressing security threats and the additional functionality mentioned above. Proposer must also provide their proposed physical deployment of the HW in the Datacenter, as well as identify the entity providing the ESRP functionality if it is to be supplied by a subcontractor.

For the City to have confidence that the availability requirements can be met, Proposers shall provide an operational availability analysis/report for ESRPs, of the hardware alone.
An Availability analysis/report is based on uptime data collected from operational PSAPs and which includes downtime due to hardware and software. Any scheduled downtime excluded from the availability calculation shall be described in full. The source of data used in the report, applicability of the data and method of arriving at the final combined hardware and/or software availability shall be fully explained in the report. The Proposer shall provide sound justification for the mean downtime (MDT) design parameter. See Section III.D.2 for more details on Availability requirements.

(5) Policy Routing Function (PRF)
The Policy Routing Rules (PRRs) detailed in NENA-STA-003.1.1-2014 cover the minimum set of requirements required to address situations typically encountered by PSAPs across the country. The City has deployed a pair of geographically diverse PSACs each capable of handling the full peak volume of 9-1-1 calls. This configuration allows the City to address all situations covered in the standard without the need to divert calls to any neighboring jurisdictions on a mass scale. However, the PRF is required by the City to enable call diversion on a granular level, and if required, to the optional 3rd Site.

Calls originating from cell phones account for roughly 70% of the City’s 9-1-1 call volume. Any emergency event in the City can generate a substantial number of 9-1-1 calls (see Appendix F). As long as NYPD call takers are available, the City will continue to take all calls from a single event. However, when the total capacity for call taking begins to reach a point of saturation, call diversion shall be implemented.

Possible 9-1-1 Call Diversion example 1: At some point, taking additional calls reporting a single event reaches a diminishing point of return. A PRR must then be used to divert calls exceeding some settable threshold to either neighboring jurisdictions and/or to an Interactive Multimedia Response (IMR) unit when its associated threshold is reached. This would free up call taking capacity at the PSACs to take calls reporting different emergencies. The IMR should be designed so that be enabled or disabled by the City.

Possible 9-1-1 Call Diversion example 2: It is possible that the volume of 9-1-1 calls reporting an event requiring a police response can block calls reporting a fire or requiring a response from EMD. Incoming calls specifically requesting either Fire or EMD by using the service requested identifier can be directly routed to their call queues bypassing the normal incoming 9-1-1 call queue allowing for a quicker response.

In addition to diverting calls, PRRs, as discussed above, shall be provided for NYPD and FDNY to apply special treatment to calls with additional data, photos, or video attached.

Special treatment example 1: The City does not want attachments to MMS messages to be sent automatically to a call taker. Instead, PRRs shall be implemented to divert attachments to a repository with a unique identifier or hyperlink. The availability of attachments, the type of attachment and the unique identifier/hyperlink can be passed to the call taker. Accessing the attachment(s) would then be at the discretion of the call taker, his/her supervisor, or the first Proposers. Accessing the repository and the
attachments would be a feature integrated with the new Call Handling subsystem through an interface to the Call Handling Subsystem.

Possible special treatment example 2: The City may certify certain OSPs and/or applications to be authorized to send photos, data and streaming video through the NG9-1-1 system to the PSAC. PRRs may be implemented to treat these certified OSPs or applications in a prescribed way.

The PRFs must comply with NENA standards especially NENA-STA-003.1.1-2014. Beyond the requirements documented in the standard, the City is interested in understanding the human interface that allows for entering Policy Routing Rules (PRRs) (see GUI 3 in Figure 4 above). The ability of the GUI to detect errors and the security measures provided to prevent unauthorized access should be described in the Proposer’s narrative.

There shall be no practical limit on the number of PRRs that can be established, however, for pricing purposes, Proposers should anticipate developing 50 PRRs, storage for attachments and media, to be included.

Proposer must describe their PRFs and in particular, compliance with the standard, its ability to perform the types of routing and special treatment described and the functionality implemented to address security threats. Proposer must also provide their proposed physical deployment and disclose the entity providing the PRF functionality.

Proposer must describe the functionality of the human interface (GUI 3 in Figure 4 above) including the access controls, audit trail of changes and validation of logic prior to putting them into service.

(6) Location Information Server (LIS)

The end-state NG9-1-1 architecture calls for every OSP to deploy a LIS. As shown in APPENDIX A - DETAILS RELATED TO OSP INTERCONNECTIONS, none of the OSPs currently operating in the City have plans for deploying a LIS in time for the implementation of this system required in this RFP. For this reason, the City plans on deploying a shared LIS that will act as a repository of wire line subscriber addresses and pseudo ANIs (pANIs) for wireless and Voice over IP subscribers. The LIS shall be required to interconnect with Mobile Positioning Centers (MPCs) and VoIP Positioning Centers (VPCs) using the current PAM and E2 interfaces. Provisioning the LIS by OSPs shall be accomplished through a validation process using valid address information provided by the City. Since the provisioning process and the interconnections with the MPCs and VPCs are consistent with the current ALI, the City requires a combination LIS-ALI.

The City is interested in a migration to the end-state NG9-1-1 architecture and will be working with the OSPs operating in the City to accelerate this process. However, for the near future, the City will host a LIS/ALI. To prepare for the end-state, the City requires a LIS/ALI that closely matches the attributes of the LIS as defined in NENA Standard STA-010.2-2016. Specifically, the LIS must implement the HELD Protocol and support all queries from LNGs and the NG9-1-1 Call Handling Subsystems to be procured under a separate RFP.
The transition from the current ALI database to the City's LIS/ALI is a topic of importance to the City. The migration provides an opportunity to "normalize" the data that populates the new LIS/ALI. All services necessary to support this transition must be included.

Physical deployment of LIS/ALIs is required to be at the PSACs and optional 3rd Site.

The Proposer must provide a detailed description of the LIS/ALI proposed including a detailed comparison against the LIS as defined in NENA standard STA-010.2-2016, and the entity that is providing the LIS functionality.

The Proposer must describe the functionality of the Graphic User Interface (GUI 1 in Figure 4 above) for the LIS/ALI including the access controls, audit trail of changes and validation of logic as part of their narrative.

The Proposer must provide a description of the data cleansing and data normalization services proposed to ensure a “clean” database for the LIS/ALI. Specifically, the City requires that records in the current MSAG and ALI be audited for inconsistencies with the NENA standard especially with respect to location information. Of particular note is the accuracy of records in the current ALI for payphones and cell towers. Subway locations must be established that are easily identifiable.

The Proposer must provide a description of the migration process from the existing ALI to the new LIS/ALI deployed by the City. The description must describe the requirement placed on the OSPs, any parallel processing of ALI records from the OSPs, and an outline for testing/validating that the new process is working properly.

Note that the City will institute an MSAG and LIS Data Quality Oversight Committee that review and approve all proposals for data cleansing made by the successful Proposer, and will provide an escalation point for any issues the successful Proposer encounters with respect to data quality.

The Proposer must provide all services required for ongoing updates of the LIS/ALI deployed by the City under this contract. This includes but is not limited to the following:

- Creation and update of a new MSAG
- Populating the Location Validation Function (LVF) with MSAG information
- Help desk (see GUI 2 in Figure 5 above) for the OSPs to resolve issues
- Implementation of a provisioning platform to process new records from the OSPs prior to placement in the LIS/ALI
- Responding to No Record Found (NRF) errors

The Proposer must provide tools and services to support requirements in NENA Standards 03-502, 06-003 and 06-502. Proposer shall anticipate and include in their price the implementation of the NENA standards on all multi-line telephone systems (MLTS) deployed by the City.

The LIS must provide active-active replication within a site, and between PSACs and the optional 3rd site such that all copies of the database are kept synchronized by ensuring that any change to one is propagated to all other copies.
To have confidence that the availability requirements can be met, Proposers shall provide an operational availability analysis/report for LIS, of the hardware alone and then also for combined hardware and software if applicable. An Availability analysis/report is based on uptime data collected from operational PSAPs and which includes downtime due to hardware and software. Any scheduled downtime excluded from the availability calculation shall be described in full. The source of data used in the report, applicability of the data and method of arriving at the final combined hardware and/or software availability shall be fully explained in the report. The Proposer shall provide sound justification for the mean downtime (MDT) design parameter. See Section III.D.2 for more details on Availability requirements.

(7) Master Network Clocks
A Master Network Clock solution must be included in the Proposer’s proposal. The Master Network Clock must be deployed consistent with NENA STA-026.5. For purposes of the proposal, Proposers must assume that any systems deployed at either of the PSACs will be on their own sub-net and therefore cannot use the clock already in place.

Master Network Clocks must be included in the solution proposed and deployed consistent with the NENA standard. The Master Clock proposed must meet the following requirements:

- The master clock shall synchronize with a GPS time source.
- The master clock shall use NTP version 3 (or more current version) protocol for time synchronization of all servers, workstations and network elements within the system.
- The availability of the Master Clock must support the overall and site-specific availability requirements.
- The ESInet and Core Services FEs shall provide the capability to authenticate to a master clock component.
- The master clock shall maintain workstation/server/device clock accuracy within a given facility within +/- 2 ms.
- The FEs shall report time in Eastern Standard Time, i.e. UTC - 5 hours with no adjustment to account for daylight saving time. This is done because Daylight Savings Time can create anomalous glitches when transitioning from EST to DST, which can become apparent in reports and when correlating syslog events.

Proposer must deploy a standards compliant Master Network Clocks and provide details of the proposed Master Clocks, their proposed physical deployment and the entity that is providing the Master Clock functionality.

To have confidence that the availability requirements can be met, Proposers shall provide an operational availability analysis/report for master clocks, of the hardware alone and then also for combined hardware and software if applicable. An Availability analysis/report is based on uptime data collected from operational PSAPs and which includes downtime due to hardware and software. Any scheduled downtime excluded from the availability calculation shall be described in full. The source of data used in the
report, applicability of the data and method of arriving at the final combined hardware and/or software availability shall be fully explained in the report. The Proposer shall provide sound justification for the mean downtime (MDT) design parameter. See Section III.D.2 for more details on Availability requirements.

4. GIS FEAs and Data Management

a) GIS Component Needs and Background

The GIS work scope of the RFP requires the Proposer to utilizing all existing and available source data (internal City data sources and External sources) and requires the Proposer to provide management skills and the coordination necessary to complete the GIS database and associated functionality.

The Proposer shall provide a complete, integrated, coordinated software only solution for GIS data management, while utilizing the hardware equipment provided by the ESInet and Core Services subsystem vendor. The GIS Proposer shall provide any hardware requirements as part of this proposal (e.g. number of CPUs, amount of memory on a server etc.) that are required by their proposed solution. Any hardware discrepancies/deficiencies found between the ESInet and Core Services subsystem provider’s proposed hardware deployment and the needs of the GIS Proposer’s will be noted, and worked out during the negotiations phase of the project. The Proposer is required to generate a SW availability report based on SW already in operation.

Tasks required of the Proposer include Citywide aggregation of:

a) the digital centerline layer,
b) address points layer,
c) emergency services response boundary layers,
d) other additional or supplemental layers as deemed necessary,
e) and the synchronization of Automatic Location Identification (ALI)/GIS/ MSAG databases.

The Proposer must verify the completeness of their narrative to meet the intent of the identified requirements within the RFP by filling out the RCM found in Attachment J. Any exceptions to the requirements identified herein must be clearly stated as such within the Proposer’s proposal. Alternatives must also be clearly stated within the response, if applicable.

b) Proposer Experience

The successful Proposer shall possess demonstrated capabilities in the areas of GIS map development, road centerline development, address point development and MSAG development. The Proposer shall also demonstrate familiarity and experience in the design, development, utilization and maintenance of the GIS datasets necessary to support the needs of the City as it relates to this project. Experience in the design, development and implementation of GIS ETL tools and programs is strongly preferred.
c) Integration with Other GIS Systems
The City requires the selected Proposer offering a GIS proposal to take the lead in integrating their proposed GIS software with the hardware contained in the ESInet and Core Services subsystem. The City seeks to understand which Proposers have deployed full NG9-1-1 systems with other Proposers.

Proposers offering an ESInet and Core Services subsystem proposal must describe the GIS providers that they have previously worked with when deploying their operational Core Services. Proposers offering a GIS-only proposal must describe the other NG9-1-1 Core Services providers they have worked with to deploy operational NG9-1-1 systems.

d) Sources of GIS Data
The Contractor shall utilize as the primary source of data for this project the Citywide Street Centerline (CSCL) GIS data developed and maintained by the City. This primary source of data encompasses all five (5) Boroughs of the City. The City will make available to the successful Contractor a matrix to include contact information for the CSCL Maintenance Group (CMG), as well as any appropriate additional contacts. The GIS data typically available represents the following:

- Road centerlines (The source CSCL Centerline is comprised of a linear feature class, geodatabase relationship classes and related tables)
- Street name aliases (The source CSCL Street Name table contains both “Primary” and alias names)
- Site/structure address points
- Common Place points and associated Landmark names (The Source CSCL Common Place feature class is comprised of a point feature class, relationship class and related tables)
- Emergency services boundaries (Fire, Police, Emergency Medical Services [EMS])
- Administrative boundaries

Additional source information that may be available to the Contractor includes MSAG and ALI databases for the City.

The Contractor may have at its disposal additional sources of information that it wishes to utilize as a supplement in conjunction with the known available data sources described above. These additional sources may include relationships or partnerships with commercial firms, utilities, US Postal Service address datasets, etc.

The Proposer must describe within its proposal submission any additional data sources that would be utilized, including and especially PSAP boundary information from adjacent 9-1-1 Jurisdictions and how it will supplement and improve upon the primary source data. Any such data sources contemplated for use by a Proposer shall be free of copyright restrictions prior to its use on this project.

Proposer must use City-provided data sources and other additional data sources.
e) GIS Data Model and Use of Tools

All GIS data layers aggregated for this project will be maintained as feature classes in Environmental Systems Research Institute’s (ESRI) file geodatabase format in a WGS 84 Latitude/Longitude projection prior to provisioning and loading the data into the ECRF/LVF system. The City uses NAD 1983 State Plane New York Long Island - FIPS 3104 (US Feet) as its standard coordinate system, so transformation to WGS 84 will be required.

The Proposer’s geodatabase model must comply with the NENA GIS Data Model standards for the NG9-1-1 i3 requirements and must be compatible with the Computer-Aided Dispatch (CAD) mapping systems in use by NYPD and FDNY. The GIS data layers listed below and their associated attribute data represents the GIS map data to be aggregated and provisioned for the ECRF/LVF functions within the NG9-1-1 system.

- Road Centerlines
- Site/Structure Address Points
- Common Place Points
- Administrative Boundary
  - County / Borough
  - Municipal
- Emergency Services Boundary
  - PSAP Boundary
  - Fire
  - Police
  - EMS
- Road Name Alias Table
- Cell Sector Location

It is expected that the successful Proposer shall aggregate the specified GIS data layers and their representative attributes into a seamless Citywide and regional (including information from counties found in APPENDIX B - DETAILS RELATED TO INTERCONNECTION WITH NEIGHBORING 9-1-1 JURISDICTIONS) dataset. The basis of this aggregated dataset will come from a combination of available source data, in multiple forms, from the City and surrounding counties, as well as any specific or unique data capabilities and resources derived from the Proposer.

In the process of aggregating the Citywide GIS map dataset, the Proposer shall conduct a gap analysis in which they shall identify errors and discrepancies within the various local datasets. It is the City’s expectation that the actual remediation of the identified errors and discrepancies within New York City limits will be conducted by CMG. The Proposer shall provide sufficient information and guidance by CMG or the other local entities for the remediation of their data.

The Proposer must submit a database modeling specification document that outlines the database schema representing the GIS layers to be developed, to include fields, descriptions, field types, etc.
f) **Road Centerlines**

The Proposer must describe the methodology used to aggregate a Citywide road centerlines GIS data layer. The methodology description shall include how the Proposer will adhere to the NENA standard for NG9-1-1 GIS Data Model.

- When aggregating the road centerlines layer, the following requirements shall be applied at a minimum:
  - Road centerlines must be broken at all intersection points with other named and addressed road centerlines.
  - Invalid connectivity at intersections shall be flagged for correction by CMG.
  - The Proposer shall identify all errors and discrepancies identified during the aggregation of this data layer and submit the identified errors and discrepancies to CMG for remediation.

\[f\]

\[g\] **Site/Structure Address Points**

The Proposer must describe the methodology used to aggregate a Citywide structure address point GIS data layer. The methodology description shall include how the Proposer will adhere to the NENA standard for NG9-1-1 GIS Data Model.

When aggregating the site/structure address points layer, the Proposer shall identify all errors and discrepancies identified during the aggregation of this data layer and submit the identified errors and discrepancies to CMG for remediation.

\[h\] **Administrative Boundary**

The Proposer must describe the methodology used to aggregate Citywide administrative boundary GIS data layers containing City boundaries. The methodology description shall include how the Proposer will adhere to the NENA standard for NG9-1-1 GIS Data Model.

The Proposer shall identify all errors and discrepancies identified during the aggregation of this data layer and submit the identified errors and discrepancies to CMG for remediation.

\[i\] **Emergency Services Boundary**

The Proposer must describe the methodology used to aggregate Citywide emergency services boundary GIS data layers containing PSAC service areas and Police, Fire, EMS service areas. The methodology description shall include how the Proposer will adhere to the NENA standards for NG9-1-1 GIS Data Model.

When aggregating the emergency services boundary layers, the Proposer shall identify all errors and discrepancies identified during the aggregation of this data layer and submit the identified errors and discrepancies to the local entity for remediation.

\[j\] **Road Name Alias Table**

The Proposer must describe the methodology used to create a Citywide road name alias table. The methodology description shall include how the Proposer will adhere to the NENA standard for NG9-1-1 GIS Data Model.
k) **Cell Sector Locations**

The Proposer must describe the methodology used to create a Citywide cell sector locations GIS data layer. The methodology description shall include how the Proposer will adhere to the NENA standard for NG9-1-1 GIS Data Model.

l) **GIS/ECRF/LVF Managed Solution**

The Proposer shall provide as a managed solution a fully developed GIS change detection/update process capable of addressing data updates and discrepancy inquiries from the City. The system must also have the ability to perform QA/QC audit checks and data analysis on an on-going basis prior to the provisioning of GIS data into the ECRF/LVF. Note that the City will institute a GIS Data Quality Oversight Committee that will review and approve all proposals for data cleansing made by the successful Proposer and will provide an escalation point for any issues the successful Proposer encounters with respect to data quality.

- The Proposer shall provide the implementation and management of a NG9-1-1 ECRF and LVF as defined in the NENA 08-003 Detailed Functional and Interface Standards for the NENA i3 Solution.
- The Proposer shall fully describe the implementation, system tools and processes, by which it will manage GIS data updates from the local 9-1-1 entities, provide for QA/QC auditing functions prior to provisioning the GIS data into the ECRF/LVF and implement and manage a NG9-1-1 compliant ECRF/LVF system.
- The Proposer shall provide for a secure web portal for local 9-1-1 entities to submit GIS update/change requests and the Proposer to communicate error/discrepancy feedback.
- The Proposer shall provide the means for web-enabled reports, performance measurements, discrepancy tracking, for GIS quality assurance and system status.
- The Proposer shall provide the means for the City to view system and data metrics by providing a portal to their RSC.
- The Proposer shall provide process and usage training of the change management process to the local 9-1-1 entities.
- The Proposer shall provide 24x7x365 customer support.
- SI System maintenance events shall last less than 4 hours and notice shall be given 1 week in advance.
- All SW updates, patches, maintenance activities must not disrupt the operating NG911 system. All changes shall be applied to one set of redundant HW while the second set continues to process operational requests.
- GIS updates to the ECRF/LVF shall be processed within 24 hours after passing quality control.
- ALI No Record Found (NRF) records shall be corrected within 48 hours of detection.
- GIS updates shall be processed and inserted into the system within 3 business days of receipt from City.
- GIS to ALI comparison shall be completed within 5 business days of receipt from City.
The Proposer must describe the functionality of the graphic user interface (GUI 5 in Figure 4 above) including the access controls, audit trail of changes and validation of logic prior to putting them into service.

m) Emergency Call Routing Function (ECRF)

The Proposer shall provide a clear description of the proposed ECRF software, list its features and capabilities, discuss its error handling, default mechanisms and logging and provide an overview of how it is deployed and achieves high reliability. The description must also discuss the GIS update process, frequency and the handling of error reports.

The Proposer must:

- Supply ECRF SW based function that is 99.9999% availability given the two sets of redundant SW provided by the ESInet and Core Services subsystem.
- Be responsible for secure and reliable ECRF Internet Protocol (IP) Located at PSAC1 and PSAC2
- Provide a web portal that permits administrative read-only access to the GIS database. This function must be rate-limited to avoid impacting emergency call delivery services
- State the maximum number of queries per second the proposed ECRF may sustain for at least sixty minutes under adverse, as defined by the City, but “all up” conditions.
- Describe and list the features of the proposed ECRF, with particular emphasis on how it meets the specific requirements herein.

The ECRF must:

- Interface and provide location-based emergency call routing functionality via the RFC 5222 (Location-to-service Translation [LoST] protocol) and the functional specification of NENA STA-010.2-2016
- Support LoST queries (via Transmission Control Protocol [TCP]) from ESRP(s), PSAC Call Handling Subsystems or any other permitted IP host within the City ESInet.
- Rate-limit queries from sources other than provisioned ESRPs
- Log all connections, connection attempts and LoST transactions.
- Be able to route locations based on geographical coordinates (LAT/LON) and based on civic addresses (house #, street, city, etc.).
- Support updates to the GIS database without disruption of ECRF LoST service.
- Be able to validate GIS database changes before they are applied, for example, detect overlaps or gaps in layer geographical boundaries.

The Proposer must provide SW for a standards-compliant ECRF.

The ECRF must provide active-active replication within a site such that all copies of the database are kept synchronized by ensuring that any change to one is propagated to all other copies. The ECRF must also provide active-active replication between sites (PSAC1, PSAC2 and the optional 3rd site) such that all database copies on different sites are kept synchronized by ensuring that any change to one copy is propagated to all other copies.

n) Location Validation Function (LVF)

The LVF is not involved in real-time emergency call delivery, but it must be highly available to Origination Service Providers and to the public at large, so these parties can verify that civic
addresses or latitude/longitude will return PSAC or emergency Proposer Uniform Resource Identifiers (URIs). In many ways, the LVF is identical to the ECRF, but because the ECRF must be highly available, it is protected within the Core NG9-1-1 Routing Service security zone. The LVF is available to the public via an LVF proxy in the public Internet in the Public Security Control Zone (PSCZ).

The Proposer must:

- Provide an LVF with an operational availability of at least 99.999%
- Provide the NG9-1-1 Location Validation Function (LVF) as defined in the NENA Standards
- Deploy at least two LVF instances.
- Provide a user-friendly web server portal located within the PSCZ to which Internet users may browse the database. The web server shall query the LVF via the proxy and return a user-friendly display with the results of the LoST query. An actual map display with the location of the user location is highly desired. This function shall be highly rate limited, e.g., five queries/day/source IP address. This feature may not be implemented initially but the functionality must be available.
- Explain the proposed LVF implementation, with particular attention to the arrangement of the proposed components, user interface and features and the security aspects of the LVF.
- Provide for a process for call origination providers to submit updates to GIS data or report discrepancies.

The LVF:

- Must be a separate instance of the ECRF-like processes running within the Core NG9-1-1 Routing Service security zone.
- Utilize a separate database instance of the GIS database derived from the ECRF GIS database. The Proposer shall show how this separate GIS database instance will be kept synchronized with the ECRF GIS database in real-time or near real-time.
- Must be accessed via a proxy server located within the PSCZ. The Core NG9-1-1 Service firewall shall then allow LVF access only from the proxy process.
- Must provide a standard LoST interface via a TCP port. This port must be listed in a Domain Name Server (DNS) entry. Connections and transactions on this port shall be logged and shall be rate limited by the PSCZ proxy.
- Proxy must also provide a LoST interface accessible by a credentialed connection that may be used by OSPs or other authorized parties. This port may be used to support a much higher rate of machine-to-machine LVF LoST protocol queries.

The Proposer must provide a standards-compliant LVF.

To have confidence that the availability requirements can be met, Proposers shall provide an operational availability analysis/report for LVF, of the hardware alone and then also for combined hardware and software if applicable. An Availability analysis/report is based on uptime data collected from operational PSAPs and which includes downtime due to hardware and software. Any scheduled downtime excluded from the availability calculation shall be described in full. The
source of data used in the report, applicability of the data and method of arriving at the final combined hardware and/or software availability shall be fully explained in the report. The Proposer shall provide sound justification for the mean downtime (MDT) design parameter.

o) Systems Integration of GIS
The Proposer is required to take the lead on the integration of all GIS services that they install. The City will act as the primary System Integrator (SI) at the system level, and will mediate all interface discussion between vendors. The Proposer must demonstrate their understanding of their role in the integration of the GIS FEIs with the rest of the NG9-1-1 Core Services FEIs by describing their role in the process and how it relates to the other selected Proposer(s). The Proposer must also clearly describe their expectations of the City in coordination of the Systems Integration process.

5. Logging & Recording

The NG NENA compliant Logging and Recording (L&R) subsystem will be heavily used by NYPD and FDNY to research incidents and prepare reports. In addition, the logging functionality shall be used to gather data to be analyzed for operational integrity, security and subsystem performance.

a) NENA Requirement Compliance

The Logging and Recording subsystem must be consistent with the NENA standards, especially STA-010.2-2016. If Proposer finds conflicts between standards, the Proposer must specify which standards their proposal follows.

The L&R subsystem must synchronize its time and date via an NTP interface to the customer-provided network clock when available.

Version upgrades, updates and maintenance to the subsystem shall only be applied after review and approval of the plan by the City and tested in the SDE. The Proposer shall be responsible for systematically deploying L&R upgrades, fixes and maintenance to the subsystem.

b) Printers

The L&R subsystem must support commonly used peripherals including printers and fax machines allowing the user to print reports.

c) Open Interface to Other Applications

The Proposer’s solution must integrate with, and provide integration services to, the many third-party applications and interfaces, to include, but not limited to: the CAD systems for NYPD and FDNY, the existing legacy L&R subsystem that services Radio and the existing analog phone systems (via the LNG).

d) Maintenance Contract

The Proposer must provide a commitment to the City that they will provide software, equipment and services that meet NENA NG9-1-1 requirements and standards now available (see references in Appendix H) and must describe how they will periodically update the subsystem components to meet future evolution of the NENA standards.
The Proposer shall warrant that the proposed subsystem will be supported for a minimum of ten (10) years from the date of the full acceptance of the proposed subsystem.

e) **NG9-1-1 Functional Elements**

All NG9-1-1 FE’s must be logged. APPENDIX D - DETAILS OF LOGGING AND RECORDING INTERFACE REQUIREMENTS lists all events which shall be logged.

Media recording will be required at all NG9-1-1 subsystem ingress points and at the NG9-1-1 Call Handling Subsystem. The subsystem must allow for simultaneous recording on all channels. It is required to provide playback on multiple remote workstations. The NG L&R subsystem is required to provide multiple channel playback without loss of any data and without deterioration to the rest of the subsystem processes. The subsystems simultaneous playback functionality shall be available for multi-media types including audio, text and video.

The Proposer shall describe the NG9-1-1 Core Services vendors with whom it has demonstrated seamless interoperability. Categories of interoperability shall be specified including full production deployment, current implementation of a production system, lab testing and participation in NENA ICE.

The Proposer shall describe if the proposed solution utilizes open source software/products and detail what, if any, are utilized.

The Proposer shall describe how product enhancement control (configuration management) is maintained and shall describe how this CM system will be utilized to handle open source software community advances. The Proposer shall describe any risk associated with utilization of open source software.

The L&R subsystem shall have the ability to provide unattended and automatic archiving of software databases and subsystem equipment configuration via a user-defined schedule.

The L&R subsystem shall have the ability to record and capture information from the NG9-1-1 Core Services FEs described in this RFP and a NG9-1-1 Call Handling Subsystem that meets the requirements of Attachment J, Appendix E, and as outlined in referenced documents of Appendix H.

Once the L&R subsystem has been delivered and is operational, the subsystem services offered must be provided as an end-to-end managed service. The proposal shall include and describe all updates, upgrades and ongoing management of the subsystem for the duration of the contract.

The subsystem must be compliant with all privacy requirements including the Health Insurance Portability and Accountability Act (HIPAA).

If multiple recorders are linked over a network, any remote workstation with rights must be able to search across multiple recorders in one step, as if they were one recorder. Proposer’s proposal must act as a single system to allow workstations anywhere on the network to access any recorder.

Proposer must provide a functional block diagram detailing the proposed solution components and connectivity, including firewalls, servers, recording devices, clients and network components.
f) **Storage Availability and Security**

The L&R storage infrastructure must be available to record and log at all times.

In addition, the recorded media and all logged events must be available at all times for search and retrieval. All stored media and logged events must also be secure. While some capability to edit the media, as described below, must be allowed, in all other cases the stored media and events must be unalterable and secure.

Many deployment models may achieve the goals listed above, however, the Proposer shall consider and propose a well-defined storage hierarchy, potentially including local, intermediate and archive levels.

Proposer shall specify the database system and version being proposed (i.e. Microsoft SQL server, Oracle, MySQL, etc.) and list any other supported databases.

g) **Availability**

The L&R subsystem shall be designed with adequate redundancy, having no single points of failure. The Proposer must describe how their proposed solution is fully redundant with no single points of failure and how it conforms to the requirements described in III.D.2.

h) **Expansion**

The L&R subsystem shall be capable of being expanded without taking the operational 911 Call Handling Subsystem off-line at either PSAC.

i) **Subsystems Engineering Margin and Growth**

The initial subsystem deployment must be sized for 1.5 times the amount of storage deemed necessary to support the performance and capacity requirements found in APPENDIX F - SUBSYSTEM PERFORMANCE AND CAPACITY.

j) **Data Formatting**

The L&R subsystem must be able to natively store records in standard audio format including WAV, MP3 and other standard media formats. There shall be no need for any additional processing which is required to create an audio file for records distribution.

The L&R subsystem voice recording shall provide the functionality for activating and deactivating the record function as follows:

- Record continuously
- Record during voice activity
- Record while telephone line voltage indicates off-hook
- Record via SIP packet capture

The Proposer will provide subsystem documentation, including as-built diagrams, rack diagrams, configuration, wire diagrams and IP level 1, 2, 3 diagrams describing the subsystem operation (and/or architecture, operating system dependencies).
The L&R subsystem voice recording GUI shall be customizable by an authorized user by providing the functionality for additional fields to be added to the GUI window for the purpose of annotating and commenting on voice record.

The L&R subsystem shall automatically permit up to 500 records to be displayed as a result of a user query and shall ask the user to verify that results greater than 500 records should be displayed. The L&R subsystem shall permit the user to synchronously play up to 20 recordings.

The L&R subsystem shall provide a visualization tool to view call activity from a group of call takers.

The L&R subsystem shall provide functionality for supervisors with sufficient privilege to select and monitor the audio on up to 25 positions - call-taker / dispatch positions from authorized workstation positions.

The L&R subsystem shall provide functionality to annotate a voice recording with a spoken time announcement, to be associated, saved and exportable with specific recordings.

The L&R subsystem voice annotation functionality shall include the capability to define the volume and extent of information provided, e.g. weekday, month, day, year, hours, minutes, seconds, AM/PM, duration.

k) Search, Retrieval, Reporting, Playback and Export
The L&R subsystem must provide a search, retrieval and export capability. This is the primary Graphical User Interface to the subsystem. The search capabilities required by the City follow the NENA standards; however, the Graphical User Interface is not defined. Therefore, Proposers must provide a detailed description of the Graphical User Interface provided.

The L&R subsystem must provide a web-based user interface for end-user interactions including searching, retrieving, exporting, reporting, quality assurance and auditing. The interface shall be compatible with the current Microsoft Internet Explorer Version(s) which will be specified during the design review process. Proposer shall list any other web browsers supported along with their versions.

Proposer must describe the functionality of the Graphical User Interface (GUI 2 in Figure 4 above), including the access controls, audit trail logging and validation of logic prior to putting them into service.

All functions, administrative and user, must be accessible via a web browser and not require the hosting of any application software on the user’s system.

Proposer shall specify if their web interface requires any browser add-ins such as Adobe Flash, Java, or Silverlight.

Proposer shall specify the web application server being proposed, e.g. Microsoft IIS Server, Apache, etc. Proposer shall list any others that are supported.

The L&R subsystem shall provide a profile-based system that will allow groups of users to be created and specific resources (channels) to be assigned.
Proposer shall specify the software development environment/platform/language the system is written in, e.g. VB.Net, Java, Spring Services and any standards used, e.g. WC3, HTML5.

The L&R subsystem must provide fast and convenient incident / scenario reconstruction and export for sharing with multiple voice, screen, image and data elements – directly within the same application interface.

Proposer shall configure the subsystem to allow each call taker to access only their own recordings, while the supervisor shall have instant access to recordings for their agency PSAP. The System Administrators shall have access to recordings for all PSAPs within their agency.

The L&R subsystem shall allow an authorized user to redact a copy of the original audio to support agency export requirements and shall provide an audit trail of all redactions including the user who authorized the export and redaction.

The L&R subsystem shall provide functionality for an interface which allows an authorized user to generate the retrieval of all call recordings that match the specified criteria, where the search function can be provided through a single query or a series of queries to the call records database.

The L&R subsystem search/playback application shall support searching by any data field or annotation associated with the recording.

The L&R subsystem search/playback application shall minimally include the following search criteria:
- Date and Time
- Customizable Channel Name or Number
- Call Duration
- Call Notations, Flags
- Dual-toned, Multi-frequency (DTMF) Codes
- Extension Number
- Call Direction (incoming or outgoing)
- ANI/ALI
- Caller ID
- Agency
- Console Position
- Voice analytics – key words or the lack of key words.
- Media type/Call type (text, video, image, etc.)

The L&R subsystem user authentication shall authorize data access, based on Group and User access levels, where data access shall minimally include:
- Access to voice
- Access to media
- Access to reporting and report templates
- Access to the device
- Access to logs

The L&R subsystem shall record and store PD, Fire and EMD agency data on independent hardware platforms segregated by agency. The access and control of each independent hardware
set will be specified and defined by the agency with the help of the Proposer, during the design phase of the project.

The L&R subsystem user authentication shall have a list of predefined groups and subgroups, which will be defined during the design phase of the project.

The L&R subsystem shall provide functionality to join PD/Fire/EMD datasets based on access privileges so as to generate reports spanning the joined datasets.

The L&R subsystem shall provide functionality to seamlessly join, using a single GUI, the legacy L&R data sets from PD/Fire/EMD (servicing the Radio subsystem) with the NG911 PD/FD/EMD datasets specified herein, so as to provide privilege-based user and reporting access.

The L&R subsystem shall provide functionality for any data type to be encrypted in the storage archive.

The L&R subsystem shall store all data sets for a period of no less than 2 years.

The L&R subsystem storage shall be expandable by a factor of at least 5x.

The L&R subsystem storage, to include all logs and records, shall be 100% replicated in real-time (or near real-time) to at least 2 offsite locations, in addition to being stored at the recording site. The offsite replication shall occur between PSAC1 and PSAC2.

The L&R subsystem shall log all use of user access/privilege and denial of user access/privilege by any user or external process.

The L&R subsystem data storage and access Record shall meet with all CJIS requirements and policy.

The L&R subsystem shall log the workstation by which the user accesses data.

The L&R subsystem shall provide functionality to track and report the complete list of users who have accessed a given data file.

The L&R subsystem shall provide functionality to grant or prevent access to a given workstation, based on a specific user or group.

The L&R subsystem shall provide functionality to playback up to 20 channels simultaneously.

The L&R subsystem shall provide functionality to playback audio at variable speeds, which shall minimally include the following variable speeds ¼, ½, 1x, 1.5x, 2x, 2.5x, 3x.

Proposer shall describe its simultaneous channel playback capabilities including simultaneous playback of multiple events such as audio, text and multimedia along a single timeline.

The L&R subsystem playback functionality shall be independent of any other subsystem function and shall, in particular, not interfere with the recording of any channel.
The L&R subsystem shall allow search and playback from an unlimited number of remote workstations on the LAN and laptops and tablets on a secure network, as well as directly from the recording unit with no LAN access required.

The L&R subsystem shall permit tagging of call records or groups of call records with color flags and alphanumeric information. The L&R subsystem shall permit tagging local or remote workstations.

l) **Subpoena Requests and Processing**
Subpoena requests for CAD records or CAD records with associated 911 Audio, Text and Video are a critical component in the City’s daily operations and workflow. These requests typically come from the DA offices, the Law Department and other related sources. The number of annual requests for subpoena records is estimated at 100,000.

The Proposer must integrate with the existing Legacy electronic subpoena (eSubpoena) request processing. Note the existing subpoena functionality is provided by NICE Systems Inc. as part of their “Investigate” SW product.

m) **Screen Capture**
The L&R subsystem shall provide functionality and network bandwidth for the periodic capture of all operational call taker and dispatch screens, to include:
- two screens for the CAD system for either NYPD, FDNY Fire, or FDNY EMD
- one telephony call handling screen
- one radio dispatch screen

Only screens with active operators need to be captured. The Proposer is to size the subsystem at each of the two PSACs with an assumption that up to 400 telephony call taker positions and 160 radio dispatchers will be active at any moment at each of the two PSACs.

The Proposer shall assume, for the purposes of this RFP, a screen resolution of 1920x1080 with a 32-bit color depth. The Proposer will describe in full their preferred approach to snapshots / pixel changes, the proposed refresh rate and the degree of compression that can be applied to the data. The capture shall remain online for at least 7 days, at which time the subsystem shall be capable of selecting data sets by position and time interval and moving them to long term storage. The long term storage shall be 50% of the storage required for the overall 7 days of short term storage. Administrative GUI functionality shall be provided to view selected positions in real time, to search and to purge short-term and long-term storage. Screen capture recordings shall be synchronized with the recorded audio, and shall permit the simultaneous playback of both the captured screen images and the audio recorded for each position.

n) **Subsystem Home Page**
The L&R subsystem must provide a web based GUI to select reports and the format of the report. A link to the report GUI shall be provided on the user homepage upon login.

The L&R subsystem shall provide functionality to automatically generate email reports on a daily, weekly, monthly or annual basis. The subsystem shall provide functionality to verify authenticity by optionally:

- exporting all media types/reports with a digital signature
b) encrypting all media types/reports upon export

The L&R subsystem shall provide functionality to generate an audit trail for each export, including the user ID, the date and time and the workstation used.

o) Network

The network requirements found below are driven primarily by the L&R requirements listed. Proposers are required to propose the network infrastructure required to achieve the storage availability, security and accessibility requirements listed above.

The network proposed must support the availability, reliability, redundancy and security required as detailed in APPENDIX F - SUBSYSTEM PERFORMANCE AND CAPACITY and in Section III.D.2. Proposers for the ESInet and Core Services scope of work must thoroughly describe the characteristics of the network proposed. Proposers for the L&R scope of work may assume that the network will be provided by the selected ESInet and Core Services Proposer.

p) System Security

Physical, cyber and data security are of paramount importance to the City.

Security measures shall be provided in accordance with the applicable NENA and City standards as specified in APPENDIX H - APPLICABLE STANDARDS and Attachment SCY-Security. The Proposer shall create a security plan with details of the security architecture, which includes the Network, Platform, Physical, Data and Process elements.

The Proposer’s physical place of business that provides remote support to the subsystem shall provide secure access such as door keys, locks, key cards, security cameras, audible and visual alarms and subsystem or device labels.

The Proposer must identify how the solution will protect the subsystem from network hackers and viruses that attempt to impede the normal operation of a system. The Proposer shall identify how their solution will sufficiently protect the subsystem from attack.

q) Interconnection with Existing L&R Subsystem

The new NG9-1-1 L&R subsystem shall support the NG9-1-1 Core Services and the new NG9-1-1 Call Handling Subsystem. The logging and recording of Radio will continue to be supported by the City’s existing L&R subsystem. The new NG9-1-1 L&R subsystem must seamlessly integrate and interoperate with the existing L&R subsystem.

Proposer’s proposal must provide seamless integration of the new L&R subsystem with the existing L&R subsystem that will remain in place. A single interface shall allow for search and retrieval across both subsystems.

To have confidence that the availability requirements can be met, Proposers shall provide an operational availability analysis / report for L&R of the hardware alone and then also for combined hardware and software if applicable. An Availability analysis / report is based on uptime data collected from operational PSAPs and which includes downtime due to hardware and software. Any scheduled downtime excluded from the availability calculation shall be described in full. The source of data used in the report, applicability of the data and method of arriving at the final
combined hardware and/or software availability shall be fully explained in the report. The Proposer shall provide sound justification for the mean downtime (MDT) design parameter.

r) Systems Integration of L&R
As mentioned previously, the responsibility for integration and testing of the L&R components with the rest of the NG9-1-1 Core Services depends on the procurement option the City selects.

The Proposer must demonstrate their understanding of their role in the integration of the L&R FEs with the rest of the NG9-1-1 Core Services FEs, the new NG9-1-1 Call Handling system and the existing radio L&R system by describing their role in the process. The figure below shows the NG911 L&R subsystem’s interaction, screen capture and integration with the legacy PD and Fire subsystems and components.

6. Additional Requirements
The Proposer must comply with the requirements in Appendix H.

The following requirements are highlighted here and must be met in Proposer’s proposal and included in the pricing.

a) Overall Solution Architecture
The Proposer’s overall solution architecture must extend from the point from interconnection with OSPs, neighboring 9-1-1 jurisdictions and ancillary systems on the ingress side to PSAC1 and PSAC 2 on the egress side. The overall design must also include a configuration at the Solutions Development Environment (SDE). A description of the SDE and the proposed configuration required can be found in Section III.D.9. A description of the logical and physical architectures is important in communicating the Proposer’s solution to the City.
The deployment of the NG9-1-1 Core Services FEs at sites around the City and potentially the region must deliver the key attributes the City requires including:

- System availability. The system as a whole must be available a minimum of 99.9999% of the time to route calls presented to the system.
- System diversity and redundancy. To deliver the system availability required, the system must be designed with no single point of failure. It must also be designed with a high level of diversity and redundancy.
- Physical Security. Access to all ESInet and NG9-1-1 Core Services components must be tightly controlled and preclude any unauthorized access to systems.
- Cyber security. Logical access to the network and the security of all data used in the system must be tightly controlled. Unauthorized access to the call transport facilities and all system information must be prevented.

b) Implementation of NG9-1-1 Subscribe/Notify

The Subscribe/Notify functionality defined in NENA-STA-010.2 2016 is critically important to the functioning of the initially deployed subsystem. In addition, when the subsystem extends to hospitals, trauma centers, the Department of Public Works and other stakeholders, the Subscribe/Notify functionally shall also be required.

The Proposer must include the full implementation of the NG9-1-1 Subscribe/Notify functionality.

c) Electrical Interface

All devices proposed for the subsystem must be provided with all necessary connecting cords and cables conforming to the National Electrical Manufacturers Association (NEMA) Codes.

The subsystems deployed at either PSAC must not cause interference to the existing radio, security, or closed circuit television communications systems, installed communications console equipment or any other data processing equipment and shall comply with all applicable FCC standards as applied to data processing equipment.

d) Wiring and Cabling

All interface connections and visible cables shall use standard EIA connectors secured by wall plates where exposed.

All cables shall be clearly marked and/or numbered in a manner that reflects a unique identifier of the cable at both ends. This cable labeling shall be in accordance with the NYC DoITT standard for cable labeling.

Any cables used shall be rated where required by local building or fire codes.

All equipment deployed at either PSAC must have the capability to be connected to redundant, resilient and diverse power sources. In addition, other facilities chosen must provide redundant, resilient and diverse power sources supported by UPS.

Cabling, communications outlets, power wiring, subsystem grounding, conduit facilities and equipment rooms shall be installed in accordance with the national standards as listed in APPENDIX H - APPLICABLE STANDARDS and all applicable local codes.
e) Grounding
The proposed subsystem must provide surge and lightning protection for all connections to AC power. Any components deployed at either PSAC must be integrated with the facilities grounding.

All hardware must be mechanically and electrically grounded to prevent both user hazard and loss of data or hardware integrity due to external electrical impulse.

All equipment must be grounded in compliance with the manufacturer recommendations and applicable standards.

f) Transient Voltage Surge Suppression
In addition to primary protection, secondary Transient Voltage Surge Suppression (TVSS) must be installed with the proposed subsystem where appropriate.

TVSS must meet the following criteria:

- TVSS devices must be installed on all equipped ports that are connected to or may be connected to wire line or wireless facilities.
- The secondary TVSS devices shall be listed with a maximum clamping voltage of 250 volts or less and operate in less than 10 nanoseconds.
- All TVSS devices shall meet UL497A requirements and must have an operational indicator to alert maintenance personnel that the device has been utilized, failed, or that the circuit is unprotected.
- The secondary TVSS must not degrade the audio signal.

g) Asset Management
All equipment owned by the City with a value in excess of $200 must have an asset tag and must be registered in the City’s asset management system. Proposer must apply asset tags as the asset is received.

h) Disaster Planning
No individual PSAP or group of PSAPs in the area around the City is capable of handling the City’s full 9-1-1 call volume. Both NYC PSACs are designed and provisioned to handle the City’s full emergency call load. However, if the City loses one PSAC, it will be "single sided" and vulnerable until both PSACs are up and operational. While this is a highly unlikely situation, the City is interested in proposals from Proposer that mitigate this type of situation.

One option the City would like explore is the deployment of an optional third site. A tertiary facility outside of both PSACs would provide for ongoing, redundant, resilient and diverse call routing if one instance of the Core Services FEs was located in an unavailable PSAC. The City requires comments from Proposer as to the: i) advantages and disadvantages of this option, ii) the proposed location of a tertiary facility, iii) the implications to the new NG9-1-1 Call Handling Subsystem, iv) the implications for NYPD Dispatchers and FDNY ARDs and dispatchers including radio communications, v) options available to the City to subscribe to a shared solution to fall back on should it become necessary vs. a facility fully dedicated to the City and vi) the possible use of a tertiary facility to host Core Services FEs for use by other parts of New York State as it implements NG9-1-1.
Other options may be available to the City that the Proposer would like to propose.

Proposer shall provide comments and pricing on the deployment of a tertiary location to host an additional instance of NG9-1-1 Core Services and shall provide other disaster planning options that meet the needs of the City. For pricing purposes assume that the City or New York State will supply a suitable location, paid for by the City. Further assume that the WAN ESInet Extensions to this 3rd facility already exist and will be accessible by the Proposer at no cost to the Proposer.

i) Deployment of an Interactive Multimedia Response Unit (IMR)
The required NG9-1-1 system is architected and staffed to handle all 9-1-1 calls originating within the City. Call diversion using PRRs shall not be required on a wholesale basis but may be implemented on a limited basis in very specific situations. In those situations, requiring call diversion, the City’s preference is to send those calls to a neighboring jurisdiction. However, as a backup to a backup to a backup, the City may entertain the use of IMRs.

Proposers are invited to recommend how IMRs could be used in conjunction with PRRs to address the rare case when call volume exceeds the available call taking capacity. Pricing for IMRs shall also be included.

Proposer shall provide a description of their IMR and recommend how an IMR might be used by the City.

j) Automated Fire and Police Alarms and Calls from Central Station Alarm Companies
A direct interface from automated or non-human initiated fire and police alarms are not envisioned as within the scope of the initial deployment of the NG9-1-1 system. However, the City would like to understand how other jurisdictions have taken advantage of standards such as AFPA.

Proposer shall provide a detailed explanation of how Automated Fire and Police Alarms and calls from Central Station Alarm companies can be interfaced to the NG9-1-1 system.

k) Transition of Service Management Responsibilities to the City
The City’s intent is to realize an integrated, coordinated solution to be provided by the successful Proposers. As noted previously, the City will play an active oversight role. During the course of the agreement, the City may determine that it wants to take on some or all of the ongoing operational and support responsibilities of the successful Proposers. The City understands that a more direct role in the management and operations could affect SLAs and other aspects of the agreement. However, the City does require a description of roles and responsibilities it may take over from each successful Proposer and the associated cost savings from the primary proposal.

Proposers shall propose a plan for the City to take on some or all operational and management responsibilities.

l) VoIP Phone System for Non-Emergency Voice Calling
The DMS-100 tandem switches used for aggregating and routing emergency calls (9-1-1 and others) are currently used for inter-office communications. The system allows the FDNY to dial 3 digits to reach extensions within the borough. Functionality to support these emergency-related calls could be provided as part of the NG9-1-1 Core Services. Alternatively, this functionality could
be provided as a feature within the NG9-1-1 Call Handling Subsystem that will be procured via a separate RFP. The City would like to explore both options.

Proposers shall provide a description of the strengths and challenges with implementing 3 digit dialing as part of the Core Services functionality proposed as opposed to delivering this functionality as part of a NG9-1-1 Call Handling Subsystem to be procured via a different RFP.

m) Implementation of the FCC’s Accessible Communications for Everyone Program
At the 2015 TDI Conference held in Baltimore, FCC Chairman Tom Wheeler announced the Commission’s Accessible Communications for Everyone (ACE) program:


During Chairman Wheeler’s keynote remarks, New York City Mayor De Blasio endorsed the program and committed the City’s support for the program in a pre-taped video:

(https://www.youtube.com/watch?v=ezD1oNkSP8k)

The implementation of NG9-1-1 provides an opportunity to consider support for ACE to support citizens and visitors who “hear with their eyes”.

Proposers shall provide thoughts and options on supporting the ACE program with the proposed NG9-1-1 system.

n) American Sign Language over Video
The NG9-1-1 ESInet and Core Services subsystem shall support American Sign Language over live video conference call. The subsystem shall provide functionality to accept, route, and provide live video streamed conference calls to one or more 911 call taker positions that are dedicated to American Sign Language interpretation. The subsystem shall provide functionality to conference-in and route live video streamed calls to a video relay interpretation service which shall provide American Sign Language interpretation services.

The NG9-1-1 L&R subsystem shall record all live video streamed conference calls.

7. Required Systems Integration Services
The City will play an active oversight role in the integration of all functionality required in this RFP, and will act as the primary System Integrator between subsystems and vendors. If a Proposer’s proposal is selected, then Proposer will have sole responsibility for the integration of their work scope (internal integration), and will share integration responsibility for all external interfaces with the vendor associated with the far end of the interface. This arrangement is described more completely in relationship to the design process in the Systems Engineering Methodology and Required Artifacts in Section III.D.1 and its subsections.

a) ESInet and Core Integration with Originating Service Providers
The City has implemented an outreach program to the seventeen (17) OSPs currently interconnected to the existing DMS-100 tandem switches. All OSPs are aware of the target schedule although no formal interconnection agreements memorializing this have been signed.
The successful ESInet and Core Services subsystem Proposer shall be responsible for entering into interconnection agreements with each of the OSPs. The successful Proposer shall prepare a standard interconnection agreement for review and approval by the City. The successful Proposer shall manage the migration of all OSP from their current interconnections with the DMS-100 tandem switches until the final operational state of NG9-1-1 subsystem with the Operational Call Handling Subsystem has been achieved.

Figure 2 - NG9-1-1 Logical Call Processing Architecture is a graphical representation of the architecture.

In addition to the OSPs currently interconnected with the DMS-100 tandem switches, the City anticipates that during the life of the contract, additional OSPs will begin offering services that include 9-1-1 to subscribers in the City. There is also a strong likelihood that some OSPs currently using an intermediary to provide 9-1-1 service, such as VoIP Service Providers, will elect to interconnect directly with the City's NG9-1-1 subsystem. The scored pricing of this RFP will include only the price for migrating the 17 OPS currently interconnected to the DMS-100 tandems.

Proposers should also note that for the purposes of this RFP, the City is not planning to allow access to the proposed NG9-1-1 subsystem from the public internet. Only authorized OSPs will be allowed to deliver emergency calls to the system. New intelligent devices, the “Internet of Things” and other sources of 9-1-1 calls will need to use either an authorized OSP to deliver calls to the NG9-1-1 subsystem or go through the established process and become an authorized OSP themselves.

The ESInet and Core Subsystem Proposer shall provide a narrative describing their approach to negotiating and executing interconnection agreements with the OSPs and their approach to migrating them to the NG9-1-1 subsystem. Proposer shall also comment on the expected duration of each of the steps in the process.

b) Transition of the OSPs to SIP with Gateway to Operational DMS-100 Tandem Switch

To more clearly define the scope of the tasks, ESInet and Core Services Selectee will be the sole party responsible for the transition of the OSPs to SIP from their current state to an operational state with the DMS-100 tandem switches via a gateway. This includes all integration and coordination efforts with Verizon, who hosts the DMS-100 tandem switches at their COs.

The Proposer will, during this phase of the project integration, execute the formal transition plans developed during the Critical Design Phase. One-by-one the OSPs will be integrated and cut over to the new subsystem using SIP, (some utilizing SIP directly and some utilizing a gateway). The SIP calls, upon reaching the CRF, will then be redirected through a subsystem gateway which will in turn convert the call signaling back to SS7 protocol and onward to the DMS-100 tandem switches.

The end goal of this transition phase is to have all the OSP calls routed through the subsystem without disruption to the current Vesta operational environment. This transitional stage is necessary to prepare the subsystem for SIP operational cutover at the conclusion of this project. It is also necessary to make OSP test queues available so that the Call Handling Subsystem can
undergo joint system testing with the ESInet and Core Services subsystem without affecting on-going operations.

During this transition phase custom test queues will be created to exercise and test the subsystem’s ability to handle each OSP’s conversion to SIP, and the onward conversion back to SS7. The test plan and test procedure developed for this phase of testing will be executed and follow the same path as those for FAT and SAT.

Deliverables: Approved Test procedure (Appendix to SAT), TRR Slides and meeting notes, Dry run results, Formal TDRs, Test Report.

c) Integration and Test with the NYC Public Safety NOC/SOC/Helpdesk External Interfaces

During this stage of the integration process, the Proposer will take the lead in the integration and test of NYC Public Safety NOC/SOC/Helpdesk/Enterprise services with the ESInet and Core and NG L&R subsystems. The Proposer is required to utilize City provided interfaces to implement this functionality, including implementing subsystem monitoring to send SNMPv3 traps and informs to the Public Safety NOC Manager-of-Managers (MOM). The Proposer’s staff is required to integrate, interface, and utilize the City provided Helpdesk software suite. Further information on the integrated NOC/SOC/Helpdesk, and Enterprise services can be found in sections III.D.1.h.(13) (Integration and Test Phases), and III.D.12 (Subsystem Management & Maintenance). Details of how the Proposer will utilize these interfaces will be worked out during the design phase of the project.

Note the Proposer should consider NOC/SOC/Helpdesk, and Enterprise Services test procedures to be part of the Subsystem Acceptance Test (SAT) phase of the project even though it is an integration to an external City provided subsystem. In any case the test procedures associated with these external interfaces shall be included as an appendix of the SAT test procedures to provide the option for the Proposer to create, approve, and execute them independent of the main body of SAT test procedures. The City technical staff will be on hand to jointly create, develop, and execute these test procedures with the Proposer’s staff.

Deliverables: Approved Test procedures (appendix to SAT), TRR Slides and meeting notes, Dry run results, Formal TDRs, Test Report.

d) Integration and Test with Logging and Recording

Before the integration of L&R with the ESInet and Core Subsystem and the Call Handling Subsystem, the NG L&R subsystem will be integrated with the legacy L&R subsystem that supports Radio and other analog connections. The ESInet and Core Services provider will then integrate with the now combined L&R subsystems. These test procedures may be redlined in the SDE. Note the Proposer may choose to combine and execute some or all of this integration and test phase with the Subsystem Acceptance Test (SAT). In any case the test procedures associated with these external interfaces shall be considered to be an independent subset of the L&R SAT test procedures to provide the option for the Proposer to create and execute them independent of the main SAT test procedures. The Legacy (NICE) Logging and Recording Vendor will be on contract to review and jointly execute these procedures.
Similarly, the interface between the L&R system and the rest of the NG9-1-1 FEs is initiated by the NG9-1-1 FEs with a SIP invite. L&R integration test procedures with ESInet and Core Services subsystem shall be created by the L&R Proposer’s staff, however the ESInet and Core Services subsystem test staff will be required to review the procedures and actively participate in all segments of the integration testing.

The L&R system will need to be integrated with the Call Handling Subsystem and the existing radio L&R system. Again, the L&R subsystem’s test team will generate the test procedures for this integration phase however the Call Handling Subsystem test team staff will be required to review the test procedures and actively participate in all segments of the integration testing.

Deliverables: Approved test procedures (appendix to SAT), TRR Slides and meeting notes, Dry run results, Formal TDRs, Test Report.

e) Integration and Test with the Call Handling Subsystem

The City will issue a separate RFP for the procurement of a NG9-1-1 Call Handling Subsystem. The Call Handling Subsystem will comply with all relevant NENA standards especially those that deal with the interface to the ESRP in Core Services. Specifically, all calls must be delivered to the Call Handling Subsystem with Presence Information Data Format Location Object (PIDF-LO) and all available subscriber information and preferences.

The ESRP must interface with the new Call Handling Subsystem in compliance with the appropriate NENA standards. Since the interpretation of the NENA standards may vary somewhat, the Proposer must provide any specific requirements or interpretations of the standard they have relied on. In addition, Proposer must provide a list of NG9-1-1 call handlings systems that they have successfully interfaced with in the lab, in a NENA ICE event, or in a client situation.

The LIS/ALI must interface with the new Call Handling Subsystem in compliance with the appropriate NENA standards.

During this stage of integration, the Contractor will integrate with the Call Handling Subsystem. Once the interfaces have been confirmed to be functional, the Contractor will utilize test queues setup during the OSP transitions to provide SIP test calls to the Call Handling Subsystem. At this time the normal 911 operational queues will still flow through the DMS-100 tandem switches, but the test queues will be diverted to the Call Handling Subsystem to generate traffic. The Call Handling Subsystem and the ESInet/Core Services subsystem test procedures which follow the system test plan (created during the CDP) will be redlined, dry run and formally executed. The Call Handling Subsystem vendor will be on contract to jointly create, develop and execute these procedures. The City will oversee and approve the work by the selected Contractor to work with other vendors to execute a SIT NLST/Performance test, further described in the Systems Engineering Methodology and Required Artifacts subsection III.D.1.h.(15).

More details about the required interface to the new NG9-1-1 Call Handling Subsystem can be found in Appendix E – Details of Interconnection with Call Handling Subsystem, also refer to:

Figure 2 - NG9-1-1 Logical Call Processing Architecture for a graphical depiction of the architecture.
The successful Proposer shall be responsible for supporting the Proposer of the Call Handling Subsystem (selected by the City through another RFP) for the transition from the current VESTA workstations to the new NG9-1-1 Call Handling Subsystem.

Proposer shall provide a detailed explanation of the call handling and LIS/ALI interface they have implemented, any assumptions or interpretations of the standard they have made and a list of Call Handling Subsystems they have successfully interfaced with.

f) Integration with GIS
During this stage of integration, the ESInet and Core Services provider will integrate the ESInet/Core with the configured GIS software required by this RFP. While GIS is an internal component of the ESInet and Core Services subsystem as outline within this document, and would normally be considered an internal integration of the subsystem, the GIS contract being separated from the ESInet and Core Subsystem warrants further discussion. In addition, the Proposer shall consider how the LIS/ALI will be integrated, tested and cut over into operations. The integration between the GIS FEs and the rest of the NG9-1-1 FEs includes database queries to the ECRF utilizing the LoST protocol.

This cutover into operations will be required before the cutover of the entire subsystem into operations occurs, hence an independent integration and test cycle will be necessary. The Proposer will specifically address the integration, test and cutover of the GIS and the LIS/ALI functionality in their technical narrative.

g) Integration with Neighboring NG9-1-1 Jurisdictions
The City must be capable of transferring 9-1-1 calls to neighboring counties in New Jersey and New York State. These counties and the target points and types of interconnections can be found in APPENDIX B - DETAILS RELATED TO INTERCONNECTION WITH NEIGHBORING 9-1-1 JURISDICTIONS.

The successful Proposer shall work with the 9-1-1 System Service Providers responsible for each of the counties to establish the appropriate interconnection with the City’s NG9-1-1 system. The successful Proposer shall also work with the 9-1-1 authorities in each of these counties to gather the necessary GIS data to support call transfers.

Figure 2 - NG9-1-1 Logical Call Processing Architecture is a graphical representation of the architecture.

Proposer shall provide a narrative describing their approach to establishing interconnections with all identified neighboring 9-1-1 jurisdictions. Proposer shall also provide a narrative describing the collection and maintenance of required GIS data from each of the jurisdictions. Proposers shall also provide expected durations for each of these steps.

h) Integration with Ancillary Legacy Systems
There are several legacy ancillary systems that need to be adapted to the NG9-1-1 system. The systems and relevant technical details can be found in APPENDIX C - DETAILS OF INTERCONNECTION WITH ANCILLARY SYSTEMS. For each of these systems, Proposers must
describe how they will adapt these systems to the NG9-1-1 system. Notes on some of these Ancillary Legacy Systems are provided below.

(1) **New York City 3-1-1 System**
The City’s 3-1-1 system receives between 400 and 500 calls a day that must be transferred to the 9-1-1 system. Today, due to limitations of technology, the caller ID for the originating caller cannot be provided with the call transfer. The NG9-1-1 system provides an opportunity to improve the transfer process.

At the time of the implementation of this RFP, the City plans to provide SIP trunking to the NG9-1-1 system and will provide the originating caller’s, caller ID.

Proposers must provide support for the SIP trunking from the City’s 3-1-1 system adequate to support 400 to 500 call transfers per day.

(2) **Emergency Reporting System**
The Emergency Reporting System consists of kiosks around the City that allows Citizens to send a call for Police or Fire Assistance. After depressing the blue button for Police or the red button for Fire, a voice path is established. If the caller has a disability inhibiting their ability to speak, a protocol has been established allowing them to use the buttons to communicate with the call taker. The location of the caller is made available to the call taker through ALI.

Support for the Emergency Reporting System must be included in the proposal.

Figure 2 - NG9-1-1 Logical Call Processing Architecture is a graphical representation of the architecture.

Proposer shall provide a detailed explanation of how the Emergency Reporting System will be adapted to the NG9-1-1 system.

(3) **SolarCell & LinkNYC**
The City has deployed a number of call boxes that utilize the cellular network to allow citizens to call for help. In addition, the City is in the process of implementing the LinkNYC program, which also allows citizens and visitors to initiate emergency calls. Calls from both services are delivered over the cell network and arrive at the PSAC like any call from a wireless subscriber. For this reason, they are not shown separately in Figure 2 above. However, calls delivered to the DMS-100 tandem switches from SolarCell are delivered with a wire line class of service. ALI dips on the ANI return the civic address of the SolarCell station that initiated the call. By the time the services required in this RFP are deployed, LinkNYC will handle location information in the same way.

Proposer shall note any issues foreseen in supporting SolarCell and LinkNYC.

i) **Integration with Interim Text to 9-1-1**
The City has plans to implement an interim text to 9-1-1 service using a City-owned Terminating Text Control Center (T-TCC). The T-TCC will be implemented according to the J-Standard 110 and is therefore capable of delivering text messages directly to the ESRP.
There is also the possibility that the wireless OSPs may elect to interface to the system with a native NG9-1-1 (i3) interface. If this occurs, the need for the interim text to 9-1-1 solution may be dramatically reduced or perhaps even eliminated.

Finally, the FCC has initiated a proceeding related to the roll out of Real-Time Text (RTT) messaging. This service has significant advantages over the SMS service supported in the interim text to 9-1-1 service. In the NPRM, the FCC proposes an availability date for the Tier 1 wireless OSPs of December 31, 2017. If the Commission promulgates rules requiring RTT in the timeframe proposed and if the Tier 1 wireless OSPs implement this service using a native NG9-1-1 interface to existing NG9-1-1 systems, this will affect the plan for supporting the interim text to 9-1-1 system.

More details about the interface to the existing Text to 9-1-1 system can be found in APPENDIX C - DETAILS OF INTERCONNECTION WITH ANCILLARY SYSTEMS.

Figure 2 - NG9-1-1 Logical Call Processing Architecture is a graphical depiction of the architecture.

Proposer must provide an assessment of the technical and regulatory evolution of SMS and RTT to reach emergency services. Proposer must also propose a solution that can adapt to the most likely scenarios for text to 9-1-1 and RTT to 9-1-1.

8. Cyber Security Requirements
Cyber security is a vital characteristic of the solution proposed. Proposer shall provide the highest level of cyber security possible by adhering to the security standards list in APPENDIX H - APPLICABLE STANDARDS and by implementing all security standards found on the City’s website and all DoITT PSAC Security guidelines shown in Attachment K.

Proposer will provide a detailed description of how their proposed solution integrates with the overall DoITT Cyber mission to monitor, detect, analyze, mitigate and respond to cyber threats and adversarial activity on the ESInet. Refer to the information in the following link:


The ESInet / Core Subsystem shall implement subsystem functionality to protect against Distributed Denial of Service (DDOS) Attacks. The Proposer must fully describe their proposed DDOS security functionality and how they propose testing said functionality.

The ESInet / Core Subsystem shall implement subsystem functionality to protect against Telephone Distributed Denial of Service Attacks (TDDOS). The Proposer must fully describe their proposed TDOS security functionality and how they propose testing said functionality.

The ESInet / Core Subsystem shall implement subsystem functionality to protect against Multimedia and Text Distributed Denial of Service Attacks (MTDDOS). The Proposer must fully describe their proposed MTDDOS security functionality and how they propose testing said functionality.
To demonstrate the Proposer’s proposal to address common cyber security challenges, Proposer shall provide a detailed description of how their proposed solution will address the following three (3) cyber security scenarios.

a) **Cyber Security Scenario 1: Distributed Denial of Service (DDoS) Attack - DNS Amplification Vector**

   (1) **Prelude**
   An orchestrator, possibly a nation state, criminal or disgruntled employee plans and prepares a DNS attack on a PSAP of moderate size. Either the orchestrator has created its own botnet or takes the easier path of leveraging an existing geographically diverse botnet whose operator makes its resources available. This botnet consists of hundreds, possibly thousands of PCs and servers from across the world, which are infected with a specific malware, making them an unwitting part of the botnet. The orchestrator has likely performed some reconnaissance on the target PSAP and chose an inconvenient time of attack, such as high call volume times when even a fully staffed PSAP is vulnerable to overload. The orchestrator will also research the DNS arrangement of the target network through use of commonly available scanners. In this scenario, the PSAP leverages external DNS services through its own DNS infrastructure as part of the service area’s network operated by the local municipality. Under current conditions, the configuration of the PSAP’s DNS server is irrelevant, because the target of a DNS Amplification DDoS is generally not the target’s DNS server. It can be any externally-facing address, including a numbered interface on their perimeter router, their firewall, their mail server, their web server (most common), or anything. The idea is simply to consume the bandwidth on their circuit, choking off legitimate traffic. If you can spike the Central Processing Unit (CPU) on the target device as a side effect that is a bonus, but it is not required for a successful DDoS.

   (2) **Actors**
   - Orchestrator (Nation State, Criminal, Disgruntled Employee, etc.)
   - DNS Server A
   - DNS Server P (PSAP)
   - Multiple remote PC’s

   (3) **Example Flow**
   From a cyber-attack perspective, a true DNS Amplification DDoS attack works like this:

   A large number of clients, typically in a botnet, send DNS requests to publicly accessible DNS servers on the Internet with a spoofed source address of a target at the victim. The target is generally the victim’s website, but can be anything in the target netblock. Each request is very small (< 100 bytes), allowing the targets to send out billions upon billions of them. The DNS servers on the Internet helpfully respond to the requests and send the answer (which is much larger, often in the tens of kilobytes) to the address listed as the source. Which happens to be the victim’s website, or their firewall, or something else. The sheer number of requests, coupled with the sheer size of each, rapidly consumes all of the bandwidth available on their circuit.

   1. The attack is initiated through an action by the orchestrator.
   2. In this case, the attacker simply clicks an icon on a simple user interface.
3. Seconds later, the botnet constituents send a specifically crafted DNS request to public DNS servers.
4. Part of the DNS request lists the municipality’s DNS server as the source (or some other high value target such as the PSAP ingress router or SBC addresses)).
5. Shortly after, (possibly milliseconds), the impact of the attack is felt by the PSAP.
6. The targeted PSAP services (such as the DNS server response to PSAP name resolution, or the ingress router or SBC) degrade or fail.
7. Depending on the network bandwidth available to the DNS server or PSAP and/or size of the attack, the PSAP network will begin either slowing or could experience a stoppage of communications.
8. The DNS server may not be located on the same path as the PSAP, so this does not necessarily follow. However, the attacker could utilize the PSAP ingress router in the IP source address, so as to target that directly.
9. Any external access attempt by the PSAP will degrade or fail due to loss of name resolution or bandwidth.
10. Trouble ticket systems slow or fail.
11. Depending on the network architecture, call quality may degrade or VoIP services may be lost completely.
12. Internal communications may be affected, depending on DNS architecture.
13. Ability to report or gain assistance to resolve the outage may be lost.
14. If other PSAPs in the area are similarly affected, transfer of call taking capability may also be impossible.
15. The orchestrator may decide to stop the attack or may reengage the attack at a later time or date.

(4) Alternative Flow
If the PSAP itself is compromised, multiple alternate vectors are possible including financial or political extortion requirement payment of funds to the attacker or the release of information based on political motivations. Note that no inside knowledge is required to carry out a DDOS attack. This said, there are routine cyber hygiene protocols that PSAPs should consider and implement in order to mitigate at least some of the potential threats and vectors.

(5) Post-Conditions
The PSAP network will begin either slowing or experience a stoppage of communications. Any external access attempt by the PSAP will degrade or fail due to loss of name resolution or bandwidth. Trouble ticket systems may slow or fail. Depending on the network architecture, call quality may degrade or VoIP services may be lost completely. Ability to report or gain assistance to resolve the outage may be lost.

b) Cyber Security Scenario 2: Telephony Denial of Service (TDOS) Attack

(1) Prelude
An orchestrator, possibly a nation state, criminal or disgruntled employee plans and prepares a Telephone Denial of Service (TDOS) attack on one or more PSAPs. To carry out the attack,
the orchestrator arranges for a large number of calls to be made to target phone number(s), which can be PSAP administrative lines or emergency (9-1-1) lines. The attack can be carried out either by leveraging an existing “busy signal” service [BUSY-SIGNAL], or by utilizing resources (such as compromised PBX systems) commandeered by the orchestrator. To avoid detection or to inhibit corrective measures, the caller-id may be changed on every call. TDOS attacks on PSAP administrative lines have been most common to date [DHSTDOS] since calls to these numbers can be made from any phone number. However, attacks against emergency (9-1-1) lines are also possible.

(2) Actors
- Orchestrator (Nation State, Criminal, Disgruntled Employee, etc.)
- Vulnerable or compromised PBXs

(3) Example Flow
From a cyber-attack perspective, a TDOS attack works like this:

The orchestrator arranges for a large number of calls to be made to the target phone number(s). The calls used in the attacks may utilize a legitimate caller-id or (more commonly) may spoof caller-id, potentially changing the caller-id on every call to avoid detection. The goal of the attack is to tie up resources within the PSAP, preventing the handling of legitimate incoming calls and/or the making of outgoing calls. The audio content of the calls may include DTMF patterns, white noise, silence (which could be construed as a “silent call” from a disabled user, or as a technical problem), or audio in English or in a foreign language. PSAP administrative lines have been a popular target for TDOS attacks, since calls originating from anywhere can be used to reach them. In contrast, calls made to 9-1-1 may or may not be routed to the target PSAP, depending on the caller-id. Often TDOS attacks are mounted in concert with other criminal activity, such as extortion attempts, or toll fraud [TOLL-FRAUD]. The orchestrator may call the target PSAP and demand payment based on a pretext (such as a debt owed by a former PSAP employee). After the blackmail demand is denied, the attack begins, typically lasting for hours or even days. The orchestrator may utilize compromised PBXs not only to initiate calls to the target PSAP but also in order to make unauthorized international calls or calls to services charging by the minute. These schemes may result in the accumulation of large charges within short periods of time, so that they can be financially damaging to the owners of the compromised PBXs.

c) Cyber Security Scenario 3: One PSAC Compromised need to protect Interconnected PSACs

(1) Prelude
A PSAP is compromised by some means such as virus, malware, hijack (see other Use Case #), etc. and it is attempting to propagate or access other PSAPs over trusted connections such as the ESI Net.

(2) Actors
- Orchestrator (Criminal, Disgruntled Employee, etc.)
- PSAP#1 staff, PSAP#2 staff, PSAP#3 staff
- Originating Service Provider (OSP) and Text Control Center(TCC)
- Systems support staff (contracted or PSAP)
- Network support staff (contract or PSAP/ LAN and ESI Net)
- CPE Proposers

(3) Example Flow
For the purposes of this example, the initial PSAP is compromised via code injection of a video file sent through Multimedia Messaging Service (MMS) messaging to the PSAP.

1. PSAP#1 receives a spoofed MMS text message from the orchestrator via the OSP and TCC
2. PSAP#1 staff view the video file unknowingly executing the malicious code. PSAP#1 due to weak cybersecurity measures has now been compromised.
3. PSAP#1 staff experience difficulties with call handling functions due to corruption on local servers and systems.
4. That malicious code then attempts to increase its footprint expanding over trusted connections to shared unprotected resources.
5. PSAP#2 systems begin to have failures and problems with call handling functions.
6. PSAP#3’s cybersecurity monitoring and security measures detect the malicious codes attempt at access alerting PSAP#3 staff.
7. PSAP#3 staff investigates the alarms, identify the potential threat and then enact appropriate plans, which include disabling of connectivity to PSAP#1 and eventually PSAP#2.
8. PSAP#3 staff notifies PSAP#1 and #2 of the activity they have identified.
9. PSAP#1 and #2 begin their own actions towards mitigation.
10. Eventually once all systems have been cleaned and tested connectivity to the ESInet will be re-established.

(4) Alternative Flow
There are several alternatives to this type of attack most stemming from how the original PSAP is compromised and depending on the cybersecurity measures in place at the originating site and the interconnected sites. Call handling can be affected if file corruption or network bandwidth becomes restricted due to the malicious code’s activity.

9. Solutions Development Environment
The Solutions Development Environment (SDE) is located at 11 MetroTech Center. It is used by the City as an integral part of the City’s Testing Methodology (see APPENDIX I - NEW YORK CITY TESTING METHODOLOGY). Proposers must include the deployment of NG9-1-1 Core Services in the SDE as part of their proposal.

The primary long-term mission of the SDE is to provide the ability to test integration points, hardware and software upgrades, patches and maintenance procedures after the subsystem is operationally deployed. The SDE as a whole consists of a subset of every mission critical PSAC1/PSAC2 subsystem so that interfaces, connections, patches, upgrades and functionality can also be tested when changes occur in any of the subsystems.

For the purposes of this RFP, the SDE must include a copy of the ESInet and Core equipment, GIS SW and L&R subsystem equipment that is contained in a single PSAC. Hence the final equipment Bill of Materials (BOM) to be proposed for the SDE initially will look like the BOM for one of the PSACs. It must include all redundant equipment so as to permit primary/secondary failover testing and to
simulate the ability to take one set of redundant equipment offline to do the required hardware / software maintenance, while at the same time showing that other set of redundant equipment within the SDE remains operationally functional, as it would be in the real operational environment. The SDE BOM will also include all required call generators, simulators and performance testing tools. The completed SDE will interface to other SDE subsystems including the SDE version of the Call Handling Subsystem. Hence the SDE is a major component of this proposal and will follow the engineering methodology described in section III.D.1. The Proposer shall therefore propose design, build, integration and testing services to complete the ESInet and Core deployment located in the SDE.

Proposers must include in their proposals a narrative description of their proposed NG9-1-1 Core, L&R, and GIS subsystem equipment for use in the SDE. Proposers are also required to provide thoughts on how the SDE design phase will be executed, if they will require changes (or would like to suggest changes) to the accelerated design approach described in section III.D.1, and finally provide any risks that they believe the accelerated design approach will present. The Proposer shall provide a description of how the Proposer will use the SDE to reduce program risk through early interface testing or other activities.

a) SDE Fast-Tracking Design Phase
   The fast-track design phase is outlined in Section II.D.1.i(5).

b) SDE for User Acceptance Testing (UAT)
   As the OSPs cut over from operational DMS-100 tandem switches to the new operational NG911 subsystems, there will be limited, if any, time for City operational users to evaluate the look, feel, workflow and performance of the integrated ESInet and Core Services and Call Handling Subsystems. Hence, another important aspect of the SDE is to provide the facility and means to do at least partial User Acceptance Testing (UAT). Note: UAT is also known as “Requirement Validation”. This capability can only be realized after the integration of the SDE ESInet and Core Services subsystem occurs with the SDE Call Handling Subsystem. At that time the user community will be able to get hands-on experience with respect to the entire NG911 system significantly before cutover into operations occurs.

   The Proposer shall therefore consider what additional equipment, if any, will be required to outfit the SDE to facilitate and perform UAT with the user community. The proposed SDE block diagram must identify all equipment required to fulfill this aspect of the mission for the user community. The SDE design document shall describe how the UAT testing will occur in the SDE by the public safety user community.

   The City will cover the cost of power, cooling and racks at the SDE. The City will also arrange for the network WAN connections between the SDE and PSAC1, PSAC2 if required. Pricing must include full maintenance on the hardware and software as well as upgrades to both (not including the 2 technical refreshes described later). Assume for the purposes of the RFP that the SDE will be actively monitoring by the City’s NOC/SOC/Enterprise services contained in the SDE.

10. Training
   Training is required for all users of the system at every level. The depth of the training and they delivery mechanism must be geared to the intended audience. Training must be available on all
aspects of the system that City employees interface with. The Proposer must include a full suite of training modules. At a minimum, training must be available for users of:

1. System monitoring;
2. The provisioning interface for the Policy Routing Function;
3. The provisioning interfaces for the ECRF and LVF; and
4. The provisioning interfaces for the LIS/ALI.
5. The NG9-1-1 Logging and Recording system

Module content and delivery must be developed for each of the following levels:

1. The mayor’s office and Agency Management;
2. Senior operations management;
3. Operations management;
4. Administrators; and
5. Individual users

Note that Proposer must provide a full description of the roles, responsibilities, skills, knowledge level and authority level for Operations Management, Administrators and individual users

The estimated training effort is shown in Table 4. This table will be updated during negotiations.

Table 4 - Estimated Staff Training Requirements

<table>
<thead>
<tr>
<th>Subject Matter</th>
<th>The Mayor’s Office</th>
<th>Senior Operations Management (NYPD, DoITT)</th>
<th>Operations Management (NYPD, FDNY, DoITT)</th>
<th>Individual Users (NYPD, FDNY, DoITT)</th>
<th>Public Safety Help Desk Staff (DoITT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>System monitoring via the Contractor’s RSC Portal</td>
<td>2</td>
<td>2</td>
<td>30</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>The provisioning interface for the Policy Routing Function</td>
<td>2</td>
<td>2</td>
<td>15</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>The provisioning interfaces for the ECRF and LVF</td>
<td>2</td>
<td>2</td>
<td>15</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>The provisioning interfaces for the LIS/ALI</td>
<td>2</td>
<td>2</td>
<td>15</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Logging and Recording</td>
<td>2</td>
<td>2</td>
<td>30</td>
<td>15</td>
<td>10</td>
</tr>
</tbody>
</table>

Training shall be provided to all City employees interfacing with the system. Content and delivery vehicle shall be tailored to the subject and the audience. Proposers shall have staff with extensive training experience and certifications. Custom training and materials shall be made available to all City employees interfacing with the system.

The City will provide facilities for all classroom training. Facilities will include LCD projectors, screens and whiteboards. Proposals must include workstations to support classroom training and must assume that a training partition will be created on the production systems and will be used for classroom training.

11. Reporting and Statistics Capture
The City requires comprehensive Reporting and Statistics Capture (RSC) functionality that captures subsystem data and produces reports. Features of the RSC must include:
• Real-time or near real-time system performance data must be made available to all authorized users.
• Data must be captured to report on all requirements shown in APPENDIX F - SUBSYSTEM PERFORMANCE AND CAPACITY.
• Additional data to be captured and specific reports can be found in APPENDIX G - DATA TO BE CAPTURED AND REQUIRED REPORTS.
• The RSC must require a secure user ID login.
• Access to the RSC Portal, data and reports must be role-based and reflect the credentials of the user.
• The system must support the generation of reports in PDF, HTML, CVS and Microsoft Excel formats.
• The RSC must be accessible anywhere with a secure network connection and support any device with an internet browser including smart phones and tablets.
• The creation of ad hoc reports using a report generation tool that provides dropdown lists and checkboxes to allow the user to include every major field stored in the RSC.

Proposer must describe the functionality of the Graphic User Interface (GUI 4 in Figure 4 above) including the access controls, audit trail of changes and validation of logic prior to putting them into service.

12. Subsystem Management & Maintenance
   While the successful Proposer shall have sole responsibility for all subsystem management and maintenance, the City requires the ability to actively oversee the day-to-day operations and monitor subsystem performance. To accomplish this tight integration with the City, the Proposer is required to utilize the City provided NOC/SOC/trouble ticket/and Enterprise services through City supplied interfaces. The outline of the Roles and Responsibilities of the successful Proposer and the City can be found in the following table which may be updated during negotiation phase of this program.

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Contractors(s) Role</th>
<th>City's Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deployment of redundant, resilient, and diverse Network Operations Centers (NOCs)</td>
<td>Primary responsibility for deploying NOCs and monitoring the system</td>
<td>Real-time access to system performance from the City's NOC</td>
</tr>
<tr>
<td>Maintenance &amp; Repairs</td>
<td>Primary responsibility for all maintenance &amp; repairs. Notification to the City contact of all maintenance and repair activity</td>
<td>Oversight and tracking of all maintenance and repair and health monitoring activities</td>
</tr>
<tr>
<td>Hardware and Software updates</td>
<td>Follow the City's Change Management Process and comply with the City's Change Management Procedures</td>
<td>Review and approval of all planned updates. Oversight and tracking of all work performed</td>
</tr>
<tr>
<td>Hardware and Software upgrades</td>
<td>Follow the City's Change Management Process and comply with the City's Change Management Procedures</td>
<td>Review and approval of all planned upgrades. Oversight and tracking of all work performed</td>
</tr>
<tr>
<td>Responsibility</td>
<td>Contractors(s) Role</td>
<td>City’s Role</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Trouble ticketing and problem escalation system</td>
<td>Primary responsibility for utilizing and integrating to the City’s ticketing system</td>
<td>Notification of all trouble tickets entered and access to all entries reporting progress towards resolution. Oversight and tracking of all system trouble.</td>
</tr>
<tr>
<td>Real-time, scheduled, and ad hoc reporting</td>
<td>Deployment of a system portal that allows authorized City staff to access system information. Access will be roles-based and include a full audit trail of access.</td>
<td>Use of the portal to oversee system performance and to generate and distribute reports</td>
</tr>
</tbody>
</table>

**Note:** The successful Proposer shall be expected to follow City Policies and procedures.

The City requires an integrated, coordinated solution from the successful Proposer which shall be at least in part, if not in full, provided by City supplied interfaces to the City NOC, SOC and Enterprise Services. This solution must include every aspect of managing and maintaining the system for the life of the contract including:

- 24x7 system monitoring
- Network and NG9-1-1 maintenance
- all software and hardware updates
- all hardware and software upgrades
- a trouble ticketing and problem escalation system
- real-time, scheduled and ad hoc reporting

These aspects must apply to all network facilities and NG9-1-1 components from the point of ingress within the subsystem to the point of egress from the subsystem.

Proposer shall provide a complete, integrated, coordinated solution. Proposer shall describe the methodologies, systems, procedures, run books and tools used to provide this solution.

**a) Customer Service and Support Requirements**

Customer support services are required at various levels including the Mayor's office, Agency (DoITT, NYPD and FDNY) Management and Operations and users including supervisors. Customer services for all levels must include:

- SLA Management
- Event management
- Incident management
- Diagnostics and reporting
- Problem resolution and trouble handling
- Network fault monitoring
- request fulfillment
- Remote diagnostics
- Access management
- Capacity management
- Change management
- Configuration management

Proposer shall provide robust customer service and support. Proposer shall provide a description of the services proposed.

**b) Network Operations Center and Security Operations Center (NOC/SOC) and Enterprise Services**

The proposed subsystem must directly interface with the City supplied Network Operations Center (NOC) and Security Operations Center (SOC). The Proposer for the purposes of this proposal must price on-site staff on a 24x7x365 basis for the duration of the contract. The NOC must be staffed with appropriate technical resources to aid trouble shooting, diagnosis and recovery from alarms and alerts.

The Proposer must define Tier 1, 2, 3, 4 escalation policy and staffing. The City will provide remote IP access to the subsystem for emergency interrogation and repair by suitably qualified and authorized Staff. The Interface to the City remote access functionality will be further defined during the design phase of the project.

The City shall provide an interface to the City’s NOC/SOC/Helpdesk which is equipped with a Manager-of-Manager, SEIM, Helpdesk software and Enterprise Management Suite of tools that monitor, Manage, Save and Restore every aspect of PSAC subsystems including:

- SNMP vs 3 traps alarms and alerts
- Central collection and storage of Syslogs
- Collection and correlation of system and security events to provide real-time indication of potential security attack vectors
- the performance and availability of devices and Server software
- SW/HW inventory
- SW Configuration Management
- Network Device Configuration Management
- network performance, throughput, latency, jitter, packet loss statistic tracking
- ITSM tool, SLA Tracking, plus Change, Incident, Problem, Asset Management
- Complete backup and restore capability with availability (or expandable) storage for backups

To be more specific the centralized Public Safety NOC VMware and HW based environment supports and provides the following centralized NOC and enterprise services SW:

(a) Central NOC (Netcool/Omnibus)
(b) Microsoft Active Directory servers
(c) MacAfee EPO Virus/Malware/HIPs Protection
(d) DNS services (Active Directory)
(e) Patch management (Bladelogic)
(f) Hardware Inventory (iLo HP Insight manager)
(g) Software Inventory
(h) SW delivery
(i) HW/SW configuration management
(j) Help Desk Functionality
(k) Network Services (CISCO OVA, CISCO DCNM, CISCO ACS, MacAfee IPS SW)
(l) Netcool impact
(m) SEIM and event syslog capture and storage (not disclosed)
(n) Packet Capture and analysis
(o) Remote Access subsystem
(p) Centralized Certificate Services

The City provided NOC/SOC has an availability in excess of five nines, with high availability components located at both PSAC1 and PSAC2.

The Proposer must design their subsystem (during the subsystem design phase) to be compatible with City provided NOC/SOC/Helpdesk/Enterprise services suite of tools.

Any service described above that cannot be utilized through the City provided interfaces must be provided by subsystem functionality described in the Proposer’s proposal.

The City is open to a description of alternate solutions; however, pricing should be based upon utilization of the above described services and interfaces and on the other content of this subsection to the extent possible. Should the City agree to an alternative solution, the redefined scope and pricing will be addressed during negotiations.

Each Proposer subsystem shall forward service-affecting SNMP vs 3 traps to the central Public Safety NOC. Each Proposer subsystem shall configure SNMP-capable servers and network elements with appropriate thresholds appropriate to detect and automatically forward service-affecting events when the configured threshold is crossed.

The Proposer’s subsystem shall utilize the City provided event manager which will monitor the subsystem directly through a direction connection to the City’s NOC/SOC.

The subsystem must support Active Directory based central administration and authentication for windows based servers and workstations. The Proposer’s active directory must interface to the central NOC Active Directory.

The subsystem must support DNS and must interface to the City supplied DNS as the DNS authority. Details will be resolved during the design phase of the program.

The Proposer may be required to host client event management and enterprise management SW on subsystem servers, which would then be subject to compatibility testing with native subsystem’s servers. The Proposer should assume for the purposes of pricing this RFP that no such client SW will be required. This topic will be formally resolved during the negotiation phase.

The Proposers will be required to utilize the City-provided virus/malware prevention/detection/end-point SW (MacAfee) which requires client based SW on target workstations and servers.

The Proposer’s subsystem equipment shall utilize SNMP version 3 for all SNMP protocol transactions.
The Proposer's SNMP access/control passwords shall conform to DoITT password complexity requirements. The Proposers should describe in their technical narrative the necessary security and network functionality that will be required to meet NIST security compliance of their subsystem. Any functionality not provided by the City supplied NOC/SOC/trouble ticket/Enterprise interfaces will be addressed during the negotiation phase of the project.

c) Help Desk Requirements
The Proposer must ensure that all actionable events created and are actively tracked by the City’s Helpdesk software. To accomplish this, the Proposer must utilize the City’s current ITIL compliant Helpdesk software via a City provided interface. The City will provide user accounts and access to Helpdesk software on suitable workstations to be provided by the Proposer via this RFP. For the purpose of this proposal the Proposer should assume that 4 workstations need to be supplied for this propose. These support workstations will be deployed at PSAC1/PSAC2 (two at each).

The City provided Trouble Ticket/helpdesk functionality and associated processes address:

- SLA management
- Incident management
- Change management
- Problem management
- Service-level management
- Continuity management
- Configuration management
- Release management
- Capacity management
- Financial management
- Availability management
- Security management
- Help desk management
- Knowledge management

The Proposer is required to directly participate in the City’s process to include Change, Incident, Problem, Management process which includes the creation of Change Requests through the City’s Change Request module that is part of the City’s Trouble ticket/Helpdesk software. All changes and maintenance to operational equipment will go through a Change Request (CR) which must be approved before by the CCB before action taken is permitted by the Proposer’s staff. Break fix CR that must be implemented to restore operational service (severity 1 or 2 TDRs) can for the purpose of this RFP be assumed to authorized in real time (i.e., assume 5 minutes for City authorization). Such incidents, when generated via the ITSM tool are automatically and directly escalated to the highest level of City’s management and will invoke an escalated internal approval process.

The City’s Public Safety Help Desk will be used by all City staff as a first point of contact, which will alert the Proposers staff as necessary. The Proposer’s help desk must operate on a 24x7x365 basis and be adequately staffed by resources who are trained and qualified in help desk and customer support services. Proposers shall provide onsite help desk staff that are dedicated only to City of NY Public Safety ESIet and Core/GIS and NG L&R Subsystems. The Proposer shall
describe their Tiered support model and why this support model can be expected to provide the minimum 4-hour Mean Down Time, as defined in the Availability section in III.D.2. Proposer NOC staff must be approved through a City vetting process.

The Proposer’s help desk staff must act as a single point of contact for all matters involving the ESInet and Core/GIS subsystem and NG L&R subsystem.

The Proposer’s helpdesk staff must be accessible via various methods including voice, text and email and have communication with:

a) All Tier levels of the Proposer’s maintenance and support service personnel
b) The City’s Public Safety helpdesk, maintenance and support personnel
c) Maintenance and support personnel associated with connected OSPs

Proposer must propose an escalation guideline document that describes the escalation procedure for the City. The Proposer must provide the following levels of service:

Table 6 - Escalation Levels of Service

<table>
<thead>
<tr>
<th>Important City Policies</th>
<th>City Expectation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard notification to the City for any changes to the system</td>
<td>7 days’ notice and change ticket opened in the City’s system</td>
</tr>
<tr>
<td>Expedited notification to the City for any changes to the system</td>
<td>3 days’ notice and change ticket opened in the City’s system</td>
</tr>
<tr>
<td>Emergency notification to the City for changes to the system</td>
<td>1 days’ notice and change ticket opened in the City’s system</td>
</tr>
</tbody>
</table>

Table 7 - Help Desk Quality and Responsiveness

<table>
<thead>
<tr>
<th>Help Desk Quality and Responsive Requirements</th>
<th>How Measured</th>
<th>SLA Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>(All Severities) Incident Record Created within 15 minutes</td>
<td>ITSM analytics – time system incident reported to the help desk or event triggered in NetCool - the time the incident record is created in the ITSM tool</td>
<td>X</td>
</tr>
<tr>
<td>(Critical and High) Incident acknowledged within 10 minutes</td>
<td>ITSM analytics - the time the incident ticket is opened to the time the support team acknowledges the ticket in the ITSM tool by assigning to an individual</td>
<td>X</td>
</tr>
<tr>
<td>(Critical) Incident resolved within 2 hours</td>
<td>ITSM Analytics - the time the incident is opened in the ITSM tool to the time the incident is resolved</td>
<td>X</td>
</tr>
<tr>
<td>(Critical) Incident notification within 20 mins</td>
<td>ITSM Analytics – the time the incident is opened in the ITSM tool to the time an email is sent from the Service Desk and ticketing system.</td>
<td>X</td>
</tr>
<tr>
<td>(High) Incident resolved within 6 hours</td>
<td>ITSM Analytics - the time the incident is opened in the ITSM tool to the time the incident is resolved</td>
<td>X</td>
</tr>
<tr>
<td>(Medium) Incident acknowledged within 4 hours</td>
<td>ITSM analytics - the time the incident ticket is opened to the time the support team acknowledges the ticket</td>
<td>X</td>
</tr>
<tr>
<td>(Medium) Incident resolved within 72 hours</td>
<td>ITSM Analytics - the time the incident is opened in the ITSM tool to the time the incident is resolved</td>
<td>X</td>
</tr>
<tr>
<td>Help Desk Quality and Responsive Requirements</td>
<td>How Measured</td>
<td>SLA Item</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>--------------</td>
<td>----------</td>
</tr>
<tr>
<td>(Low) Incident acknowledged within 24 hours</td>
<td>ITSM analytics - the time the incident ticket is opened to the time the support team acknowledges the ticket</td>
<td>X</td>
</tr>
<tr>
<td>(Low) Incident resolved within 168 hours (7 days)</td>
<td>ITSM Analytics - the time the incident is opened in ITSM tool to the time the incident is resolved</td>
<td>X</td>
</tr>
</tbody>
</table>

13. **Project Management, Planning, and Schedule Requirements**

Projects of this scope and complexity demand the application of rigorous project management methodologies. The successful Proposer will have an organizational structure that demonstrates the importance of project management and Project Managers, including a description of the management processes used throughout their various projects. The successful Proposer will apply project management methodologies detailed in the Project Management Body of Knowledge (PMBOK) and will staff project management positions with individuals with the experience necessary.

The assigned Proposer’s Project Manager must have a PMP certification, a degree in business from an accredited college/university, or have a college degree with equivalent years of project management experience. The Project Manager shall have a minimum of 10 years of large system deployment experience including the implementation of one or more projects with minimum budget of $20M. The City reserves the right to interview and approve the choice of Project Manager before the project kick-off.

Project Management Office (PMO) meetings will be held to review project status, schedules, risks, and other important programmatic areas. An agenda will be sent out two days before the meeting and meeting minutes will be captured and circulated within two days of the completion of the meeting.

To encourage greater engagement and interaction with City project team members, the City will reserve one to four cubicles at MetroTech Center in Brooklyn, NY, for each selected Proposer’s exclusive use. A City phone and a City desktop computer configured with the City’s preferred tools including Microsoft Project, Visio, Outlook, Word and Excel will be provided at each cubicle, subject to the City’s security and usage regulations.

As noted previously, the selected Proposers will provide systems integration services - managed internally by each Proposer’s PM and working in full coordination with the City’s PMO and technical teams.

Proposers shall provide a preliminary project management plan as part of their proposal. This plan must describe the methodology for implementing Proposer’s proposed solution and show activities involved with integration to the City’s NG9-1-1 Call Handling Subsystem leading to operational cutover on or before July 31, 2021. The implementation of the project management plan shall be consistent with the Project Management Institute (PMI) best practices.

At a minimum, the implementation project plan must include:

- Proposed schedule (see additional requirements and planning assumptions below)
- Change management plan
- Configuration management plan
- Communications plan
- Quality Assurance and Quality Control plan
- Risk Management plan
- Status meeting with the City.
- Project Jeopardy Notification.

**a) Schedule and Planning Assumptions**

A detailed and final schedule with major milestones shall be jointly developed during final contract negotiations. However, Proposer must propose a high-level schedule in phases as part of their proposal.

In developing the implementation schedule, Proposer must make the following assumptions:

- Contract signing and project initiation as shown in TIMETABLE
- All OSPs have been engaged and an interconnection/migration schedule meeting the project milestones/deadlines can be arranged
- All neighboring 9-1-1 jurisdictions have been engaged and an interconnection schedule meeting the project milestones/deadlines can be arranged
- All City organizations responsible for Ancillary Systems and Text to 9-1-1 will be ready to support the migration schedule required to meet project milestones/deadlines
- Completion of the ESInet and Core Services Build phase no later than Feb 2, 2020
- Completion of the ESInet and Core Services SAT Test phase no later than July 5, 2020
- NG9-1-1 Call Handling Subsystem will be ready for integration no later than December 6, 2020
- Beginning of System Integration Test (SIT) March 1, 2021
- Overall NG9-1-1 System Ready for Service commencing no later than July 31, 2021.

**b) Test Plan and Assumptions**

The test plan to be implemented shall follow the City's testing methodology and use the City's terminology. An overview of the City's testing methodology can be found in APPENDIX I - NEW YORK CITY TESTING METHODOLOGY

Proposer shall propose a test plan consistent with the one used by the City outlined in Appendix I and show all scheduled tests in the MS Project schedule in accordance with the release management process and policy for testing and implementation into production.

**c) Technical Refresh**

The City requires the Proposer to perform two (2) complete technical refreshes, one refresh starting in operational years 5 and 10 during the 15 operational life of the subsystem. Hardware is expected to be completely replaced and updated for each Functional Element in the subsystem. The newly installed hardware and software must meet or exceed the requirement baseline established during the project design phase, including the requirements related to availability. Hardware and software must meet or exceed the requirements specified by the latest version of the applicable NENA, or successor organization, specifications. The technical refresh is required to be backward compatible with any SW that does not require a technical update.
Technical refresh costs will be reimbursed subject to a change order, contract update, or as discussed and agreed during the negotiations phase of the project. An update to the project design documents, along with an updated implementation and test plan, will be required as part of the technical refresh process. No operational down time will be permitted as part of this refresh process.

E. Overall Program Reporting and Governance

In this project, the City seeks a Proposer that embraces complete, transparent, bi-directional communications during all phase and covering all topics. To that end, the City requires that the successful Proposer provide frequent project status assessment and actively participate in more formal project reviews.

The City will establish a Program Stewardship Committee that will be responsible for the day-to-day oversight of this project. The City will form sub-committees to focus on specific aspects of the project. For example, the Data Quality Management committee mentioned previously will be a subcommittee. Proposers should anticipate a full, face-to-face meeting with the Program Stewardship Committee every month during the migration to NG9-1-1 and quarterly once the system is in steady-state operations. The frequency of subcommittee meetings will be established later, however, for planning purposes Proposers shall expect the frequency to be similar to that of the Program Stewardship Committee.

Topics for the Agenda of each meeting shall be collected and distributed 2 weeks prior to the meeting to allow all parties to prepare. The final agenda shall be published 3 days prior to the meeting and shall include the topic, any decisions to be made and the topic owner.

The successful Proposer should plan on their project manager and any required specialists attend Program Stewardship Committee meeting in person.

Proposer must participate in all Program Stewardship Committee and subcommittee meetings in an open, transparent manner

F. Agency Assumptions Regarding Payment Structure

During the later stages of the contract negotiation process, billing milestones will be finalized. The payment plan for each class will follow the general structure in accordance with the milestones listed below; details of these milestones can be found in Section III.D.1. Note: the final pricing will be structured consistent with the pricing workbook provided with the RFP.

(1) City approval of Requirements Baseline
(2) City approval of Critical Design Review (CDR)
(3) City acceptance of Factory Acceptance Test (FAT) Report – build phase complete
(4) Completion of OSP migration to SIP; DMS-100 tandem switches operating via Gateway – initial ESInet integration with OSPs complete
(5) Acceptance of Subsystem Acceptance Test (SAT) Report – functional, integrated and tested
(6) Acceptance of System Integration Test (SIT) Report – integration and test complete to all external subsystems
(7) City acceptance of FSAT - Cutover of NG9-1-1 ESInet and Core Services, GIS and L&R into Operations; operations stable for 30 days
G. Compliance with Local Law 34 of 2007
Pursuant to Local Law 34 of 2007, amending the City's Campaign Finance Law, the City established a computerized database containing the names of any "person" that has "business dealings with the city" as such terms are defined in the Local Law. For the purposes of the database, Proposers are required to complete the attached ATTACHMENT G - DOING BUSINESS DATA FORM and return it with your proposal submission and must do so in a separate envelope. (If the Proposer is a proposed joint venture, the entities that comprise the proposed joint venture must each complete a Data Form.) If the City determines that a Proposer has failed to submit a Data Form or has submitted a Data Form that is not complete, the Proposer will be notified by the Agency and will be given four (4) calendar days from receipt of notification to cure the specified deficiencies and return a complete Data Form to the Agency. Failure to do so will result in a determination that your proposal submission is non-responsive. Receipt of notification is defined as the day notice is e-mailed or faxed (if the Proposer has provided an e-mail address or fax number), or no later than five (5) days from the date of mailing or upon delivery, if delivered.

H. Whistleblower Protection Expansion Act Rider
Local Law Nos. 30 and 33 of 2012, codified at sections 6-132 and 12-113 of the New York City Administrative Code, the Whistleblower Protection Expansion Act, protect employees of certain City contractors from adverse personnel action based on whistleblower activity relating to a City contract and require contractors to post a notice informing employees of their rights. Please read ATTACHMENT C - WHISTLEBLOWER PROTECTIVE EXPANSION ACT RIDER, carefully.

I. Compliance with Iran Divestment Act
Pursuant to State Finance Law Section 165-a and General Municipal Law Section 103-g, the City is prohibited from entering into contracts with persons engaged in investment activities in the energy sector of Iran. Each Proposer is required to complete the attached Bidders Certification of Compliance with the Iran Divestment Act, certifying that it is not on a list of entities engaged in investments activities in Iran created by the Commissioner of the NYS Office of General Services. If a Proposer appears on that list, the Agency will be able to award a contract to such Proposer only in situations where the Proposer is takings steps to cease its investments in Iran or where the Proposer is a necessary sole source. Please refer to ATTACHMENT D - IRAN DIVESTMENT ACT COMPLIANCE RIDER required for this solicitation and instructions for how to complete the required form and to http://www.ogs.ny.gov/About/regs/ida.asp additional information concerning the list of entities.

J. Subcontractor Compliance Notice
The selected Proposer will be required to utilize the City’s web-based system to identify all subcontractors in order to obtain subcontractor approval pursuant to PPB Rule section 4-13, they will also be required to enter all subcontractor payment information and other related information in such system during the contract term. Please read ATTACHMENT E - SUBCONTRACTING COMPLIANCE NOTICE as it relates to competitive solicitations. The City's new web based subcontractor reporting system will be located on line at the Payee Information Portal at the following address: https://a127-pip.nyc.gov/webapp/PRDPCW/SelfService.
K. **HIRENYC and Reporting Requirements**

The Hiring and Employment Rider shall apply to contracts valued at $1 million or more for all goods, services and construction except human services contracts that are subject to the Public Assistance Hiring Commitment Rider. The Rider describes the Hire NYC process and obligations, including reporting requirements throughout the life of the contract. The Hire NYC process requires contractors to enroll with the Hire NYC system within thirty days after the registration of the contract subject to this solicitation, to provide information regarding all entry to mid-level job opportunities arising from this contract and located in New York City, and to agree to interview qualified candidates from HireNYC for those opportunities. The Rider also includes reporting requirements unrelated to HireNYC. (See ATTACHMENT K)

L. **Paid Sick Leave Law Contract Rider**

The Earned Sick Time Act, also known as the Paid Sick Leave Law (“PSLL”), requires covered employees who annually perform more than 80 hours of work in New York City to be provided with paid sick time. Contractors of the City of New York [or of other governmental entities] may be required to provide sick time pursuant to the PSLL. (See ATTACHMENT L) the Paid Sick Leave Law Rider, will be included in any contract awarded from this RFP and will incorporate the PSLL as a material term of such a contract. Please read ATTACHMENT L carefully.

M. **Joint Ventures and Other Contractor Relationships**

Proposals may be submitted by joint ventures. Note that, there is no minimum requirement for the proportion of work by either of the two joint ventured parties. Joint ventures must carry the required insurance either as policies written specifically for the joint venture entity, or by using their existing single entity policies with endorsements written for the joint venture activity.

The joint venture must be formed as a separate legal entity, and established for at least five (5) years prior to proposal submission under this RFP. The Department of Information Technology and Telecommunications (DoITT) does not recognize the corporate configuration wherein one company is “in association with” another. Relationships between two or more firms shall be either as joint venture or prime contractor/subcontractor. In the event that a proposal is received wherein two or more firms are described as being "in association with" each other, DoITT will treat the relationship as one of prime contractor/subcontractor(s). The RFP evaluation will be handled accordingly, and if chosen as a winner, the contract documents will show only the prime firm on the signature page, and all other firms will be treated as subcontractors.

N. **HIPAA Business Associate Provisions**

Capitalized terms within this section N will have its respective definition set forth in Attachment HIPAA (HIPAA Form for Contractor of Business Associate Agency), attached hereto and made a part hereof.

If in the course of Contractor’s performance of services, a Covered Entity Agency and/or Business Associate Agency will disclose any Protected Health Information to Contractor, or otherwise provide access to any Protected Health Information to Contractor, Contractor will be subject to the City’s HIPAA Business Associate provisions set forth in Attachment HIPAA. For the avoidance of doubt, a Contractor engaging in the NG9-1-1 Logging and Recording component will have access to Protected Health Information. Therefore, if Contractor provides Logging and Recording services, Contractor shall be subject to the City’s Business Associate provisions set
forth in Attachment HIPAA. The City’s HIPAA Business Associate provisions will be in addition to any obligations of the Contractor has under an agreement between DoITT and Contractor.

O. **Prevailing Wage Requirements**

Any work within the scope of services of this contract involving construction and labor trades will require compliance with NYS Labor Law 220 as to the construction trade work. Any work within the scope of services of this contract involving building service occupations will require compliance with NYS Labor Law 230 as to the building services work. The provisions of the NYC Living Wage Law [Admin Code 6-109] will apply to any work within the scope of services of this contract in any of the applicable areas of employment: day care services, food services, Head Start services, homecare services, services to persons with Cerebral Palsy, building services and temporary services. When federal funding is utilized for this contract any work involving construction trades would also be subject to the requirements of the US Davis-Bacon Act. When federal funding is utilized for this contract any work involving service occupations may be subject to the US McNamara-O’Hara Service Contract Act.

P. **Participation by Minority-Owned and Women-Owned Business Enterprises**

If the contract resulting from this Request for Proposals will be subject to M/WBE participation requirements under Section 6-129 of the Administrative Code of the City of New York, as indicated by the inclusion of Schedule B – M/WBE Utilization Plan (Attachment M) and the Participation Goals indicated in Part I thereof, proposers must complete the Schedule B – M/WBE Utilization Plan and submit it with their proposal. Please refer to the Schedule B – M/WBE Utilization Plan and the Notice to All Prospective Contractors (Attachment MWBE) for information on the M/WBE requirements established for this solicitation and instructions on how to complete the required forms. If the proposer intends to seek a full or partial waiver of the Participation Goals on the grounds described in Section 10 of the Notice to All Prospective Contractors, including, but not limited to, the proposer’s intention to use its own forces to perform any or all of the required contract work resulting in a failure to attain the Participation Goals, the proposer must request and obtain from the Agency a full or partial waiver of the Participation Goals (M/WBE Utilization Plan, Part III) in advance of proposal submission and submit the waiver determination with the proposal. Please note that if a partial waiver is obtained, the proposer is required to submit a completed Schedule B-M/WBE Utilization Plan based on the revised Participation Goals in order to be found responsive.

*Remainder of this page intentionally left blank*
IV. FORMAT AND CONTENT OF THE PROPOSAL

**Instructions:** Proposers must provide all information for the type of proposal offered in the format below. The proposal must be typed on both sides of 8 ½” X 11” paper with diagrams, engineering drawings, and pricing workbook outputs allowable on 11” X 17” paper. The City requests that all proposals be submitted on paper with no less than 30% postconsumer material content, i.e., the minimum recovered fiber content level for reprographic papers recommended by the United States Environmental Protection Agency. For any changes to that standard please consult the web site: [http://www.epa.gov/cpg/products/printing.htm](http://www.epa.gov/cpg/products/printing.htm). The proposal will be evaluated based on its content, not length. Failure to comply with any of the above Instructions will not make the proposal non-responsive.

A. Proposal Format

Proposers must provide one hard copy original of its full proposal (including original signatures), to include each of the sections below, for each scope of work they are proposing. Pages must be paginated. In addition, Proposer must submit an electronic copy (CD/DVD ROM, flash drive, or other readable electronic media) of all hardcopy documents submitted in response to this RFP.

**NOTE:** All proposals must include a copy of the attachments referenced in the RFP. Any forms included in the attachment must be filled and signed, as appropriate. This RFP includes the following attachments:

<table>
<thead>
<tr>
<th>ATTACHMENT A</th>
<th>PROPOSAL COVER LETTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATTACHMENT B</td>
<td>PRICE PROPOSAL WORKBOOK</td>
</tr>
<tr>
<td>ATTACHMENT C</td>
<td>WHISTLEBLOWER PROTECTIVE EXPANSION ACT RIDER</td>
</tr>
<tr>
<td>ATTACHMENT D</td>
<td>IRAN DIVESTMENT ACT COMPLIANCE RIDER</td>
</tr>
<tr>
<td>ATTACHMENT E</td>
<td>SUBCONTRACTING COMPLIANCE NOTICE</td>
</tr>
<tr>
<td>ATTACHMENT F</td>
<td>ACKNOWLEDGEMENT OF ADDENDA</td>
</tr>
<tr>
<td>ATTACHMENT G</td>
<td>DOING BUSINESS DATA FORM</td>
</tr>
<tr>
<td>ATTACHMENT H, H-I</td>
<td>DISPLACEMENT DETERMINATION FORM</td>
</tr>
<tr>
<td>ATTACHMENT I</td>
<td>CONTRACT TERMS</td>
</tr>
<tr>
<td>ATTACHMENT I-I</td>
<td>SUPPLEMENTAL CONTRACT PROVISIONS</td>
</tr>
<tr>
<td>ATTACHMENT J</td>
<td>REQUIREMENTS COMPLIANCE MATRIX</td>
</tr>
<tr>
<td>ATTACHMENT K</td>
<td>HIRENYC AND REPORTING REQUIREMENT</td>
</tr>
<tr>
<td>ATTACHMENT L</td>
<td>PAID SICK LEAVE LAW CONTRACT RIDER</td>
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<tr>
<td>ATTACHMENT M</td>
<td>SCHEDULE B – M/WBE UTILIZATION PLAN / WAIVER APPLICATION</td>
</tr>
<tr>
<td>ATTACHMENT HIPAA</td>
<td>HIPAA BUSINESS ASSOCIATE AGREEMENT</td>
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<td>ATTACHMENT MWBE</td>
<td>NOTICE TO PROSPECTIVE CONTRACTORS</td>
</tr>
<tr>
<td>ATTACHMENT NDA</td>
<td>NON-DISCLOSURE AGREEMENT</td>
</tr>
<tr>
<td>ATTACHMENT SCY</td>
<td>SECURITY REQUIREMENTS</td>
</tr>
</tbody>
</table>

1. Proposal Cover Letter

The Proposal Cover Letter in **ATTACHMENT A** transmits the Proposer’s Proposal Package to the Agency. It must be completed, signed and dated by an authorized representative of the Proposer.
2. Proposer’s Qualifications

a) Proposer’s Role
The Proposer must describe their role in delivering the solution. This must include the products the Proposer has developed and is proposing, their Project Management role, and the Proposer’s direct role in providing ongoing management of the system once it is ready for service. Note that the Proposer must be completely accountable for all products and services included in their proposal. All product and service contributions from any subcontractors shall be the responsibility of the Proposer during the implementation and in steady-state operations. If the Proposer is not a network provider and chooses to use a network provider or providers to implement the ESInet, Proposer shall be responsible for maintenance and repair of the network during the operational phase of the project.

The Proposer must provide a detailed list of all subcontractors used to deliver the solution including the company name, address and the roles and responsibilities each subcontractor shall perform. This must include the products and services each subcontractor will provide. The Proposer must also provide the executed agreement between the Proposer and each subcontractor or a letter signed by officers of the Proposer and the subcontractor outlining the business relationship prior to contract negotiations.

b) Proposer’s Regulatory Certifications
Proposer must possess all regulatory certifications at the Federal, State and Local level required to provide the solution proposed. This includes at a minimum, CLEC status in the State of New York and registration as a Covered 9-1-1 Entity with the FCC for ESInet and Core Services Proposers. These certifications must be maintained through the life of the contract. In addition, if any new regulatory certifications are required, Proposer must obtain these certifications.

c) Proposer’s Financial Stability
The Proposer must be cumulatively profitable over the last 5 years. The Proposer must provide a narrative describing the profitability of the corporate entity as well as the operating unit responsible for delivering 9-1-1 products and services. The Proposer must also provide an audited income statement and balance sheet for the past 5 years.

Each subcontractor used by the Proposer, with a subcontract value greater than 2 million dollars must be cumulatively profitable over the last 3 years. The Proposer must provide a narrative describing the profitability of the subcontractor. The Proposer must also provide an audited income statement and balance sheet for the past 3 years for each subcontractor.

d) Proposer’s Successful Track Record in NG9-1-1

Demonstrated experience in delivering NG9-1-1 systems

a. For Proposers interested in offering a NG9-1-1 ESInet and Core Services proposal, describe at least two (2) ESInet and Core Services systems / implementations installed with government entities of similar size and complexity as the City of New York,
including descriptions for all Functional Elements (FEs) incorporated, and the average number of 9-1-1 calls routed on a monthly basis. Please provide customer contact information for each implementation listed in your response.

b. For Proposers interested in offering a GIS proposal, describe at least two (2) GIS implementations with government entities of similar size and complexity as the City of New York, including all Functional Elements (FEs) and services/solutions. Please provide customer contact information for each implementation listed in your response.

c. For Proposers interested in offering a L&R proposal, describe at least two (2) full L&R implementations with government entities of similar size and complexity as the City of New York, including all Functional Elements (FEs) and their interactions. Please provide customer contact information for each implementation listed in your response.

Customer References

Proposer must provide a minimum of three (3) customer references for systems delivered to government entities of similar size and complexity as the City of New York within the last 3 years by the Proposer and any subcontractors. References must come from a customer that contracted with the Proposer for NG9-1-1 services. Proposers must provide the following for each customer reference:

- Legal Name of the Government Entity:
- Mailing Address:
- Contact Name, title, telephone number, email address
- Date the project was completed or is scheduled for completion:
- A description of the NG9-1-1 services implementation including the supported monthly call volume
- The role played by the Proposer on that project and the NG9-1-1 components provided
- If a site visit to this customer is requested, provide location information

e) **Proposer’s Long-Term Commitment to NG9-1-1**

Proposer must report the number and names of their employees, including subcontractors, active in relevant Standards Development Organizations (SDOs) including NENA, IETF and ATIS and their role in the standards development process.

Proposers must report their participation, including subcontractors, in recent Public Safety industry events in the past 5 years including the names of employees involved and the nature of the participation.

Proposers must describe their systems engineering processes, their Configuration Management controls and their Quality Assurance function / teams that are currently in place within their organization and should describe what changes, if any, to be made to their structure for this program.
Proposers must report the number and names of their employees, including subcontractors, that have Emergency Number Professional (ENP) certification from NENA.

Proposers must report their E9-1-1 and NG9-1-1 filings, including for their subcontractors, made on regulatory proceedings at the federal or state level over the past 5 years. Proposers must provide links to those filings (please do not attach the filings to your response).

Proposer must provide a detailed description of their company’s business continuity and disaster recovery plan, as well as resiliency and disaster recovery plans especially for departments within the company that will provide products and/or services to the City as part of this RFP.

Proposer must provide a detailed description of the business continuity plan, as well as resiliency and disaster recovery plans, for each of their subcontractors as part of this project, especially in areas that provide products and/or services to the City.

f) **Proposer’s Business Continuity Plan and Disaster Recovery Plan**

Proposer must provide a detailed description of their company’s business continuity and disaster recovery plan, as well as resiliency and disaster recovery plans especially for departments within the company that will provide products and/or services to the City as part of this RFP.

Proposer must provide a detailed description of the business continuity plan, as well as resiliency and disaster recovery plans, for each of their subcontractors as part of this project, especially in areas that provide products and/or services to the City.

g) **Physical and Cyber Security Measures**

The Proposer shall provide a detailed description of the physical and cyber security measures that will be employed to protect information provided by the City. The narrative must include a description of the Proposer’s staff roles, and which roles are anticipated to have access to sensitive information. Further, the narrative should describe the types of background checks that have been, and will be performed, on each staff member.

The Proposer must agree to be subject to 3rd Party Cyber Risk Reviews, which will validate the overall ESInet Core and L&R subsystem security perimeter, and in particular validate that the security interfaces to the City SEIM and NOC have been successfully integrated, deployed, tested, and otherwise incorporated into the overall Public Safety Security Operating Center.

The Proposer must provide certifications or test data that indicates that their subsystem and or components meet Federal or International recognizable standards (e.g. FIP 140-2, HIPAA, NENA 75-502 Next Generation 9-1-1 Security (NG-SEC) Audit Checklist NENA 04-503, NIST Cybersecurity Framework, and other security documents referenced in Appendix H). As part of the Critical Design review, the Proposer shall demonstrate how the Proposer’s own cyber security program/response capabilities will map into notifications for the City. Further, they shall provide a Risk Assessment of their subsystem.
(or components), and shall provide a detailed discussion on the defenses specific to the IPv6 schema that NG911 will ride on.

h) **Proposer’s Project Management Organization, Staffing and Capabilities**
Proposer must provide a narrative describing the Project Management processes and methodologies to be employed in this project. This narrative must include an organizational chart showing the relationship between the project management function and the technical staff responsible for delivering the project. It must also include a description of the problem escalation process within the operating unit. This narrative must also discuss how subcontractors are included in the overall Project Management model. Proposer recommendations for how the City engages may also be submitted.

i) **Proposer’s Certification in Critical Areas**
Third party certification demonstrates a Proposer’s commitment to Quality, Security and other capabilities in areas that are critical to this project.

Proposers must provide a list of all relevant corporate (not individual) 3rd party certifications, the certifying organization and the year certified. Proposers are also encouraged to describe how this certification adds value to the products and services proposed.

3. **Technical Proposal**
The City requires all specific information and documentation to evaluate the Proposer’s experience, organizational capability, and approach with full technical details to meet the City’s intent in this RFP, including all stated requirements and those referenced.

The Proposer’s Technical Proposal will be a clear narrative that minimally includes the following areas.

a) **Experience**
Proposer shall describe their successful relevant experience and that of each proposed subcontractor, if any, and the proposed Key Personnel in providing the work described in Section III of this RFP.

Additionally, the Proposer shall:

- Attach a listing of at least three relevant references, including the name of the reference entity, a brief statement describing the relationship between the Proposer or proposed subcontractor, as applicable, and the reference entity, and the name, title, and telephone number of a contact person at the reference entity, for the Proposer and each proposed subcontractor, if any.

- Submit proof of meeting the following requirements. Proposals that fail to meet all of these requirements will not be considered. Within their respective scopes of work, Proposers shall meet the requirements in this RFP, including the following categories:
  - All standards listed in **APPENDIX H - APPLICABLE STANDARDS** and any referenced standards. (possible conflicts in standards must be explained and noted)
- System performance, capacity, etc., listed in **APPENDIX F - SUBSYSTEM PERFORMANCE and CAPACITY**.
- Identify Key Personnel and attach for each Key Personnel position a resume and/or description of the qualifications each possesses.
  - For all Classes, Key Personnel shall include, but not be limited to, the Project Manager.
  - For Class 1: ESInet and Core Services, Key Personnel shall include, but not be limited to, the Project Manager, Chief Engineer, Lead Systems Engineer, and Operations Manager.
- Provide a statement certifying that the proposed Key Personnel will be available for the first year of the project and the first six months of steady state operations. For any change in Key Personnel, the Proposer shall give 30 days notice and require City approval for the replacement candidate.

b) **Organizational Capability**

Proposer shall describe and demonstrate their organizational capability to provide the work described in Section III, including programmatic, managerial, financial, and technical areas.

Additionally, the Proposer shall:
- Attach a chart showing where, or an explanation of how, the proposed solution/services are a part of the Proposer’s organizational competency.
- Attach a copy of the Proposer’s latest audit report or certified financial statement, or a statement as to why no report or statement is available.

c) **Quality and Functionality of Proposed Solution**

Proposer must include a technical narrative explaining their proposed solution and architecture, features and functions, ability to follow the systems engineering methodology described, analyses where appropriate, and their proposal’s ability to meet all the requirements in this RFP and those referenced. Special care must be taken by the Proposer to ensure their proposal and solution meet all the requirements that apply to their scope of work, given that certain other requirements may not apply when they are specifically for a different scope of work. The City will pay special attention in evaluating the extent to which each proposal meets all the requirements that apply to their scope of work.

Proposer shall describe in detail how they will provide the work described in Section III of this RFP and demonstrate that their proposed approach will fulfill the City’s goals and objectives.

Graphics, figures and tables shall be used as appropriate to provide additional information to the narrative. The narrative must support the Proposer’s self-assessment that their solution fully complies with each requirement. If the Proposer’s proposal does not comply or only partially complies with any requirement, the narrative must fully explain all aspects of the requirements that will not be met. Along with their narrative, the Proposer must indicate their assessment of their proposal’s compliance with each requirement by filling in ATTACHMENT J – Requirements.
Compliance Matrix (RCM). The Proposer shall utilize the columns adjacent to each requirement in the RCM to directly comment or reference their narrative that addresses the requirement’s compliance and to provide other relevant information.

Proposers shall propose an approach that they believe will most likely achieve the City’s goals and objectives, and meet the stated and referenced requirements in this RFP.

4. Pricing Proposal

All pricing information must be presented in the attached Pricing Workbook. A separate Pricing Workbook in Excel format for each RFP Class proposed shall be used for all costs associated with the effort for that Class / scope of work.

The Pricing Workbook contains a tab to be used for all costs associated with unsolicited or optional products or services recommended by the Proposer. Scoring of the pricing proposals will be based on the total cost of ownership on the “Total NRC Cost Rollup” and “Total MRC 5-year Cost Rollup” tabs. The tab for optional cost elements in the workbook will not be scored. Unless otherwise specified in a “Proposer pricing note”, costs for all hardware, software, and services must be included.

The following are the instructions for completing the tabs in the workbook and the assumptions to be used.

**Workbook Instructions:**

- Carefully study all the information provided in the RFP, especially the appendices, to understand the effort involved.
- Complete all tabs in the Pricing Workbook and follow the instructions provided for each tab and/or general instructions within the workbook. The City expects transparency on how the total costs are developed.
- Examples have been provided in the workbook to illustrate how the Proposer shall fill it in. The Proposer must modify any sample labor categories, rates, hours, costs, values, etc. to entirely reflect its company approach for the bid. The workbook is to be completed in the spirit of the examples that have been provided.
- If Proposers believe that data is missing and requires assumptions to be made, please alert the City point of contact. If the City determines that additional information is required, it will provide the information or assumptions to all Proposers.

**Workbook Guidelines/Assumptions:**

- The City believes all information required to prepare a comprehensive proposal and accurate pricing has been provided.
- The total cost to the City must include all non-recurring and monthly recurring costs for all products and services, systems integration, project management, installation, testing, maintenance, updates, upgrades and insurance for all hardware and software – for the development and delivery of the solution through the first five years of steady-state operations.
- The potential life of the project is from the initiation to the end of 15 years of steady-state operations.

**General Notes:** The City prefers full Enterprise pricing. The table below outlines the anticipated NRC and MRC.

### Table 8 - Anticipated Pricing and Payment Process

**NRC = Non-recurring Costs, MRC = Monthly Recurring Cost**

<table>
<thead>
<tr>
<th>Proposer/Contract Price Element</th>
<th>City’s Anticipated Payment Process</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>[1] Pre-contract</strong></td>
<td></td>
</tr>
<tr>
<td>(a) Baseline design, schedule, final SOW, contract</td>
<td>Rolled into NRC post contract if awarded</td>
</tr>
<tr>
<td><strong>[2] Post Contract – During implementation</strong></td>
<td></td>
</tr>
<tr>
<td>(a) Hardware, software and installation of all systems</td>
<td>NRC per the milestone payment plan</td>
</tr>
<tr>
<td>(b) All Project management</td>
<td>NRC per the milestone payment plan</td>
</tr>
<tr>
<td>(c) All Design Activities</td>
<td>NRC per the milestone payment plan</td>
</tr>
<tr>
<td>(d) All testing</td>
<td>NRC per the milestone payment plan</td>
</tr>
<tr>
<td>(e) All administrative costs</td>
<td>NRC per the milestone payment plan</td>
</tr>
<tr>
<td>(f) All Integration activities</td>
<td>NRC per the milestone payment plan</td>
</tr>
<tr>
<td><strong>[3] Post Contract – During steady-state operations</strong></td>
<td></td>
</tr>
<tr>
<td>(a) All system monitoring and management</td>
<td>Included in fixed MRC</td>
</tr>
<tr>
<td>(b) All software maintenance, updates and upgrades</td>
<td>Included in fixed MRC</td>
</tr>
<tr>
<td>(c) All hardware maintenance, updates and upgrades</td>
<td>Included in fixed MRC</td>
</tr>
<tr>
<td>(d) All maintenance and repairs</td>
<td>Included in fixed MRC</td>
</tr>
<tr>
<td>(e) System updates to keep current with standards</td>
<td>Included in fixed MRC</td>
</tr>
<tr>
<td>(f) Onboarding additional OSPs</td>
<td>NRC and MRC negotiated as part of a Change Order</td>
</tr>
<tr>
<td>(g) Interconnection with a NYS NG9-1-1 system</td>
<td>NRC and MRC negotiated as part of a Change Order</td>
</tr>
<tr>
<td>(h) Addition of any features in the Options section</td>
<td>NRC and MRC negotiated as part of a Change Order</td>
</tr>
<tr>
<td>(i) Integration with FirstNet</td>
<td>NRC and MRC negotiated as part of a Change Order</td>
</tr>
<tr>
<td>(j) Technical Refresh in years 5 and 10</td>
<td>NRC and MRC negotiated as part of a Change Order</td>
</tr>
<tr>
<td>(k) Additional ESInet bandwidth due to volume in excess of projections</td>
<td>NRC and MRC negotiated as part of a Change Order</td>
</tr>
</tbody>
</table>

5. **Acknowledgement of Addenda**

   The Acknowledgment of Addenda form, ATTACHMENT F - ACKNOWLEDGEMENT OF ADDENDA, serves as the Proposer’s acknowledgment of the receipt of addenda to this RFP, which may have been issued by the Agency prior to the Proposal Due Date and Time, as set forth in Section I (D), above. The Proposers must complete this form as instructed on the form.

B. **Proposal Package Contents (“Checklist”)**

1. **Checklist for ESInet and Core Services Proposals**
   1. Cover Letter (using format found in Attachment A)
   2. Proposer Qualifications (using format found in Section IV.A.2)
   3. Technical Proposal (using format found in Section IV.A.3) to meet all stated and referenced requirements as applicable
   4. Pricing Proposal (using the workbook provided in ATTACHMENT B - PRICE PROPOSAL)
5. Acknowledgement of Addenda (using format found in ATTACHMENT F - ACKNOWLEDGEMENT OF ADDENDA)

6. **Required attachments**
   
a. Five years audited financial reports, including such reports for Subcontractors, where the Subcontractor’s portion of the total contract cost is valued at $1,000,000 or more.
   
b. Representative resumes of key staff
   
c. Requirement Compliance Matrix – inputs shall reference the technical narrative sections when possible.
   
d. Availability Analysis
   
e. Technical Proposal Narrative including block diagrams.

7. **Optional attachments**
   
a. Proposer NG9-1-1 white papers demonstrating subject matter expertise
   
b. Proposer marketing materials

2. **Checklist for GIS-only Proposals**
   
1. Cover Letter (using format found in Attachment A)
   
2. Proposer Qualifications (using format found in Section IV.A.2)
   
3. Technical Proposal (using format found in Section IV.A.3) to meet all stated and referenced requirements as applicable, including GIS FEs and Data Management sections
   
4. Pricing Proposal (using the workbook provided in ATTACHMENT B - PRICE PROPOSAL)
   
5. Acknowledgement of Addenda (using format found in ATTACHMENT F - ACKNOWLEDGEMENT OF ADDENDA)

6. **Required attachments**
   
a. Five years audited financial reports
   
b. Representative resumes of key staff
   
c. Requirement Compliance Matrix – inputs shall reference the technical narrative sections when possible.
   
d. Availability Analysis if applicable
   
e. Technical Proposal Narrative including block diagrams.

7. **Optional attachments**
   
a. Proposer NG9-1-1 white papers demonstrating subject matter expertise
   
b. Proposer marketing materials

3. **Checklist for L&R-only Proposals**
   
Cover Letter (using format found in Attachment A)

1. Attachment A – Proposal Cover Letter

2. Proposer Qualifications (using format found in Section IV.A.2)
3. Technical Proposal (using format found in Section IV.A.3) to meet all stated and referenced requirements as applicable, including L&R sections

4. Pricing Proposal (using the workbook provided in ATTACHMENT B - PRICE PROPOSAL)

5. Acknowledgement of Addenda (using format found in ATTACHMENT F - ACKNOWLEDGEMENT OF ADDENDA)

6. Required attachments
   a. Five years audited financial reports
   b. Representative resumes of key staff
   c. Requirement Compliance Matrix – inputs shall reference the technical narrative sections when possible.
   d. Availability Analysis
   e. Technical Proposal Narrative including block diagrams.

7. Optional attachments
   a. Proposer NG9-1-1 white papers demonstrating subject matter expertise
   b. Proposer marketing materials

*Remainder of this page intentionally left blank.*
V. PROPOSAL EVALUATION AND CONTRACT AWARD PROCEDURES

A. Evaluation Procedures
Proposers may submit proposals to one or more of three scopes of work, also referred to as Classes, by addressing the requirements set forth in the RFP for the respective scope of work. The proposal for each Class must comprise of a technical narrative and corresponding price workbook (ATTACHMENT B – PRICE PROPOSAL WORKBOOK). Each Class will require a separate proposal which will be separately evaluated. The City reserves the right, at its sole discretion, to award contracts described below, or to make no award from this RFP, based on what is in the best interest of the City.

All proposals accepted by the Agency will be assessed initially to determine whether they meet the Requirements in Section IV.B and are therefore responsive or non-responsive to the RFP. Proposals that are determined by the City to be non-responsive will be rejected.

For Stage 1 evaluations, the City's Proposer Selection Committee will evaluate and rate all responsive proposals based on the Evaluation Criteria prescribed below. The City will establish a short-list defining the competitive proposals through a natural break in scores among competing proposals.

For Stage 2 evaluations, the Proposer Selection Committee will invite the short-list Proposers to make an oral presentation to the Committee. The content of the oral presentation will be Proposer's proposal. The applicable scoring criteria for the Stage 2 evaluations will be established prior to any oral presentations from the Proposers.

B. Evaluation Criteria
A contract will be awarded to each responsible Proposer whose proposal is determined to be the most advantageous to the City, taking into consideration the price and such other factors or criteria, which are set forth in this RFP. The City may choose to make no award if it is deemed in the best interest of the City.

Each RFP Class, or scope of work, will be separately evaluated. A two-stage evaluation process will be used to select the Proposers eligible for contract award.

Stage 1 will be a technical evaluation of the written proposal, including demonstrated quality and functionality of proposed solution, staff experience, and level of organizational capability. The technical requirements in this RFP will be grouped in categories and an aggregate score given per category. Categories will follow the subsections in III.D – Detailed Technical Requirements. The City will establish a short-list defining the competitive proposals through a natural break in scores among competing proposals. Only short-listed Proposers will participate in Stage 2 of the evaluation process.

Stage 2 will be comprised of evaluations of each Proposer’s:

- **Oral Presentations and Interviews.** Proposer will avail the critical team members for in-person oral meetings and interviews. Matters for discussion will be limited to the technical proposal. The Proposer Selection Committee will have the opportunity to meet the Proposer’s Project Team and conduct a Q&A session with them.
- **Proof of Concept Demonstrations.** Proposer will demonstrate in an operational or lab environment a working HW/SW solution that matches the Proposer’s solution to the greatest extent possible, and secondarily, to permit the Proposer the opportunity to highlight and demonstrate proposal features that are required by the City or which the Proposer feels should be emphasized. Proposers will demonstrate product or system functionality and simulate City-specific scenarios to highlight and differentiate the Proposer’s capabilities.

- **Proposer’s Reference Site/Facility Visit.** The City shall conduct and evaluate reference site visits and/or facility visits for Proposer’s current customer base. The City shall request additional information as it deems appropriate.

- **Price Proposal.** To determine the overall value offered, the City will consider the totality of each Proposer’s price proposal and its completeness for the Class, across all RFP Classes considered for award. Prior to completion of Stage 2, the City may request Best and Final Offers (BAFO) for any or all Classes.

  The pricing score = \((\text{Lowest Proposed Price} ÷ \text{Proposed Price}) \times \text{Maximum Points}\)

  - Vendor A Price = $100 (lowest)
  - Vendor B Price = $200
  - Vendor A Score = \((100 ÷ 100) \times 40 = 40\)
  - Vendor B Score = \((100 ÷ 200) \times 40 = 20\)

Scoring of proposals can be found in Table 9 below.

**Table 9 - Proposal Evaluation Criteria**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Criteria</th>
<th>% of Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Demonstrated quality and functionality of proposed solution</td>
<td>55%</td>
</tr>
<tr>
<td>1</td>
<td>Demonstrated staff experience</td>
<td>15%</td>
</tr>
<tr>
<td>1</td>
<td>Demonstrated level of organizational capability</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stage</th>
<th>Criteria</th>
<th>% of Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Performance - Interviews/Presentations</td>
<td>15%</td>
</tr>
<tr>
<td>2</td>
<td>Performance - Proof of Concept Demonstration</td>
<td>25%</td>
</tr>
<tr>
<td>2</td>
<td>Assessment - Facility and/or Customer Reference Site</td>
<td>20%</td>
</tr>
<tr>
<td>2</td>
<td>Pricing</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Each Proposer per Class in Stage 1 will receive an evaluation score in the range from 0 to 100 points. The short-listed Proposers per Class will advance to Stage 2 and additionally will receive an evaluation score in the range from 0 to 100 points. For each Class in the RFP, the Proposer with the highest total score derived from the sum of Stage 1 evaluation (100 points total) and Stage 2 evaluation (100 points total), will be selected for award for each Class of the RFP. The City, in its sole discretion, reserves the right to make no award in any or each of its Classes.
VI. GENERAL INFORMATION TO PROPOSERS

A. Complaints

The New York City Comptroller is charged with the audit of contracts in New York City. Any Proposer who believes that there has been unfairness, favoritism or impropriety in the proposal process should inform the Comptroller, Office of Contract Administration, 1 Centre Street, Room 1005, New York, NY 10007; contract@comptroller.nyc.gov, or at (212) 669-2323. In addition, the New York City Department of Investigation shall be informed of such complaints at its Investigations Division, 80 Maiden Lane, New York, NY 10038; the telephone number is (212) 825-5959.

B. Applicable Laws

This Request for Proposals and the resulting contract award(s), if any, unless otherwise stated, are subject to all applicable provisions of New York State Law, the New York City Administrative Code, New York City Charter and New York City Procurement Policy Board (PPB) Rules. A copy of the PPB Rules may be obtained by contacting the PPB at (212) 788-0010 or at the following website: http://www1.nyc.gov/site/mocs/resources/procurement-policy-board-ppb.page

C. General Contract Provisions

Contracts shall be subject to New York City’s general contract provisions, If the Agency utilizes other than the formal Attachment I and Attachment I-1, in substantially the form that they appear in the Agency’s general contract provisions. A copy of the applicable document is attached to this RFP.

D. Contract Award

Contract award is subject to each of the following applicable conditions and any others that may apply: New York City Fair Share Criteria; New York City MacBride Principles Law; submission by the Proposer of the requisite New York City Department of Business Services/Division of Labor Services Employment Report and certification by that office; submission by the Proposer of the requisite VENDEX Questionnaires/Affidavits of No Change and review of the information contained therein by the New York City Department of Investigation; all other required oversight approvals; applicable provisions of federal, state and local laws and executive orders requiring affirmative action and equal employment opportunity; and Section 6-108.1 of the New York City Administrative Code relating to the Local Based Enterprises program and its implementation rules.

E. Proposer Appeal Rights

Pursuant to New York City’s Procurement Policy Board Rules, Proposers have the right to appeal Agency non-responsiveness determinations and Agency non-responsibility determinations and to protest an Agency’s determination regarding the solicitation or award of a contract.

F. Multi-Year Contracts

Multi-year contracts are subject to modification or cancellation if adequate funds are not appropriated to the Agency to support continuation of performance in any City fiscal year succeeding the first fiscal year and/or if the contractor’s performance is not satisfactory. The Agency will notify the contractor as soon as is practicable that the funds are, or are not, available.
for the continuation of the multi-year contract for each succeeding City fiscal year. In the event of cancellation, the contractor will be reimbursed for those costs, if any, which are so provided for in the contract.

G. Prompt Payment Policy

Pursuant to the New York City’s Procurement Policy Board Rules, it is the policy of the City to process contract payments efficiently and expeditiously.

H. Prices Irrevocable

Prices proposed by the Proposer shall be irrevocable until contract award, unless the proposal is withdrawn. Proposals may only be withdrawn by submitting a written request to the Agency prior to contract award but after the expiration of 90 days after the opening of proposals. This shall not limit the discretion of the Agency to request Proposers to revise proposed prices through the submission of best and final offers and/or the conduct of negotiations.

I. Confidential, Proprietary Information or Trade Secrets

Proposers shall give specific attention to the identification of those portions of their proposals that they deem to be confidential, proprietary information or trade secrets and provide any justification of why such materials, upon request, should not be disclosed by the City. Such information must be easily separable from the non-confidential sections of the proposal. All information not so identified may be disclosed by the City.

J. RFP Postponement/Cancellation

The Agency reserves the right to postpone or cancel this RFP, in whole or in part and to reject all proposals.

K. Proposer Costs

Proposers will not be reimbursed for any costs incurred to prepare proposals.

L. VENDEX Fees

Pursuant to PPB Rule 2-08(f)(2), the contractor will be charged a fee for the administration of the VENDEX system, including the Proposer Name Check Process, if a Proposer Name Check review is required to be conducted by the Department of Investigation. The contractor shall also be required to pay the applicable fees for any of its subcontractors for which Proposer Name Check reviews are required. The fee(s) will be deducted from payments made to the contractor under the contract. For contracts with an estimated value of less than or equal to $1,000,000, the fee will be $175. For contracts with an estimated value of greater than $1,000,000, the fee will be $350. The estimated value for each contract resulting from this RFP is estimated to be above $1million.

M. Charter Section 312(1) Certification

Pursuant to Section 312(1) City Charter, the applicable certification is included as Attachment H-1 in this RFP.
APPENDIX A - DETAILS RELATED TO OSP INTERCONNECTIONS

The information provided in the below represents the OSPs operating in the City of New York. All OSPs are aware of and support a migration to the NG9-1-1 system no earlier than the second half of calendar 2018.

<table>
<thead>
<tr>
<th>Company</th>
<th>Name on Verizon List</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATT Wireless</td>
<td>ATT Wireless</td>
</tr>
<tr>
<td>ATT - CLEC</td>
<td>Teleport</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>Bandwidth</td>
</tr>
<tr>
<td>Broadview</td>
<td>Broadview</td>
</tr>
<tr>
<td>Cablevision/Lightpath</td>
<td>Cablevision</td>
</tr>
<tr>
<td>Empire One</td>
<td>Empire One</td>
</tr>
<tr>
<td>Hypercube</td>
<td>Hypercube</td>
</tr>
<tr>
<td>Level (3)</td>
<td>L(3), Frontier/Global Crossing, Time Warner</td>
</tr>
<tr>
<td>RCN</td>
<td>RCN</td>
</tr>
<tr>
<td>Sprint</td>
<td>Sprint</td>
</tr>
<tr>
<td>T-Mobile</td>
<td>T-Mobile</td>
</tr>
<tr>
<td>Verizon Business</td>
<td>WorldCom, Brooks Fiber</td>
</tr>
<tr>
<td>Verizon - ILEC</td>
<td>MCI Metro</td>
</tr>
<tr>
<td>Verizon Wireless</td>
<td>Verizon Wireless</td>
</tr>
<tr>
<td>Windstream</td>
<td>Paetec, US LEC</td>
</tr>
<tr>
<td>Xchange</td>
<td>Exchange</td>
</tr>
<tr>
<td>XO Comm</td>
<td>XO, Allegiance</td>
</tr>
</tbody>
</table>

Notes:
1. All OSPs currently interconnect via SS7
2. All OSPs currently interconnect to both DMS-100 tandem switches
3. Detailed information for each OSP will be provided to the selected Proposer along with contact information for each.
4. All OSPs are aware of the project schedule and have indicated they will be ready to migrate as planned
5. Other Ancillary Systems are connected to the DMS-100 tandem switches. Details on these systems can be found in APPENDIX C - DETAILS OF INTERCONNECTION WITH ANCILLARY SYSTEMS.

Important notes related to OSP interconnections:

- Proposals, including pricing, should include migrating all OPS currently operating in the City.
- Proposals shall assume that only authorized OSPs will interconnect with the proposed NG9-1-1 system. Access to the system from the public internet will not be allowed. Any new smartphone application, the “internet of things” and other sources of emergency calls will need to be delivered by an authorized OSP or become an authorized OSP themselves.
APPENDIX B - DETAILS RELATED TO INTERCONNECTION WITH NEIGHBORING 9-1-1 JURISDICTIONS

The information provided in the table below has been gathered from the operator of the DMS-100 tandem switches. This information must be used throughout the Proposer’s proposal including the technical design and pricing.

<table>
<thead>
<tr>
<th>Neighboring Jurisdiction</th>
<th>Target interconnection type</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nassau County, NY</td>
<td>E9-1-1</td>
<td>Floral Park, NY CO &amp; Plainview, NY CO</td>
</tr>
<tr>
<td>Westchester County, NY</td>
<td>E9-1-1</td>
<td>White Plains, NY CO &amp; Nyack, NY CO</td>
</tr>
<tr>
<td>Bergen County, NJ</td>
<td>NG9-1-1</td>
<td></td>
</tr>
<tr>
<td>Hudson County, NJ</td>
<td>NG9-1-1</td>
<td></td>
</tr>
<tr>
<td>Essex County, NJ</td>
<td>NG9-1-1</td>
<td></td>
</tr>
<tr>
<td>Union County, NJ</td>
<td>NG9-1-1</td>
<td></td>
</tr>
<tr>
<td>Middlesex County, NJ</td>
<td>NG9-1-1</td>
<td></td>
</tr>
<tr>
<td>Monmouth County, NJ</td>
<td>NG9-1-1</td>
<td></td>
</tr>
</tbody>
</table>

New NG9-1-1 Call Routing Locations (current facilities are at New Brunswick, NJ CO & Madison, NJ CO)
APPENDIX C - DETAILS OF INTERCONNECTION WITH ANCILLARY SYSTEMS

The information provided in the table below has been gathered from the operator of the DMS-100 Tandem Switches. This information must be used throughout the Proposer’s proposal including the technical design and pricing.

**Technical Details of the Emergency Reporting System (ERS)**

The Emergency Reporting System (ERS) consists of call boxes deployed throughout the City. Each call box has a blue button to call for police assistance and a red button to report a fire or request medical assistance. When either button is depressed, a voice connection is established. If the blue button was depressed, a NYPD Call Taker responds. If the red button is depressed a Fire ARD responds.

The connections between the call boxes and the PSACs utilize ISDN PRI Circuits (23B+1D). The call boxes are connected with Verizon end office switches which then interconnect with the two DMS-100 tandem switches used to aggregate 9-1-1 calls.

When a button is depressed, the ERS box dials a predetermined 10-digit number. The number dialed is unique to the agency and borough. The 10-digit number dialed is populated in the Q.931 “Called Party” field and is received at the DMS-100 tandem switches on the D channel. Each ERS call box is assigned a 10-digit number that is loaded into the ALI database and managed using PS/ALI. The ERS System populates the Q.931 “Calling Party” field, which is also received at the DMS-100 tandem switches on the D channel.

To enable use by the deaf and hard of hearing community, a protocol was developed for use on the ERS. The dapping protocol can be found at [http://www.nyc.gov/html/mopd/downloads/pdf/emergency.pdf](http://www.nyc.gov/html/mopd/downloads/pdf/emergency.pdf) and must be supported by the NG9-1-1 system.

Proposers should assume that the City will take responsibility for the call boxes and the ISDN network. Proposers must designate a point of interconnection in their proposal. The City will provide the network facilities from the call boxes to the interconnection point. Proposers must adapt the ERS to the NG9-1-1 system with no modifications made to the ERS protocols.

**Technical Details of the Interim Text to 9-1-1 System**

By the time a contract to implement the solution detailed in this RFP is awarded, the City will have implemented an interim text to 9-1-1 solution. This solution will follow the J-Standard 110. The City will be using the web browser option for handling incoming text messages. Every NYPD call taker workstation will be enabled to handle text messages, however, text messages will be delivered to a queue handled by a designated team of call takers.

To manage the distribution and assign a call taker to incoming text messages. The City will have implemented a termination – Text Control Center (T-TCC). The T-TCC will be deployed using redundant servers located at PSAC 1 and PSAC 2. Each of the four instances of the T-TCC will be connected to West / Intrado’s national TCC. West / Intrado’s TCC will aggregate text messages from the wireless carriers they support as well as text messages from the TCS national TCC, which aggregates text messages from the wireless carriers TCC supports. The figure below shows this configuration.
The Proposer’s proposal must be capable of accepting text messages delivered to the ESRP. The functionality provided by the City’s T-TCC may or may not be required once the system detailed in this RFP has been implemented. Proposer’s may propose maintaining the City’s T-TCC and interfacing with it or propose the elimination of the City’s T-TCC and interconnecting with West / Intrado’s National TCC. Proposer may make other proposals that accept text to 9-1-1 messages not delivered natively by the OSP. The Proposer must also propose a migration plan to the proposed system.
APPENDIX D - DETAILS OF LOGGING AND RECORDING INTERFACE REQUIREMENTS

The existing Logging and Recording subsystem provided by NICE Inc. will remain in place to support the PD/Fire/EMD Motorola Radio subsystem. The Proposer must provide a single graphical user interface between the existing and the new NG911 L&R subsystem.

Logging

All significant steps in processing a call must be logged. Logging must include external events, internal events, media and messages. All clients (FEs) must implement logging to at least two loggers for redundancy. Logging to a third logger is desirable.

The logger shall implement ElementState event notification, which shall be used by all FEs to determine the availability state of the logger. All subscribed FEs will be promptly notified of a change in ElementState. ServiceState is also implemented.

All NG9-1-1 FEs must act as a Session Recording Client (SRC) as defined in the Session Recording Protocol.

The following EventTypes must be logged in accordance with the standard:

- StartCall/EndCall
- StartRecCall/EndRecCall
- TransferCall
- Route
- StartMedia
- EndMedia
- StartRecMedia & EndRecMedia
- RecordingFailed
- Message
- AdditionalAgency
- MergeIncident
- UnMergeIncident
- LinkIncident
- UnLinkIncident
- ClearIncident
- ReopenIncident
- LoSTquery
- LoSTresponse
- CallSignalingMessage
- SiprecMetadata
- ALILocationQuery
- ALILocationResponse
- MalformedMessage
- SplitIncident
- EIDD
- DiscrepancyReport
- ElementStateChange
- ServiceStateChange
- AdditionalDataQuery
- AdditionalDataResponse
- LocationQuery
- LocationResponse
- CallStateChange
- GatewayCallEvent
- SecurityPostureStateChange

Recording

Below are PSAC2 and PSAC1 Logging and Recording channel counts for each agency and shall be used when sizing the subsystem. The recording subsystem shall follow the appropriate NENA requirements specified in Appendix I.

Replay Workstations

The L&R subsystem shall support 60 NYPD & FDNY replay workstations to be distributed between PSAC1, PSAC2, FOC and the Fire COs.

Recording Positions for Subsystem Sizing

The L&R subsystem shall support the following number of recording positions:

NYPD: PSAC2 384, PSAC1/1PP 488
FDNY: PSAC2 192, PSAC1/COs 144
Miscellaneous positions: PSAC2 500, PSAC1 500
APPENDIX E - DETAILS OF INTERCONNECTION WITH CALL HANDLING SUBSYSTEM

A new NG9-1-1 Call Handling Subsystem will be procured through a separate RFP. For purposes of the RFP, Proposers must assume that the Call Handling Subsystem will comply with section 5.5 of NENA - STA-010.2-2016. Specifically:

1. The interface to the Call Handling Subsystem will be SIP.
2. The interface will support all media, voice, video and text.
3. The Call Handling Subsystem will use the LoST protocol to query the ECRF.
4. The Call Handling Subsystem will use the HELD protocol to query the LIS/ALI.
5. The Call Handling Subsystem will deploy an ElementState notifier for every queue it establishes.
6. The Call Handling Subsystem will deploy a ServiceState notifier.
7. The Call Handling Subsystem will deploy a QueueState notifier for every queue it establishes.
8. The Call Handling Subsystem will implement a logging service client.
9. The Call Handling Subsystem will provide a Security Posture notifier.
10. The Call Handling Subsystem will deploy a dereference (HTTP GET) interface to obtain additional data. The Call Handling Subsystem will also be able to dereference an EIDD URI for a call transferred to it.
11. The Call Handling Subsystem will have a NTP client interface.
12. The Call Handling Subsystem will be responsible for the interconnection with the LIS/ALI.

Proposers must also use the following assumptions in the preparation of their proposal:

- The Call Handling Subsystem will be deployed as one logical system serving both PSACs.
- The call handling host systems will be physically located at the PSACs.
- The City requests a third system that is logically part of the Call Handling Subsystem but deployed at a location outside either of the two PSACs.
- All calls, regardless of the service requested in the SIP header, will be sent to the Call Handling Subsystem.
- The CAD systems will not be attached to the ESInet.
- The following queues will be established in the Call Handling Subsystem and will require calls meeting the criteria to be deposited in the proper queue by the ESRP:
  - Normal (default) voice call queue
  - Text messages with no attachments
  - Text messages with attachments
  - Calls from a subscriber with a stated primary language of Spanish
  - Testing queue
  - Training queue
  - Calls from neighboring 9-1-1 jurisdictions covered under mutual aid agreements.
APPENDIX F - SUBSYSTEM PERFORMANCE AND CAPACITY

The following system performance requirements must be achieved. Those items that must be included in an SLA are noted accordingly.

<table>
<thead>
<tr>
<th>System Capacities and Throughput requirements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Voice call routing capacity</td>
<td>50,000 calls per hour</td>
</tr>
<tr>
<td>Peak voice call volume</td>
<td>12,600 calls per hour total (6300 at PSAC1 and PSAC2 sustained for up to 2 days. Note: SDE, or optional 3rd site equivalent specification is 6300.</td>
</tr>
<tr>
<td>Minimum Number of Simultaneous Calls</td>
<td>500</td>
</tr>
<tr>
<td>Minimum Call Queue depth</td>
<td>5000</td>
</tr>
<tr>
<td>Text to 9-1-1 volume</td>
<td>3% of voice call volumes</td>
</tr>
<tr>
<td>MMS volume</td>
<td>3% of voice call volumes</td>
</tr>
<tr>
<td>Average Call volume per year</td>
<td>33,000,000</td>
</tr>
<tr>
<td>Assume Average size of MMS attachment for sizing of data</td>
<td>50M (TBR)</td>
</tr>
</tbody>
</table>

Note system storage should be initially sized for 2 years of MMS storage with the capability of 5 times expansion.

<table>
<thead>
<tr>
<th>System performance or Availability Requirements</th>
<th>SLA Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packet Latency: less than 5 ms average round trip between the ingress point (BCF or LNG) and the egress point (Call Handling Subsystem)</td>
<td>X</td>
</tr>
<tr>
<td>Packet Loss: Less than 1% between the ingress point (BCF or LNG) and the egress point (Call Handling Subsystem)</td>
<td>X</td>
</tr>
<tr>
<td>Jitter: Not to exceed 5 ms between the ingress point (BCF or LNG) and the egress point (Call Handling Subsystem)</td>
<td>X</td>
</tr>
<tr>
<td>Time clock Accuracy (network devices, servers, workstation): within 2 ms of Stratum 1 time server</td>
<td>X</td>
</tr>
<tr>
<td>Call setup time less than 1 second</td>
<td>X</td>
</tr>
</tbody>
</table>
APPENDIX G - DATA TO BE CAPTURED AND REQUIRED REPORTS

The City requires a Reporting and Statistics Capture (RSC) functionality. The RSC provides critical analytical insights needed to properly manage and evaluate the effectiveness of the 9-1-1 network (ESInet) and call handling (CPE) solutions employed to process all calls entering or exiting the 9-1-1 system, including 10-digit emergency calls, language line conferences, etc.

The RSC may use data collected by the Logging & Recording System as described in APPENDIX D - DETAILS OF LOGGING AND RECORDING or the RSC may collect its own data for reporting purposes including Call Detail Records, call metadata and log files. Collection and use of Incident IDs as defined in NENA-STA-010.2-2016 is also critical.

**Metrics and Measures to be Captured**

Timing related metrics:
- Individual Core Element Response Times (BCF, LNG, ESRP)
- Database Lookup Timing (ECRF, LVF)
- End-to end call delivery (From entry at BCF or LNG to delivery to Call Handling Call Queue)

Volume Related Metrics:
- ESRP Requests Processed
- ECRF queries
- Calls not requiring diversion (PRF not invoked)
- LoST Update Volumes
- Calls processed by payload types (media, voice, text, etc.)
- Incoming calls processed by BCF vs. LNG
- LIS lookups from LNG (number of location requests)
- LIS lookups from call Handling
- Total calls received vs. Total calls delivered to Call Handling Subsystem Queues
- Calls transferred to and from other jurisdictions
- Lost/dropped calls
- Metadata
  - Calls by service requested
  - Calls with PIDF-LO vs. not
  - Calls with PIDF-LO providing location by value
  - Calls with PIDF-LO providing location by reference

Bandwidth and QoS related Metrics:
- Percent Total Bandwidth Used (based on available bandwidth; e.g., T1 = 24 64Kb channels)
- Total Bandwidth Utilized
- Jitter and Packet Drop Counts
- Average Usage per Call

**Required Report Sorting and Format:**
- Hourly, weekly, monthly, annually generated automatically and on an ad hoc basis
- Measurements within requirements and SLA vs. measurements not meeting requirements or SLA
- Details vs. Summary
APPENDIX H - APPLICABLE STANDARDS

The City requires that the NG9-1-1 ESI-net and Core Services system proposed be consistent with New York City, NENA, IETF, ATIS and other applicable standards. The most important standards are listed below. Certification that the Proposer’s proposal meets the requirements below must be included in the proposal cover letter (see Appendix A).

The City acknowledges that the standards listed will evolve during the life of the contract and not every aspect of every standard will be applicable to the NYC NG9-1-1 system. Therefore, the City’s expectations are that:

1. Unless otherwise noted, all products offered by the Proposer must conform to applicable standards.
2. All requirements described in section IV are provided to amplify important aspects of the standards that are of particular importance to the City. None of the stated requirements are intended in any way to supersede the referenced standards with the exception of the Availability requirements (see section III.D.2). Proposers shall identify any possible conflicts between the City requirements and the standards in their narrative.
3. Where standards from different SDOs are in conflict, the Proposer must note which standard they are following.
4. Upon the release of a new version of an existing standard or the release of a new standard that affects the NYC NG9-1-1 system, the selected Proposer must evaluate the new standard and provide the City with a written assessment of the impact on the NYC NG9-1-1 system. The assessment will include an action plan for implementing aspects of the new standard that affect the NYC NG9-1-1 system. After gaining approval for the plan from the City, the selected Proposer must execute their action plan. The assessment and implementation will occur in a commercially reasonable timeframe.

<table>
<thead>
<tr>
<th>LIST OF STANDARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NENA STA 010 Detailed Functional and Interface Standards for NENA i3 Solution Stage 3</td>
</tr>
<tr>
<td>NENA 08-002 Functional and Interface Standards for Next Generation 9-1-1</td>
</tr>
<tr>
<td>NENA/APCO-REQ-001.1.1-2016 NENA/APCO Next Generation 9-1-1 Public Safety Answering Point Requirements</td>
</tr>
<tr>
<td>NENA 75-502 Next Generation 9-1-1 Security (NG-SEC) Audit Checklist</td>
</tr>
<tr>
<td>NENA 04-502 v1 CPE Site Characteristics</td>
</tr>
<tr>
<td>NENA 04-503 v1 PSAP Security</td>
</tr>
<tr>
<td>NENA 08-506 v1 Emergency Services IP Network Design for NG9-1-1</td>
</tr>
<tr>
<td>NENA 71-502 v1 An Overview of Policy Rules for Call Routing and Handling in NG9-1-1</td>
</tr>
<tr>
<td>NENA STA 003 NENA Standard for NG9-1-1 Policy Routing Rules</td>
</tr>
<tr>
<td>NENA 08-752 v1 NENA NG9-1-1 CORE TECHNICAL Standards</td>
</tr>
<tr>
<td>NENA 08-506 Emergency Services IP Network Design for NG9-1-1</td>
</tr>
<tr>
<td>NENA Security for Next-generation 9-1-1 Standard (NG-SEC, document 75-001)</td>
</tr>
<tr>
<td>NENA Next Generation 9-1-1 security (NG-SEC) Audit Checklist (document 75-002)</td>
</tr>
<tr>
<td>NENA 02-010 Standard Data Formats for 9-1-1 Data Exchange and GIS Mapping</td>
</tr>
<tr>
<td>NENA 02-014 GIS Data Collection and Maintenance Standards</td>
</tr>
<tr>
<td>NENA 71-501 Synchronizing GIS with MSAG and ALI (latest issue at time of RFP)</td>
</tr>
<tr>
<td>NENA NG9-1-1 United States Civic Location Data Exchange Format (CLDXF)</td>
</tr>
<tr>
<td>NENA 71-003 NG9-1-1 GIS Data Model v1.0</td>
</tr>
<tr>
<td>NENA STA-026.5 2016 PSAP Master Clock</td>
</tr>
<tr>
<td>NENA-INF-008.2-2013NG9-1-1 Transition Plan Considerations Information Document</td>
</tr>
</tbody>
</table>
## List of Standards

- NENA/APCO-INF-005 NENA/APCO Emergency Incident Data Document (EIDD) Information Document
- ATIS/TIA/EIA-568 Commercial Building Telecommunications Wiring Standard
- ATIS/TIA/EIA-569 Commercial Building Standard for Telecommunications Pathways and Spaces
- ATIS/TIA/EIA-606 Administration standard for the Telecommunications Infrastructure of Commercial Buildings
- ATIS/TIA/EIA-607 Commercial Building Grounding and Bonding Requirements for Telecommunications
- National Electrical Code (NFPA-70)
- ATIS/TIA J-STD-110 Standard for Text to 9-1-1
- Applicable industry standards from Underwriters Laboratories (UL), International Organization of Standards (ISO), Open Systems Interconnection (OSI), Institute of Electrical and Electronics Engineers (IEEE), American National Standards, Institute (ANSI), Electronic Industries Alliance (EIA), Telecommunications Industry Association (TIA) and NIST Cybersecurity Framework: [http://www1.nyc.gov/site/doitt/business/it-security-requirements-vendors-contractors.page](http://www1.nyc.gov/site/doitt/business/it-security-requirements-vendors-contractors.page)

### Other Rules, Regulations and Policies

- FCC Rules and Regulations Parts 68 and 15
- FCC 13-158 – Improving 911 Reliability and Reliability and Continuity of Communications Networks Including Broadband Technologies
- ITIL and ISO20000 – Information Technology Infrastructure Library for IT Service management

*Note: The City requires a system based on Industry standards including those listed above. Proposers must note when proprietary standards or protocols are used within the proposed solution.*
APPENDIX I - NEW YORK CITY TESTING METHODOLOGY

The City has implemented a testing strategy for all 9-1-1 related systems. The successful Proposer is required to adopt the City’s test process and nomenclature and assign testing staff to support all testing as outlined below for this RFP. The City will create a Test Review Board (TRB) to manage and oversee all test activities.

At a high level, the testing phases are structured as follows:

**FAT:** A Factory Acceptance Test (FAT) is performed on selected Subsystems to verify that the subsystem meets its design requirements, before it is ready to ship to the SDE (see below), or to the production environment as decided by the City. Test strategy and objectives, test cases, test procedures and other details related to the execution of FAT are to be documented and delivered to the City as well as a final FAT report. Upon completion of the FAT, the subsystem can be shipped to the installation site.

**SDE:** Solutions Development Environment (SDE) Testing. A representative implementation of the Proposer’s solution shall be implemented in the SDE. The SDE is utilized as a risk reduction environment to create and dry run test procedures and to ensure that the system and the interfaces are functioning and properly documented. The SDE will be utilized in this way to test the initial implementation of the proposed system. Test strategy and objectives, test cases, test procedures and other details related to the execution of this test are to be documented and delivered to the City as well as a final SDE test report. Additionally, the SDE can be utilized to test updates, upgrades, patches, or any other modifications to the system prior to promotion to the production system.

**SAT:** A Subsystem Acceptance Test (SAT) will be performed to verify that the subsystem performs in accordance with the approved subsystem design and requirements in City spaces and that no equipment was damaged during shipment from the factory. Test strategy and objectives, test cases, test procedures and other details related to the execution of SAT are to be documented and delivered to the City as well as a final SAT report.

**SIT/Performance:** Performance or stress testing will occur after formal SAT testing is successfully completed on all subsystems and accepted on agency servers. The selected ESInet / Core Proposer leads and conducts the NLST with the City providing oversight and approval. The selected Proposer creates test cases, test procedures, as well as a final NLST report.

**SIT:** System Integration Test. This is performed at the successful conclusion of SAT and Performance testing. SIT verifies the successful integration of the subsystems’ interfaces along with the successful integration of all interconnected sites for operations, failover, and disaster recovery. The selected ESInet / Core Proposer leads and conducts SIT with the City providing oversight and approval. The selected Proposer creates test cases, test procedures, as well as a final SIT report.

**UAT:** User Acceptance Test. This is performed by the City to confirm that the System can achieve the defined operational missions. It consists of testing to validate Business Processes using procedures developed by the City. Additionally, the City assesses the System’s readiness for use as an operational environment. Problems found during testing are assessed by the TRB for severity and either deferred or retested.

**FSAT:** The Final System Acceptance Test (FSAT) for the ESInet, NG9-1-1 Core Services and all called-for interconnections will be performed after the system is placed into operation by the City. It must operate...
for a 30 calendar-day period with no Severity Level 1 or Severity Level 2 system failures (as defined below). The City leads and conducts FSAT with the Proposer (as needed) to provide support.

**Test Deliverables for each phase:**

- Test Strategy
- Hardware / software documentation
- Schedule
- Test Plan
- RVTM – requirements verification traceability matrix
- Test Cases / Test Procedures
- Test Results Report

**Test Review Board (TRB)**

The City establishes a Test Review Board (TRB) to oversee, monitor, guide and support the accomplishment of all formal tests for the project. The TRB is comprised of the following:

- City Test Manager – Chairs the TRB
- City Project Manager
- Agency representative(s)
- Requirements & Test team / Quality Assurance representative
- Proposer Representative(s) (as needed)

The Proposer shall allocate man-hours to participate in the Test Review Board’s activities. The City Test Manager leads the TRB, while decisions are jointly arrived. During formal test events, the TRB will convene on a regular basis to review the previous or current period’s planned test activities, monitoring Test Discrepancy Reports (TDRs) and tracking the resolution and actions associated with these TDRs generated during the test phases of the project. The Proposer is responsible for the creation of TDRs and for entering the TDRs into a problem tracking system for FAT, SDE and SAT testing. The TRB also specifies the Severity (1 thru 5) and Priority (1 thru 3) of issues and determines the amount of regression testing when retesting is required. The TRB also makes a recommendation to the approving authorities for the successful completion of each formal test in a Test Exit Review (TER).

**Test Readiness Review (TRR)**

The TRR is performed by the Test Review Board during the test Phases. The TRB will convene a Test Readiness Review (TRR) prior to each formal test event and oversee any actions.

Between one and four weeks before a formal test event, the TRB will conduct a TRR to assess:

- The system readiness for testing
- Systems, interfaces or simulators and tools are locked down / under configuration control
- Requirements, Use Cases, Test Plans and Test Cases / Test Procedures are approved and under configuration control
- The subsystems, system and/or interfaces have been pre-tested in accordance with the Test Procedures
- System-under-test documentation is available
- Test personnel are trained and available
- Test teams are notified and available
- Test Procedures have been verified and reviewed
• Open issues, action items and anomalies identified prior to a specific test have been documented and evaluated for impact on testing

**Test Entrance and Exit Criteria**
The TRB establishes Entrance and Exit criteria for each test Phase. These criteria provide a checklist on whether to proceed to the next phase. The TRR shall include DoITT and Agencies directly involved and Proposer / Contractor personnel, with additional participants as decided by the TRB. Note that all test procedures must be approved by the City prior to executing the tests. The City uses the following Entrance and Exit Criteria.

**Entrance Criteria:**

- All Hardware and Software has been installed and configured
- All Cohabitation testing is complete and certified at 100%
- LAN/WAN is installed and accepted by DoITT
- A “go decision” is agreed to by the internal Project Management and Executive Team
- The Agencies provide agreement that the submitted ATP documents and identified testing scenarios meet their requirements
- Additional technical requirements as determined during functional testing

**Exit Criteria:**

- All Test Scenarios included within the “final ATP document” have been executed as indicated
- All testing is considered 100% certified with no outstanding “Severity issues” open
- All testing is considered 100% certified with an agreed number outstanding “Severity 2 or 3 issues” open
- NYC agrees that the ATPs have been 100% certified

The table below shall be used to assess the status of the entrance criteria prior to commencement of the TRR and the exit criteria at the end of TRR.

**Notes:**

- Decision to go ahead can be made even if items are not all green / blue
- TRBs can be conducted more than once if the initial test is not complete or if Severity 1 or 2 defects exist
Prior to a formal test event, the DoITT Requirements & Test (R&T) / Quality Assurance (QA) Team, with potential Contractor’s QA participation, shall conduct a system lockdown audit. The purpose of this audit is to ensure the following:

- The system-under-test is defined by the documentation set
- The test configuration and environment is controlled
- The system-under-test is ready to proceed to test

The system-under-test is under configuration control and typically defined by the following documentation set:
- Rack profile / elevation drawings
- Console layouts (if applicable)
- Wiring diagrams
- Cable matrix
- Equipment list
- Software versions
- Configuration files

The purpose of defining the system-under-test is:
- To ensure the system is understood by the test team to match the full spectrum of test requirements and Test Cases and Test Procedures to the physical system.
- To match the physical system to the Bill of Materials and/or Purchase Order(s) to ensure payment equals assets tested.

**Personnel**

The table below defines roles, responsibilities and authority for executing test and related management activities throughout the life of the project.

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibilities and Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Test Manager</td>
<td>• Lead Test Readiness Reviews (TRRs) and Test Review Board (TRB);</td>
</tr>
<tr>
<td></td>
<td>• Test Manager has the authority to:</td>
</tr>
<tr>
<td></td>
<td>▪ Review and approve test plans, test cases, test procedures and test reports;</td>
</tr>
<tr>
<td></td>
<td>▪ Review and approve test logs to acknowledge successful completion of tests;</td>
</tr>
<tr>
<td></td>
<td>▪ Support and review development of test cases and Test Procedures;</td>
</tr>
<tr>
<td></td>
<td>▪ Oversee and coordinate all test activities;</td>
</tr>
<tr>
<td></td>
<td>▪ Support QA with the collection of testing performance metrics.</td>
</tr>
<tr>
<td>Proposer Project Management (Test Coordinator)</td>
<td>• Proposer resource scheduling and utilization</td>
</tr>
<tr>
<td></td>
<td>• Schedule adherence</td>
</tr>
<tr>
<td></td>
<td>• Test results tracking</td>
</tr>
<tr>
<td></td>
<td>• Test results reporting</td>
</tr>
<tr>
<td></td>
<td>• Issue communication, remediation direction and tracking and reporting to the Test Review Board (TRB)</td>
</tr>
<tr>
<td></td>
<td>• Single testing point of contact for the center to which they are assigned</td>
</tr>
<tr>
<td></td>
<td>• Participates in TRB meetings as necessary to provide input and resolve test result disputes</td>
</tr>
<tr>
<td></td>
<td>• Review and be aware of the City test management process and procedures</td>
</tr>
<tr>
<td></td>
<td>• Provide support and lead the project for the Proposer during the execution of formal tests</td>
</tr>
<tr>
<td>Role</td>
<td>Responsibilities and Authority</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| City Requirements / Test Team | • Coordinate City resources to observe or participate in test activities  
|                             | • Resolve test result disputes  
|                             | • Establish and review test management procedures  
|                             | • Witness tests  
|                             | • Participate in the TRB  
|                             | • Create TDRs for any issues                                                                 |
| Proposer Test Representatives | • Prepare for testing activities, including development of test plans and procedures for the appropriate test stages  
|                             | • Perform execution of testing activities  
|                             | • Document what occurs in testing and the results, in conjunction with the City provided witnesses  
|                             | • Participate in the TRB as required                                                             |
| City Project Teams          | • Evaluate and approve Subsystem-level test plans and procedures  
|                             | • Witness tests  
|                             | • Participate in the TRB as required                                                             |
| City QA                     | • Provide independent Quality oversight of test planning and execution, in accordance with the City’s Quality Assurance Plan  
|                             | • Capture and report test performance metrics  
|                             | • Witness tests  
|                             | • Participate in the TRB                                                                         |

**Test Discrepancy Reports**

Testing errors are documented as a Test Discrepancy Report (TDR). A TDR is used to identify, define and track all encountered test discrepancies. Each TDR will be assigned a Severity Level based on the nature of the defect. The TRB is responsible for determining, assigning and updating the Severity Level, based on the defined criteria and input from the test engineers and witnesses. Any disagreements regarding assigned Severity Level will be resolved by the TRB.

TDRs shall be tracked by the Proposer in a TDR Log or a tool designed for such a purpose. The City will employ its own TDR management tool and expects regular input from the Proposer to update its information and ability to track and manage TDRs.

The TDR will be assigned to the appropriate organization for resolution and will be tracked through closure. If a defect is identified during a formal test, the TRB may choose to continue testing with the remedy of the defect deferred to a later date. TDRs will remain open until all Test Procedures affected by the defect have been executed and signed off by the TRB.

Each TDR will contain the following information:

- Identification Number
- Short description or name
- Date / Time of the discrepancy
- Names of test participants
- Location where test was performed
- The test, including the specific step, that failed
- A description of the discrepancy
- The specific release and build in which the problem was identified (e.g., 2.2.016p2)
- Configuration information such as event number, resource ID and server, as appropriate
- Log files, screen prints, or report output
- Severity Level
- Probability of occurrence
- The consequence of problem
- Corrective action
- Root cause
- Regression testing needed (if any)
- Status

**TDR Severity Levels**

Severity levels define criticality of problems encountered during testing. Severity levels have been defined by the City as follows:

<table>
<thead>
<tr>
<th>Severity Level 1</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The highest severity level, means a serious problem including, but not limited to:</td>
<td></td>
</tr>
<tr>
<td>- A defect that results in the failure of a complete software or hardware system, or multiple subsystems</td>
<td></td>
</tr>
<tr>
<td>- The complete loss of or degradation of usability, performance, or availability that prevents a major business/stakeholder goal from being obtained</td>
<td></td>
</tr>
<tr>
<td>- A problem that does not have a reasonably acceptable workaround.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Severity Level 2</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means a problem that causes:</td>
<td></td>
</tr>
<tr>
<td>- A significant loss of feature functionality, or loss of a subsystem</td>
<td></td>
</tr>
<tr>
<td>- A major degradation of usability, performance or availability; the system therefore is preventing a major business / stakeholder goal or portion of business goal from being obtained</td>
<td></td>
</tr>
<tr>
<td>- The lack of a reasonably acceptable workaround for a given problem.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Severity Level 3</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means a problem that causes loss of a system, subsystem or loss of feature functionality for which there is a reasonable technical or operational workaround.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Severity Level 4</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means only a minor problem that does need to be fixed. The correction of Severity Level 4 issues is not an exit criterion for that formal test.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Severity Level 5</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Means a minor problem with system aesthetics or procedure redlines that are not considered true defects. The correction of Severity Level 5 issues is not required as an exit criterion for that formal test.</td>
<td></td>
</tr>
</tbody>
</table>

**TDR Priority Codes**

If testing uncovers many Defects, the team responsible for the fixes may not be able to complete the fixes within the expected turnaround times. In this situation the Test Team Lead, Test Coordinator and the Development Lead, in consultation with the Agency, will prioritize the fixes using the following priority codes.

Priority Codes are independent of Severity Levels. For example, a Severity 3 could have a Priority 1.

<table>
<thead>
<tr>
<th>Priority Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>High Priority.</strong> The Defect should be fixed as soon as possible.</td>
</tr>
<tr>
<td>2</td>
<td><strong>Medium Priority.</strong> The Defect should be fixed as soon as there are no more ‘1’ priority Defects.</td>
</tr>
<tr>
<td>3</td>
<td><strong>Low Priority.</strong> The Defect must be fixed before the next code drop or hand over to the next test type.</td>
</tr>
</tbody>
</table>
APPENDIX J - NEW YORK CITY GLOSSARY

The acronyms and definitions listed below are unique to New York City or are included to ensure clarity in the RFI. In all other cases, this RFI uses terms defined in the NENA Master Glossary, which can be found at [http://www.nena.org/?page=Glossary](http://www.nena.org/?page=Glossary).

<table>
<thead>
<tr>
<th>Acronym/ Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-1-1 Authority</td>
<td>For purposes of this project, the Department of Information Technology and Telecommunications is effectively playing the role typically played by a 9-1-1 Authority. References to the 9-1-1 Authority typically mean DoITT.</td>
</tr>
<tr>
<td>ARDs</td>
<td>Alarm Receipt Dispatchers. In the City, 9-1-1 calls are initially answered by Police call takers. If the caller is reporting a fire or a medical emergency, the call is transferred to an ARD. This position gathers all of the information called for in the protocol. Once the intake is complete, all data collected about the incident is sent to an appropriate dispatcher via the CAD system.</td>
</tr>
<tr>
<td>CRF</td>
<td>New York City Call Routing Facility. This refers to the two or three logical facilities that will host the NG9-1-1 Core Services.</td>
</tr>
<tr>
<td>EMD ARDs</td>
<td>In the City, 9-1-1 calls are answered by Police call takers. If the caller is reporting a medical emergency, the call is transferred immediately to an Emergency Medical Dispatch Alarm Receipt Dispatcher. This position gathers all of the information called for in the protocol. Once the intake is complete, all data collected about the incident is sent to a EMD dispatcher via the CAD system.</td>
</tr>
<tr>
<td>ESInet</td>
<td>Emergency Services IP Network. The City’s use of this term is consistent with the definition in the master glossary. It is included here to be clear that the ESInet is limited to the underlying IP network. The term ESInet does not include the NG9-1-1 Core Services.</td>
</tr>
<tr>
<td>FDNY</td>
<td>Fire Department of New York includes all Fire and EMD functions.</td>
</tr>
<tr>
<td>Fire ARDs</td>
<td>FDNY Alarm Receipt Dispatchers. In the City, calls are initially answered by Police Call Takers. If the emergency is either Fire, the call is transferred to a Fire ARD.</td>
</tr>
<tr>
<td>NLST</td>
<td>Network Large Scale Testing confirms the system handles performance and capacity requirements for the City.</td>
</tr>
<tr>
<td>NYPD</td>
<td>New York City Police Department.</td>
</tr>
<tr>
<td>PSAC</td>
<td>Public Safety Answering Center has the same meaning as PSAP - Public Safety Answering Point.</td>
</tr>
<tr>
<td>Ready for Service</td>
<td>This indicates the subsystem has been implemented, tested and approved for operations by the City. Once the subsystem has been deemed “ready for service”, the subsystem is cutover into operations and steady-state operations begin.</td>
</tr>
<tr>
<td>SDE</td>
<td>The Solutions Development Environment is a facility that hosts a full replication of the City’s 9-1-1 system on a reduced scale. Al updates, configuration changes and upgrades must be tested in the SDE prior to deployment to the production systems.</td>
</tr>
<tr>
<td>SR</td>
<td>Selective Router. The City uses a mated pair of DMS-100 tandem switches to aggregate and distribute 9-1-1 calls. However, the DMS-100 tandem switches do not include the Selective Router Feature set. Instead, the switches act as a large Centrex switch that performs all call routing to individual call taker workstations. CAMA trunks are not used between the DMS-100 tandem switches and the workstations. References to the Selective Routers typically mean the DMS-100 tandem switches.</td>
</tr>
</tbody>
</table>
APPENDIX K - TOOLS FOR ENTERPRISE ARCHITECTURE, REQUIREMENTS AND TEST

The Proposer shall use the tools that the NYC Department of Information Technology & Telecommunications (DoITT) uses for Requirements, Design and Test Artifacts Management.

Enterprise Architect (EA), by Sparx, is used to establish the architecture baseline, Use Cases, Event Flows, manage and control changes and generate reports and metrics.

Contour, Jama Software, is the Requirements and Test tool / repository for the City as well as the facility for logging a Test Discrepancy Report (TDR). Contour is used to create Requirements and Test artifacts, e.g. Test Cases, Scripts and Defects and it is in Contour where priorities are identified and defects are logged and monitored.

Contour also provides traceability between the projects in its databases to the EA projects, thereby giving the City a complete end-to-end visibility to make sure that a defect can be traced back to the test script, test case, design model, use case and ultimately to the requirement being tested. Contour allows the City to visually confirm that every requirement, system and component specification has been tested.

Most importantly, the City uses EA and Contour to provide complete traceability from requirements, analysis and design models and testing artifacts through to implementation and deployment. This allows the City to ensure effective verification, validation and immediate impact analysis across the entire systems engineering life cycle.

The City Uses EA and Contour to:

- Define an organized, hierarchical requirements model
- Trace the implementation of system requirements to model elements
- Search and report on requirements
- Perform impact analysis of proposed changes to requirements
- Create diagrams for modeling strategic and business level concepts
- Assign domain-specific profiles and reusable model patterns
- Baseline and version management for tracking and integrating changes
- Role-based security based on a need-to-know criteria

The link between EA and Contour creates a continuous feedback loop so if anything changes in any of the artifacts related to each other, all the related artifacts are marked suspect thereby alerting Business Analysts and Testers of the change.

For more information regarding the City's Testing Methodology, see Appendix I.

The figure below shows a screenshot of a requirement and some of its attributes in Contour.
HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT BUSINESS ASSOCIATE AGREEMENT PROVISIONS

I. DEFINITIONS

Except as otherwise defined herein, any and all terms used in this Attachment shall have the same meaning as those terms in the HIPAA Rules (as defined below). As used in this Attachment, the following terms shall have the following meanings:

(a) “Attachment” shall mean the Health Insurance Portability and Accountability Act Business Associate Agreement Provisions constituting this attachment.

(b) “Breach” shall have the same meaning as the term “breach” in 45 CFR §164.402.

(c) "Business Associate" shall have the same meaning as the term “business associate” in 45 CFR §160.103, and for this Attachment shall be the contractor or other person who is a party to the Agreement to which this is an Attachment and who may create, receive, maintain, transmit, or access Protected Health Information on behalf of Covered Entity pursuant to such Agreement. Business associates shall be referred to generically as “business associates.”

(d) "Covered Entity" shall have the same meaning as the term “covered entity” in 45 CFR §160.103, and for this Attachment shall be the City agency that is a party to the Agreement to which this is an Attachment and constitutes a covered entity or has a health care component. Covered Entities shall be referred to generically as “covered entities.”

(e) “Designated Record Set” shall have the same meaning as the term “designated record set” in 45 CFR §164.501.

(f) “Electronic Protected Health Information” or “Electronic PHI” shall have the same meaning as the term “electronic protected health information” in 45 CFR §160.103, except that Electronic PHI shall be limited to the information created, received, maintained, transmitted, or accessed by Business Associate or its Subcontractors or agents on behalf of Covered Entity.

(g) “HIPAA” shall mean the Health Insurance Portability and Accountability Act of 1996, Public Law No. 104-191, and the regulations promulgated thereunder, as the law and regulations may be amended.

(h) “HIPAA Rules” shall mean the Privacy, Security, Breach Notification, and Enforcement Rules at 45 CFR Part 160 and Part 164, as they may be amended.

(i) "Individual" shall have the same meaning as the term "individual" in 45 CFR §160.103 and shall include a person who qualifies as a personal representative in accordance with 45 CFR §164.502(g).

(j) "Protected Health Information" or “PHI” shall have the same meaning as the term "protected health information" in 45 CFR §160.103, except that PHI shall be limited to the
information created, received, maintained, transmitted, or accessed by Business Associate or its Subcontractors or agents on behalf of Covered Entity.

(k) "Required by Law" shall have the same meaning as the term "required by law" in 45 CFR §164.103.

(l) "Secretary" shall mean the Secretary of the United States Department of Health and Human Services or his or her designee.

(m) “Security Incident” shall have the same meaning as the term “security incident” in 45 CFR §164.304.

(n) “Subcontractor” shall have the same meaning as the term “subcontractor” in 45 CFR §160.103, and for this Attachment shall be a subcontractor of Business Associate.

(o) “Unsecured Protected Health Information” or “Unsecured PHI” shall have the same meaning as the term “unsecured protected health information” in 45 CFR §164.402.

II. OBLIGATIONS AND ACTIVITIES OF BUSINESS ASSOCIATE

(a) Permitted or Required Uses. Business Associate agrees to not use or disclose Protected Health Information other than as permitted or required by this Attachment or as Required By Law.

(b) Appropriate Safeguards. Business Associate agrees to use appropriate safeguards to prevent use or disclosure of Protected Health Information other than as provided for by this Attachment, and with respect to Electronic Protected Health Information to comply with Subpart C of 45 CFR Part 164 (45 CFR §164.302 et seq.).

(c) Mitigation. Business Associate agrees to mitigate, to the extent practicable, any harmful effects of which Business Associate becomes aware that have resulted from any unauthorized acquisition, access, use or disclosure of Protected Health Information by Business Associate, its Subcontractors or agents.

(d) Reporting Unauthorized Use or Disclosure. Business Associate agrees to report to Covered Entity, in writing, any unauthorized acquisition, access, use or disclosure of Protected Health Information by Business Associate, its Subcontractors or agents in violation of this Attachment of which Business Associate becomes aware. Business Associate shall make such report to the designated representative of Covered Entity, in writing, within five (5) business days of having been made aware of such unauthorized acquisition, access, use or disclosure. Business Associate agrees to fully cooperate with any investigation conducted by Covered Entity or its designated agents of any such unauthorized acquisition, access, use or disclosure.

(e) Breach Notification Under HIPAA Rules.

(1) Business Associate agrees to comply with the requirements of Subpart D of 45 CFR Part 164 (45 CFR §164.400 et seq.), including but not limited to the requirement that, following the discovery of any Breach of Unsecured PHI, Business Associate shall, without unreasonable delay, and in no event later than sixty (60) days after discovery of any Breach of Unsecured PHI, notify Covered Entity in writing of any such Breach, unless a delay in such notification is required.
by 45 CFR §164.412. Business Associate shall provide Covered Entity with an explanation in writing of the basis for its determination that a Breach of Unsecured PHI has occurred and any risk assessment conducted under 45 CFR §164.402 (see paragraph (2) in definition of “Breach”), and all documentation in support of such determination.

(2) If Business Associate finds that an unauthorized acquisition, access, use or disclosure of PHI has occurred and has been reported to Covered Entity as required by Section II(d) or Section IV(c), but has been determined not to constitute a Breach of Unsecured PHI, Business Associate shall provide Covered Entity with an explanation in writing of the basis for such determination and any risk assessment conducted under 45 CFR §164.402 (see paragraph (2) in definition of “Breach”), and all documentation in support of such determination. Such explanation in writing shall be provided without unreasonable delay, and in no event later than sixty (60) days after the discovery of the unauthorized acquisition, access, use or disclosure of PHI.

(3) Business Associate shall fully cooperate with any investigation conducted by Covered Entity or its designated agents of whether a Breach of Unsecured PHI has occurred. In the event of a disagreement between Business Associate and Covered Entity as to whether or not such a Breach has occurred, the determination made by Covered Entity shall control.

(4) Business Associate shall bear all costs related to its determination whether Business Associate has had a Breach of Unsecured PHI. In the event a Breach of Unsecured PHI has occurred, Business Associate shall reimburse Covered Entity for all costs incurred by Covered Entity related to: (i) providing the notice required by 45 CFR §§ 164.404 and 164.406, including if applicable, but not limited to, written notice, substitute notice, additional notice in urgent situations, and notification to media; and (ii) all measures in mitigation of the harmful effects of any acquisition, access, use, or disclosure of PHI that are commercially reasonable, including but not limited to, credit monitoring services for individuals affected by such Breach, and any other commercially reasonable preventive measure. The determination of whether a measure in mitigation of the harmful effects of any acquisition, access, use, or disclosure of PHI is commercially reasonable shall be in the sole discretion of the Covered Entity.

(f) **Subcontractors and Agents.** In accordance with 45 CFR §§164.502(e)(1)(ii) and 164.308(b)(2), as applicable, Business Associate agrees to ensure that all of its Subcontractors and agents that create, receive, maintain, transmit, or access Protected Health Information on behalf of Business Associate, agree in writing to the same restrictions, conditions, and requirements that apply to Business Associate with respect to such information. Business Associate is not in compliance with this Attachment if Business Associate knew of a pattern of activity or practice of a Subcontractor that constituted a material breach or violation of the Subcontractor’s obligations under its subcontract, unless Business Associate took reasonable steps to cure the breach or end the violation, as applicable, and if such steps were unsuccessful, terminated the subcontract, if feasible.

(g) **Access by Individual.** Business Associate agrees to provide access, at the request of Covered Entity, and in the reasonable time and manner designated by the Covered Entity, to Protected Health Information in a Designated Record Set, to Covered Entity or, as directed by Covered Entity, to an Individual or Individual’s designee in order to satisfy Covered Entity’s
obligations under 45 CFR §164.524, provided that Business Associate has Protected Health Information in a Designated Record Set.

(h) **Amendment to PHI.** Business Associate agrees to make any amendment(s) to Protected Health Information in a Designated Record Set that the Covered Entity directs or agrees to pursuant to 45 CFR §164.526 at the request of Covered Entity or an Individual, and in the reasonable time and manner designated by the Covered Entity, and to take other measures as necessary to satisfy Covered Entity’s obligations under 45 CFR §164.526, provided that Business Associate has Protected Health Information in a Designated Record Set.

(i) **Request for an Accounting.** Business Associate agrees to document such disclosures of Protected Health Information, and information related to such disclosures, as would be required for Covered Entity to respond to a request by an Individual for an accounting of disclosures of Protected Health Information in accordance with 45 CFR §164.528. Business Associate agrees to make available to Covered Entity or an Individual, in the reasonable time and manner designated by the Covered Entity, information collected pursuant to this Section II(i) in order to provide an accounting of disclosures as necessary to satisfy Covered Entity’s obligations under 45 CFR §164.528.

(j) **Additional Restrictions on PHI.** If Covered Entity notifies Business Associate that it has agreed to be bound by additional restrictions on the uses or disclosures of certain Protected Health Information pursuant to the HIPAA Rules, Business Associate agrees to be bound by such additional restrictions and shall not disclose such PHI in violation of such additional restrictions.

(k) **Carrying Out Covered Entity Obligation(s).** To the extent that Business Associate is to carry out one or more of Covered Entity’s obligation(s) under Subpart E of 45 CFR Part 164 (45 CFR §164.500 et seq.), Business Associate shall comply with the requirements of such Subpart E that apply to the Covered Entity in the performance of such obligation(s).

(l) **Access by Secretary to Determine Compliance.** Business Associate agrees to make its internal practices, books, and records, including policies and procedures, relating to the use and disclosure of Protected Health Information created, received, maintained, transmitted, or accessed by Business Associate on behalf of Covered Entity, available to the Covered Entity and to the Secretary, in the reasonable time and manner designated by the Covered Entity, or in the time and manner designated by the Secretary, as applicable, for purposes of determining compliance with the HIPAA Rules. Business Associate shall immediately notify Covered Entity upon receipt of any request by the Secretary for access and of all materials to be disclosed pursuant to such request.

III. **PERMITTED USES AND DISCLOSURES BY BUSINESS ASSOCIATE**

(a) **Use and Disclosure for Performance.** Except as otherwise provided in this Attachment, Business Associate may only use or disclose Protected Health Information as necessary to perform services, functions, activities, and/or duties for, or on behalf of, Covered Entity as specified in the Agreement to which this is an Attachment, or as necessary to perform its duties under this Attachment, or as Required by Law, provided that such use or disclosure would not violate the HIPAA Rules if done by Covered Entity.
(b) **Disclosure to Third Parties.** Subject to Section II(f) and Section IV(b) of this Attachment, Business Associate may disclose Protected Health Information to third parties as necessary to perform services, functions, activities, and/or duties for, or on behalf of, Covered Entity as specified in the Agreement to which this is an Attachment, or as necessary to perform its duties under this Attachment. The third parties shall provide written assurances of their confidential handling of such PHI, which shall include adherence to the same restrictions and conditions on use and disclosure as apply to Business Associate herein.

(c) **Minimum Necessary Use and Disclosure.** In accordance with the HIPAA Rules, when using or disclosing Protected Health Information, or when requesting PHI from Covered Entity or another covered entity or business associate, Business Associate agrees to make reasonable efforts to limit the PHI to the minimum necessary to accomplish the intended purpose of the use, disclosure or request.

(d) **Use for Management, Administration and Legal Responsibilities.** Business Associate may use Protected Health Information if necessary for the proper management and administration of the Business Associate or to carry out the legal responsibilities of the Business Associate.

(e) **Disclosure for Management, Administration and Legal Responsibilities.** Business Associate may disclose Protected Health Information if necessary for the proper management and administration of the Business Associate, provided that (1) the disclosure is Required By Law, or (2) (A) Business Associate obtains reasonable assurances from the person to whom the information is disclosed that it will be held confidentially and used or further disclosed only as Required By Law or for the purpose for which it was disclosed to the person, and (B) the person notifies the Business Associate of any instances of which it is aware in which the confidentiality of the information has been breached. To the extent permitted by applicable law, prior to disclosing PHI as Required by Law to a law enforcement, regulatory, administrative, or oversight agency, or in response to a subpoena, court order, civil investigative demand, or other compulsory document or lawful process, Business Associate shall notify Covered Entity of such pending disclosure and provide reasonable time for Covered Entity to oppose such disclosure, should Covered Entity deem such opposition necessary; provided, however, that if Covered Entity does not respond to Business Associate regarding such opposition prior to the date on which such disclosure must be timely made, Business Associate may, in its own discretion, disclose PHI as Required by Law or such lawful process.

(f) **Data Aggregation Services.** Business Associate may use or disclose Protected Health Information to provide data aggregation services relating to the health care operations of the Covered Entity as permitted by 45 CFR §164.504(e)(2)(i)(B). Under no circumstances may Business Associate disclose PHI to any other person or entity pursuant to this Section III(f) without the express authorization of Covered Entity.

(g) **De-identified PHI.** Business Associate agrees that it will obtain the prior approval of Covered Entity before de-identifying Protected Health Information in accordance with 45 CFR §164.514(a)–(c) and utilizing such de-identified PHI.
(h) **Use of PHI or De-identified PHI for Research Purposes.** Business Associate agrees that it will obtain the prior approval of Covered Entity for the use or disclosure of Protected Health Information or de-identified PHI for research purposes.

IV. **SECURITY REQUIREMENTS**

(a) **Safeguards to Protect Electronic PHI.** Business Associate agrees to comply with the applicable requirements of Subpart C of 45 CFR Part 164 (45 CFR §164.302 et seq.), which include but are not limited to, implementing administrative, physical, and technical safeguards that reasonably and appropriately protect the confidentiality, integrity, and availability of the Electronic Protected Health Information that Business Associate creates, receives, maintains, transmits, or accesses on behalf of Covered Entity.

(b) **Subcontractors and Agents.** In accordance with 45 CFR §§164.502(e)(1)(ii) and 164.308(b)(2), as applicable, Business Associate agrees to ensure that all of its Subcontractors and agents that create, receive, maintain, transmit, or access Electronic Protected Health Information on behalf of Business Associate agree in writing to comply with the applicable requirements of Subpart C of 45 CFR Part 164 (45 CFR §164.302 et seq.), which include but are not limited to, implementing reasonable and appropriate safeguards to protect such information.

(c) **Reporting Security Incident.** Business Associate agrees to report to Covered Entity, in writing, any Security Incident involving Protected Health Information experienced by Business Associate, its Subcontractors or agents, of which Business Associate becomes aware. Business Associate shall make such report to the designated representative of Covered Entity, in writing, within five (5) business days of having been made aware of such Security Incident. Business Associate agrees to fully cooperate with any investigation conducted by Covered Entity or its designated agents of any such Security Incident.

V. **COMPLIANCE WITH CERTAIN NEW YORK STATE LAWS**

(a) **Confidentiality Under New York Law.** Business Associate agrees to comply with all applicable New York State laws and any regulations promulgated thereunder governing the confidentiality of information created, received, maintained, transmitted, or accessed by Business Associate, its Subcontractors or agents on behalf of Covered Entity, including but not limited to the following provisions, as applicable: New York Public Health Law §18 (Access to Patient Information) and Article 27-F (HIV and AIDS Related Information); New York Mental Hygiene Law §§22.05 and 33.13; New York Civil Rights Law §79-l; New York General Business Law §399-ddd (Confidentiality of Social Security Account Numbers), §399-h and §899-aa; and chapter 5 of title 10 of the Official Compilation of Codes, Rules, and Regulations of the State of New York.

(b) **Breach Notification Under New York Law.** Pursuant to New York General Business Law (“GBL”) §899-aa(2) and (3) and in conformity with Section II(d) and Section IV(c) of this Attachment, Business Associate shall, within five (5) business days of discovery thereof, notify Covered Entity of any “breach of the security of the system,” as defined in GBL §899-aa(1)(c), that involves Protected Health Information containing individuals’ “private information,” as defined in GBL §899-aa(1)(b), that was, or was reasonably believed to be, acquired from Business Associate, its Subcontractors or agents by a person without valid authorization. Business Associate shall bear all costs related to its “breach of the security of the system” under GBL §899-
aa. In the event such breach has occurred, Business Associate shall reimburse Covered Entity for all costs incurred by Covered Entity related to providing the notice required by GBL §899-aa(5), including if applicable, but not limited to: written notice; electronic notice; telephone notification; substitute notice; email notice; posting of notice on web site; and notification to major statewide media.

VI. OBLIGATIONS OF COVERED ENTITY

(a) Notify of Limitation(s) in Privacy Notice. Covered Entity shall notify Business Associate of any limitation(s) in the notice of privacy practices utilized by Covered Entity under 45 CFR §164.520, to the extent that such limitation may affect Business Associate's use or disclosure of Protected Health Information.

(b) Notify of Changes in Individual’s Permission. Covered Entity shall notify Business Associate of any changes in, or revocation of, permission by an Individual to use or disclose Protected Health Information, to the extent that such changes may affect Business Associate's use or disclosure of Protected Health Information.

(c) Notify of Restriction on Use or Disclosure. Covered Entity shall notify Business Associate of any restriction on the use or disclosure of Protected Health Information that Covered Entity has agreed to or is required to abide by under 45 CFR §164.522, to the extent that such restriction may affect Business Associate's use or disclosure of Protected Health Information.

(d) Impermissible Request by Covered Entity. Covered Entity shall not request Business Associate to use or disclose Protected Health Information in any manner that would not be permissible under the HIPAA Rules if done by Covered Entity.

VII. TERM AND TERMINATION

(a) Term. This Attachment shall be effective during the term of the Agreement to which this is an Attachment, or until earlier termination of such Agreement.

(b) Termination for Violation of Material Term. In the event that Covered Entity reasonably believes that Business Associate may have violated a material term of this Attachment, Covered Entity shall have the right to investigate such violation, and Business Associate shall fully cooperate with any such investigation. If Covered Entity determines that Business Associate has violated a material term of this Attachment, Covered Entity may immediately terminate the Agreement to which this is an Attachment without penalty or recourse to Covered Entity. Alternatively, Covered Entity may provide written notice to Business Associate of the existence of a violation of a material term of this Attachment, and afford Business Associate an opportunity to cure such violation to the satisfaction of Covered Entity within thirty (30) days of receiving notice of the violation or such other period of time as the parties may agree to. Failure to cure such violation within the applicable time period is grounds for immediate termination of the Agreement to which this is an Attachment. If Covered Entity determines that neither cure of such violation nor termination is feasible, Covered Entity may report such violation to the Secretary and/or to any other governmental agency as may be required by applicable law, and Business Associate agrees that it shall not have or make any claim(s), whether at law or in equity, with respect to such report(s). Termination pursuant to this Section VII(b) shall be effectuated by a
written notice to Business Associate that specifies the violation upon which the termination is based and the effective date of the termination.

(c) **Effect of Termination.**

(1) Except as provided in paragraph (2) of this Section VII(c), upon termination or expiration of the Agreement to which this is an Attachment, Business Associate shall return or destroy, and ensure that its Subcontractors and agents return or destroy, all Protected Health Information received from Covered Entity, or created, maintained, received, or accessed by or on behalf of Business Associate or Covered Entity, that the Business Associate, its Subcontractors or agents still maintain in any form. Business Associate shall not retain, and shall ensure that its Subcontractors and agents not retain, copies of the Protected Health Information.

(2) In the event that Business Associate determines that returning or destroying the Protected Health Information is infeasible, Business Associate shall provide to Covered Entity notification of the conditions that make return or destruction infeasible. Upon receipt by Covered Entity of such notification that return or destruction of Protected Health Information is infeasible, Business Associate shall extend the protections of this Attachment, and shall ensure that its Subcontractors and agents in writing extend the same protections, to such Protected Health Information and limit further uses and disclosures of such Protected Health Information to those purposes that make the return or destruction infeasible, for so long as Business Associate, its Subcontractors or agents, as applicable, maintain such Protected Health Information.

(d) **Non-exclusive Provisions.** The termination provisions of this Section VII are in addition to, and not in lieu of, the termination provisions provided elsewhere in the Agreement to which this is an Attachment and any other rights and remedies of the Covered Entity that are provided by law or by such Agreement.

VIII. **INDEMNIFICATION**

(a) **Indemnification.** Without regard to any limitation of liability provision otherwise provided in the Agreement to which this is an Attachment, Business Associate agrees to defend, indemnify and hold harmless Covered Entity, the City of New York, and their respective employees, officers, subcontractors, agents, and other members of their workforce (each of the foregoing hereinafter referred to as “indemnified party”) against all losses suffered by the indemnified party and all liability to third parties arising from or in connection with: (1) any violation or breach of the provisions of this Attachment by Business Associate or its employees, directors, officers, Subcontractors, agents, or other members of its workforce; (2) any violation or breach of the provisions of the Agreement to which this is an Attachment relating to the use or disclosure of Protected Health Information; or (3) any negligent act or omission or intentional tortious act by Business Associate, its employees, directors, officers, Subcontractors, agents, or other members of its workforce that result in a violation of the HIPAA Rules. Accordingly, on demand, the Business Associate shall reimburse the indemnified party for any and all losses, liabilities, fines, penalties, costs, or expenses (including reasonable attorneys’ fees) which may for any reason be imposed upon indemnified party by reason of any suit, claim, action, proceeding, or demand by any third party which results from the conduct described in (1), (2) or (3) above.
IX. MISCELLANEOUS

(a) **Agency.** For purposes of this Attachment, it is the understanding and intention of the parties that Business Associate is acting as an independent contractor, and not an agent, of Covered Entity.

(b) **References to Law and Rules.** A reference in this Attachment to any section of law or rules (including but not limited to the HIPAA Rules), means the section of law or rules as in effect or as amended.

(c) **Amendment.** In order to ensure that this Attachment at all times remains consistent with applicable law and rules regarding use and disclosure of Protected Health Information (including but not limited to the HIPAA Rules), Business Associate agrees that this Attachment may be amended from time to time upon written notice from Covered Entity to Business Associate as to the revisions required to make this Attachment consistent with applicable law and rules.

(d) **Survival.** The respective rights and obligations of Business Associate and Covered Entity under the provisions of this Attachment shall survive the expiration or termination of the Agreement to which this is an Attachment.

(e) **Interpretation.** Any ambiguity in this Attachment shall be resolved in favor of a meaning that permits Covered Entity and Business Associate to comply with the HIPAA Rules and the applicable State laws cited in Section V of this Attachment.

(f) **No Third Party Beneficiaries.** Nothing express or implied in this Attachment is intended to confer, nor shall anything herein confer, upon any person other than the parties and the respective successors or assigns of the parties, any rights, remedies, obligations, or liabilities whatsoever.

(g) **More Restrictive Provisions Control.** In the event that the Agreement to which this is an Attachment contains provisions relating to the use or disclosure of Protected Health Information that are more restrictive than the provisions of this Attachment, the provisions that are more restrictive shall control.
ATTACHMENT MWBE - NOTICE TO PROSPECTIVE CONTRACTORS

NOTICE TO ALL PROSPECTIVE CONTRACTORS
PARTICIPATION BY MINORITY-OWNED AND WOMEN-OWNED BUSINESS ENTERPRISES IN CITY PROCUREMENT

ARTICLE I. M/WBE PROGRAM

Local Law No. 129 of 2005 added and Local Law 1 of 2013 amended Section 6-129 of the Administrative Code of the City of New York (hereinafter “Section 6-129”). Section 6-129 establishes the program for participation in City procurement (“M/WBE Program”) by minority-owned business enterprises (“MBEs”) and women-owned business enterprises (“WBEs”), certified in accordance with Section 1304 of the New York City Charter. As stated in Section 6-129, the intent of the program is to address the impact of discrimination on the City’s procurement process, and to promote the public interest in avoiding fraud and favoritism in the procurement process, increasing competition for City business, and lowering contract costs. The contract provisions contained herein are pursuant to Section 6-129, and the rules of the Department of Small Business Services (“DSBS”) promulgated thereunder.

If this Contract is subject to the M/WBE Program established by Section 6-129, the specific requirements of MBE and/or WBE participation for this Contract are set forth in Schedule B of the Contract (entitled the “M/WBE Utilization Plan”), and are detailed below.

The Contractor must comply with all applicable MBE and WBE requirements for this Contract.

All provisions of Section 6-129 are hereby incorporated in the Contract by reference and all terms used herein that are not defined herein shall have the meanings given such terms in Section 6-129.

Article I, Part A, below, sets forth provisions related to the participation goals for construction, standard and professional services contracts.

Article I, Part B, below, sets forth miscellaneous provisions related to the M/WBE Program.

PART A

PARTICIPATION GOALS FOR CONSTRUCTION, STANDARD AND PROFESSIONAL SERVICES CONTRACTS OR TASK ORDERS

1. The MBE and/or WBE Participation Goals established for this Contract or Task Orders issued pursuant to this Contract, (“Participation Goals”), as applicable, are set forth on Schedule B, Part I to this Contract (see Page 1, line 1 Total Participation Goals) or will be set forth on Schedule B, Part I to Task Orders issued pursuant to this Contract, as applicable.

The Participation Goals represent a percentage of the total dollar value of the Contract or Task Order, as applicable, that may be achieved by awarding subcontracts to firms certified with New York City Department of Small Business Services as MBEs and/or WBEs, and/or by crediting the participation of prime contractors and/or qualified joint ventures as provided in Section 3 below, unless the goals have been waived or modified by Agency in accordance with Section 6-129 and Part A, Sections 10 and 11 below, respectively.

2. If Participation Goals have been established for this Contract or Task Orders issued pursuant to this Contract, Contractor agrees or shall agree as a material term of the Contract that Contractor shall be
subject to the Participation Goals, unless the goals are waived or modified by Agency in accordance with Section 6-129 and Part A, Sections 10 and 11 below, respectively.

3. If Participation Goals have been established for this Contract or Task Order issued pursuant to this Contract, a Contractor that is an MBE and/or WBE shall be permitted to count its own participation toward fulfillment of the relevant Participation Goal, provided that in accordance with Section 6-129 the value of Contractor’s participation shall be determined by subtracting from the total value of the Contract or Task Order, as applicable, any amounts that the Contractor pays to direct subcontractors (as defined in Section 6-129(c)(13)), and provided further that a Contractor that is certified as both an MBE and a WBE may count its own participation either toward the goal for MBEs or the goal for WBEs, but not both.

A Contractor that is a qualified joint venture (as defined in Section 6-129(c)(30)) shall be permitted to count a percentage of its own participation toward fulfillment of the relevant Participation Goal. In accordance with Section 6-129, the value of Contractor’s participation shall be determined by subtracting from the total value of the Contract or Task Order, as applicable, any amounts that Contractor pays to direct subcontractors, and then multiplying the remainder by the percentage to be applied to total profit to determine the amount to which an MBE or WBE is entitled pursuant to the joint venture agreement, provided that where a participant in a joint venture is certified as both an MBE and a WBE, such amount shall be counted either toward the goal for MBEs or the goal for WBEs, but not both.

4. A. If Participation Goals have been established for this Contract, a prospective contractor shall be required to submit with its bid or proposal, as applicable, a completed Schedule B, M/WBE Utilization Plan, Part II (see Pages 2-4) indicating: (a) whether the contractor is an MBE or WBE, or qualified joint venture; (b) the percentage of work it intends to award to direct subcontractors; and (c) in cases where the contractor intends to award direct subcontracts, a description of the type and dollar value of work designated for participation by MBEs and/or WBEs, and the time frames in which such work is scheduled to begin and end. In the event that this M/WBE Utilization Plan indicates that the bidder or proposer, as applicable, does not intend to meet the Participation Goals, the bid or proposal, as applicable, shall be deemed non-responsive, unless Agency has granted the bidder or proposer, as applicable, a pre-award waiver of the Participation Goals in accordance with Section 6-129 and Part A, Section 10 below.

B. (i) If this Contract is for a master services agreement or other requirements type contract that will result in the issuance of Task Orders that will be individually registered (“Master Services Agreement”) and is subject to M/WBE Participation Goals, a prospective contractor shall be required to submit with its bid or proposal, as applicable, a completed Schedule B, M/WBE Participation Requirements for Master Services Agreements That Will Require Individually Registered Task Orders, Part II (page 2) indicating the prospective contractor’s certification and required affirmations to make all reasonable good faith efforts to meet participation goals established on each individual Task Order issued pursuant to this Contract, or if a partial waiver is obtained or such goals are modified by the Agency, to meet the modified Participation Goals by soliciting and obtaining the participation of certified MBE and/or WBE firms. In the event that the Schedule B indicates that the bidder or proposer, as applicable, does not intend to meet the Participation Goals that may be established on Task Orders issued pursuant to this Contract, the bid or proposal, as applicable, shall be deemed non-responsive.

(ii) Participation Goals on a Master Services Agreement will be established for individual Task Orders issued after the Master Services Agreement is awarded. If Participation Goals have been established on a Task Order, a contractor shall be required to submit a Schedule B – M/WBE Utilization Plan For Independently Registered Task Orders That Are Issued Pursuant to Master Services Agreements, Part II (see Pages 2-4) indicating: (a) whether the contractor is an MBE or WBE, or qualified joint venture; (b) the percentage of work it intends to award to direct subcontractors; and (c) in cases where the contractor intends to award direct subcontracts, a description of the type and dollar value of work designated for
participation by MBEs and/or WBEs, and the time frames in which such work is scheduled to begin and end. The contractor must engage in good faith efforts to meet the Participation Goals as established for the Task Order unless Agency has granted the contractor a pre-award waiver of the Participation Goals in accordance with Section 6-129 and Part A, Section 10 below.


5. Where an M/WBE Utilization Plan has been submitted, the Contractor shall, within 30 days of issuance by Agency of a notice to proceed, submit a list of proposed persons or entities to which it intends to award subcontracts within the subsequent 12 months. In the case of multi-year contracts, such list shall also be submitted every year thereafter. The Agency may also require the Contractor to report periodically about the contracts awarded by its direct subcontractors to indirect subcontractors (as defined in Section 6-129(c)(22)). PLEASE NOTE: If this Contract is a public works project subject to GML §101(5) (i.e., a contract valued at or below $3M for projects in New York City) or if the Contract is subject to a project labor agreement in accordance with Labor Law §222, and the bidder is required to identify at the time of bid submission its intended subcontractors for the Wicks trades (plumbing and gas fitting; steam heating, hot water heating, ventilating and air conditioning (HVAC); and electric wiring), the Contractor must identify all those to which it intends to award construction subcontracts for any portion of the Wicks trade work at the time of bid submission, regardless of what point in the life of the contract such subcontracts will occur. In identifying intended subcontractors in the bid submission, bidders may satisfy any Participation Goals established for this Contract by proposing one or more subcontractors that are MBEs and/or WBEs for any portion of the Wicks trade work. In the event that the Contractor’s selection of a subcontractor is disapproved, the Contractor shall have a reasonable time to propose alternate subcontractors.

6. MBE and WBE firms must be certified by DSBS in order for the Contractor to credit such firms’ participation toward the attainment of the Participation Goals. Such certification must occur prior to the firms’ commencement of work. A list of MBE and WBE firms may be obtained from the DSBS website at www.nyc.gov/buycertified, by emailing DSBS at buyer@sbs.nyc.gov, by calling (212) 513-6356, or by visiting or writing DSBS at 110 William St., New York, New York, 10038, 7th floor. Eligible firms that have not yet been certified may contact DSBS in order to seek certification by visiting www.nyc.gov/getcertified, emailing MWBE@sbs.nyc.gov, or calling the DSBS certification helpline at (212) 513-6311. A firm that is certified as both an MBE and a WBE may be counted either toward the goal for MBEs or the goal for WBEs, but not both. No credit shall be given for participation by a graduate MBE or graduate WBE, as defined in Section 6-129(c)(20).
7. Where an M/WBE Utilization Plan has been submitted, the Contractor shall, with each voucher for payment, and/or periodically as Agency may require, submit statements, certified under penalty of perjury, which shall include, but not be limited to: the total amount the Contractor paid to its direct subcontractors, and, where applicable pursuant to Section 6-129(j), the total amount direct subcontractors paid to indirect subcontractors; the names, addresses and contact numbers of each MBE or WBE hired as a subcontractor by the Contractor, and, where applicable, hired by any of the Contractor's direct subcontractors; and the dates and amounts paid to each MBE or WBE. The Contractor shall also submit, along with its voucher for final payment: the total amount it paid to subcontractors, and, where applicable pursuant to Section 6-129(j), the total amount its direct subcontractors paid directly to their indirect subcontractors; and a final list, certified under penalty of perjury, which shall include the name, address and contact information of each subcontractor that is an MBE or WBE, the work performed by, and the dates and amounts paid to each.

8. If payments made to, or work performed by, MBEs or WBEs are less than the amount specified in the Contractor's M/WBE Utilization Plan, Agency shall take appropriate action, in accordance with Section 6-129 and Article II below, unless the Contractor has obtained a modification of its M/WBE Utilization Plan in accordance with Section 6-129 and Part A, Section 11 below.

9. Where an M/WBE Utilization Plan has been submitted, and the Contractor requests a change order the value of which exceeds the greater of 10 percent of the Contract or Task Order, as applicable, or $500,000, Agency shall review the scope of work for the Contract or Task Order, as applicable, and determine whether the Participation Goals should be modified.

10. Pre-award waiver of the Participation Goals.

   (a) A bidder or proposer, or contractor with respect to a Task Order, may seek a pre-award full or partial waiver of the Participation Goals in accordance with Section 6-129, which requests that Agency change one or more Participation Goals on the grounds that the Participation Goals are unreasonable in light of the availability of certified firms to perform the services required, or by demonstrating that it has legitimate business reasons for proposing a lower level of subcontracting in its M/WBE Utilization Plan.

   (b) To apply for a full or partial waiver of the Participation Goals, a bidder, proposer, or contractor, as applicable, must complete Part III (Page 5) of Schedule B and submit such request no later than seven (7) calendar days prior to the date and time the bids, proposals, or Task Orders are due, in writing to the Agency by email at _____ or via facsimile at _____. Bidders, proposers, or contractors, as applicable, who have submitted requests will receive an Agency response by no later than two (2) calendar days prior to the due date for bids, proposals, or Task Orders; provided, however, that if that date would fall on a weekend or holiday, an Agency response will be provided by close-of-business on the business day before such weekend or holiday date.

   (c) If the Agency determines that the Participation Goals are unreasonable in light of the availability of certified firms to perform the services required, it shall revise the solicitation and extend the deadline for bids and proposals, or revise the Task Order, as applicable.

   (d) Agency may grant a full or partial waiver of the Participation Goals to a bidder, proposer or contractor, as applicable, who demonstrates—before submission of the bid, proposal or Task Order, as applicable—that it has legitimate business reasons for proposing the level of subcontracting in its M/WBE Utilization Plan. In making its determination, Agency shall consider factors that shall include, but not be limited to, whether the bidder, proposer or contractor, as
applicable, has the capacity and the bona fide intention to perform the Contract without any subcontracting, or to perform the Contract without awarding the amount of subcontracts represented by the Participation Goals. In making such determination, Agency may consider whether the M/WBE Utilization Plan is consistent with past subcontracting practices of the bidder, proposer or contractor, as applicable, whether the bidder, proposer or contractor, as applicable, has made efforts to form a joint venture with a certified firm, and whether the bidder, proposer, or contractor, as applicable, has made good faith efforts to identify other portions of the Contract that it intends to subcontract.


(a) A Contractor may request a modification of its M/WBE Utilization Plan after award of this Contract. PLEASE NOTE: If this Contract is a public works project subject to GML §101(5) (i.e., a contract valued at or below $3M for projects in New York City) or if the Contract is subject to a project labor agreement in accordance with Labor Law §222, and the bidder is required to identify at the time of bid submission its intended subcontractors for the Wicks trades (plumbing and gas fitting; steam heating, hot water heating, ventilating and air conditioning (HVAC); and electric wiring), the Contractor may request a Modification of its M/WBE Utilization Plan as part of its bid submission. The Agency may grant a request for Modification of a Contractor’s M/WBE Utilization Plan if it determines that the Contractor has established, with appropriate documentary and other evidence, that it made reasonable, good faith efforts to meet the Participation Goals. In making such determination, Agency shall consider evidence of the following efforts, as applicable, along with any other relevant factors:

(i) The Contractor advertised opportunities to participate in the Contract, where appropriate, in general circulation media, trade and professional association publications and small business media, and publications of minority and women’s business organizations;

(ii) The Contractor provided notice of specific opportunities to participate in the Contract, in a timely manner, to minority and women’s business organizations;

(iii) The Contractor sent written notices, by certified mail or facsimile, in a timely manner, to advise MBEs or WBEs that their interest in the Contract was solicited;

(iv) The Contractor made efforts to identify portions of the work that could be substituted for portions originally designated for participation by MBEs and/or WBEs in the M/WBE Utilization Plan, and for which the Contractor claims an inability to retain MBEs or WBEs;

(v) The Contractor held meetings with MBEs and/or WBEs prior to the date their bids or proposals were due, for the purpose of explaining in detail the scope and requirements of the work for which their bids or proposals were solicited;

(vi) The Contractor made efforts to negotiate with MBEs and/or WBEs as relevant to perform specific subcontracts, or act as suppliers or service providers;

(vii) Timely written requests for assistance made by the Contractor to Agency’s M/WBE liaison officer and to DSBS;

(viii) Description of how recommendations made by DSBS and Agency were acted upon and an explanation of why action upon such recommendations did not lead to the desired level of participation of MBEs and/or WBEs.

Agency’s M/WBE officer shall provide written notice to the Contractor of the determination.
(b) The Agency may modify the Participation Goals when the scope of the work has been changed by the Agency in a manner that affects the scale and types of work that the Contractor indicated in its M/WBE Utilization Plan would be awarded to subcontractors.

12. If this Contract is for an indefinite quantity of construction, standard or professional services or is a requirements type contract and the Contractor has submitted an M/WBE Utilization Plan and has committed to subcontract work to MBEs and/or WBEs in order to meet the Participation Goals, the Contractor will not be deemed in violation of the M/WBE Program requirements for this Contract with regard to any work which was intended to be subcontracted to an MBE and/or WBE to the extent that the Agency has determined that such work is not needed.

13. If Participation Goals have been established for this Contract or a Task Order issued pursuant to this Contract, at least once annually during the term of the Contract or Task Order, as applicable, Agency shall review the Contractor’s progress toward attainment of its M/WBE Utilization Plan, including but not limited to, by reviewing the percentage of work the Contractor has actually awarded to MBE and/or WBE subcontractors and the payments the Contractor made to such subcontractors.

14. If Participation Goals have been established for this Contract or a Task Order issued pursuant to this Contract, Agency shall evaluate and assess the Contractor’s performance in meeting those goals, and such evaluation and assessment shall become part of the Contractor’s overall contract performance evaluation.

PART B
MISCELLANEOUS

1. The Contractor shall take notice that, if this solicitation requires the establishment of a M/WBE Utilization Plan, the resulting contract may be audited by DSBS to determine compliance with Section 6-129. See §6-129(e)(10). Furthermore, such resulting contract may also be examined by the City’s Comptroller to assess compliance with the M/WBE Utilization Plan.

2. Pursuant to DSBS rules, construction contracts that include a requirement for a M/WBE Utilization Plan shall not be subject to the law governing Locally Based Enterprises set forth in Section 6-108.1 of the Administrative Code of the City of New York.

3. DSBS is available to assist contractors and potential contractors in determining the availability of MBEs and/or WBEs to participate as subcontractors, and in identifying opportunities that are appropriate for participation by MBEs and/or WBEs in contracts.

4. Prospective contractors are encouraged to enter into qualified joint venture agreements with MBEs and/or WBEs as defined by Section 6-129(c)(30).

1. By submitting a bid or proposal the Contractor hereby acknowledges its understanding of the M/WBE Program requirements set forth herein and the pertinent provisions of Section 6-129, and any rules promulgated thereunder. If awarded this Contract, the Contractor hereby agrees to comply with the M/WBE Program requirements of this Contract and pertinent provisions of Section 6-129, and any rules promulgated thereunder, all of which shall be deemed to be material terms of this Contract. The Contractor hereby agrees to make all reasonable, good faith efforts to solicit and obtain the participation of MBEs and/or WBEs to meet the required Participation Goals.
ARTICLE II. ENFORCEMENT

1. If Agency determines that a bidder or proposer, as applicable, has, in relation to this procurement, violated Section 6-129 or the DSBS rules promulgated pursuant to Section 6-129, Agency may disqualify such bidder or proposer, as applicable, from competing for this Contract and the Agency may revoke such bidder’s or proposer’s prequalification status, if applicable.

2. Whenever Agency believes that the Contractor or a subcontractor is not in compliance with Section 6-129 or the DSBS rules promulgated pursuant to Section 6-129, or any provision of this Contract that implements Section 6-129, including, but not limited to any M/WBE Utilization Plan, Agency shall send a written notice to the Contractor describing the alleged noncompliance and offering the Contractor an opportunity to be heard. Agency shall then conduct an investigation to determine whether such Contractor or subcontractor is in compliance.

3. In the event that the Contractor has been found to have violated Section 6-129, the DSBS rules promulgated pursuant to Section 6-129, or any provision of this Contract that implements Section 6-129, including, but not limited to, any M/WBE Utilization Plan, Agency may determine that one of the following actions should be taken:

   (a) entering into an agreement with the Contractor allowing the Contractor to cure the violation;
   (b) revoking the Contractor’s pre-qualification to bid or make proposals for future contracts;
   (c) making a finding that the Contractor is in default of the Contract;
   (d) terminating the Contract;
   (e) declaring the Contractor to be in breach of Contract;
   (f) withholding payment or reimbursement;
   (g) determining not to renew the Contract;
   (h) assessing actual and consequential damages;
   (i) assessing liquidated damages or reducing fees, provided that liquidated damages may be based on amounts representing costs of delays in carrying out the purposes of the M/WBE Program, or in meeting the purposes of the Contract, the costs of meeting utilization goals through additional procurements, the administrative costs of investigation and enforcement, or other factors set forth in the Contract;
   (j) exercising rights under the Contract to procure goods, services or construction from another contractor and charge the cost of such contract to the Contractor that has been found to be in noncompliance; or
   (k) taking any other appropriate remedy.

4. If an M/WBE Utilization Plan has been submitted, and pursuant to this Article II, Section 3, the Contractor has been found to have failed to fulfill its Participation Goals contained in its M/WBE Utilization Plan or the Participation Goals as modified by Agency pursuant to Article I, Part A, Section 11, Agency may assess liquidated damages in the amount of ten percent (10%) of the difference between the dollar amount of work required to be awarded to MBE and/or WBE firms to meet the Participation Goals and the dollar amount the Contractor actually awarded and paid, and/or credited, to MBE and/or WBE firms. In view of the difficulty of accurately ascertaining the loss which the City will suffer by reason of Contractor’s failure to meet the Participation Goals, the foregoing amount is hereby fixed and agreed as
the liquidated damages that the City will suffer by reason of such failure, and not as a penalty. Agency may deduct and retain out of any monies which may become due under this Contract the amount of any such liquidated damages; and in case the amount which may become due under this Contract shall be less than the amount of liquidated damages suffered by the City, the Contractor shall be liable to pay the difference.

5. Whenever Agency has reason to believe that an MBE and/or WBE is not qualified for certification, or is participating in a contract in a manner that does not serve a commercially useful function (as defined in Section 6-129(c)(8)), or has violated any provision of Section 6-129, Agency shall notify the Commissioner of DSBS who shall determine whether the certification of such business enterprise should be revoked.

6. Statements made in any instrument submitted to Agency pursuant to Section 6-129 shall be submitted under penalty of perjury and any false or misleading statement or omission shall be grounds for the application of any applicable criminal and/or civil penalties for perjury. The making of a false or fraudulent statement by an MBE and/or WBE in any instrument submitted pursuant to Section 6-129 shall, in addition, be grounds for revocation of its certification.

7. The Contractor's record in implementing its M/WBE Utilization Plan shall be a factor in the evaluation of its performance. Whenever Agency determines that a Contractor's compliance with an M/WBE Utilization Plan has been unsatisfactory, Agency shall, after consultation with the City Chief Procurement Officer, file an advice of caution form for inclusion in VENDEX as caution data.

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ATTACHMENT NDA - NON-DISCLOSURE AGREEMENT

NON-DISCLOSURE AGREEMENT

This Non-Disclosure Agreement (the “Agreement”) is entered into by and between the City of New York, acting by and through its Department of Information Technology and Telecommunications (the “City” or “DoITT”), and [Vendor Name and State of Incorporation] (“Recipient”) (each, a “party” and collectively, the “parties”).

BACKGROUND

Recipient desires to provide the City with a proof of concept for the purpose of enabling the City to evaluate its products and services and enter into a potential business relationship.

Recipient will gain access to the City’s Confidential Information (as defined below in Section 1 (DISCLOSURE OF CONFIDENTIAL INFORMATION)) in the course of its performance under the proof of concept.

The City desires to participate in the proof of concept in order to evaluate Recipient’s products and services, subject to Recipient’s agreement to protect its Confidential Information in accordance with this Agreement.

In consideration of being granted the opportunity to provide the proof of concept, and for other good and valid consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. DISCLOSURE OF CONFIDENTIAL INFORMATION. The City may disclose Confidential Information to Recipient, either orally, visually, electronically, in writing or other tangible form. As used in this Agreement, “Confidential Information” means all non-public information, including financial statements, projections, plans, trade secrets, security logging and other data, records, supplier lists and agreements, employee lists, contractor information, policies and procedures, processes, techniques, technologies, software programs, source code, schematics, designs, network configurations and site information, and any other confidential or proprietary information that has been classified, marked or announced as confidential or proprietary, or which, because of the circumstances of disclosure or the nature of the information itself, would be reasonably understood to be confidential and proprietary.

2. PERMITTED USE. Recipient shall use the Confidential Information solely as required to provide the proof of concept to the City. Recipient shall not, directly or indirectly, use any Confidential Information for any other use or purpose. Recipient may not reproduce or make any copies of Confidential Information without DoITT’s prior written consent, except as required to perform its obligations under the proof of concept.

3. RESTRICTIONS ON DISCLOSURE.

   (a) Recipient shall not disclose the Confidential Information, without DoITT’s express written consent, to any person, entity or organization, except to Recipient’s partners, principals, employees, directors and advisors (including accountants, attorneys and consultants) (collectively, “Representatives”). Without limiting the generality of the foregoing, Recipient shall draw to the attention of the Representatives that will have access to the Confidential Information all of the obligations contained in this Agreement, and Recipient shall cause each Representative to be bound by written obligations substantially similar to those in this Agreement. Recipient will be liable for the
disclosure of Confidential Information by its Representatives.

(b) **Degree of Care.** Recipient shall use the same degree of care to protect the Confidential Information from disclosure that it uses to protect its own highly confidential information from unauthorized disclosure, but in no event may Recipient use less than a commercially reasonable standard of care. Recipient shall notify DoITT in writing promptly upon discovery of any unauthorized use or disclosure of Confidential Information or any other breach of this Agreement, and will use commercially reasonable efforts to cooperate with the City to regain possession of all Confidential Information and to prevent any further disclosure or unauthorized use.

(c) **Exceptions.** This Section 3 (RESTRICTIONS ON DISCLOSURE) does not apply to Confidential Information to the extent that Recipient can demonstrate or establish by written evidence that: (1) the Confidential Information became part of the public domain other than through actions that constitute a breach of this Agreement or fault on the part of Recipient; (2) the Confidential Information was lawfully obtained by Recipient from a source other than the City free of any obligation to keep it confidential; (3) Recipient developed such information independently of and without reference to any Confidential Information of the City; (4) DoITT expressly authorized disclosure of the Confidential Information by Recipient in writing; or (5) the Confidential Information is required to be disclosed pursuant to law, regulation, judicial or administrative order, or request by a governmental or other entity authorized by law to make such request; provided, however, that Recipient shall comply with Section 5 (RESPONSE TO LEGAL PROCESS) below. Recipient will bear the burden of proving any of the foregoing conditions exist.

4. **MATERIALS.**

(a) **Ownership.** The City will retain all right, title and interest in and to Confidential Information. Neither this Agreement nor any disclosure of Confidential Information will be deemed to grant Recipient any license or other intellectual property right. All materials including documents, drawings, models, apparatus, sketches, designs, audits, reports and lists furnished to Recipient by the City, and any tangible embodiments of the City’s Confidential Information created by Recipient, including any and all derivative forms, copies, record bearing media, summaries, and notes of the contents thereof, will remain the property of the City.

(b) **Return.** Upon the earlier of the request of the City or the Term (as defined below in Section 8 (TERM AND TERMINATION), Recipient shall cease using and promptly return to the City or arrange for the destruction of all tangible copies of any Confidential Information then in Recipient’s possession or under Recipient’s control. If Recipient destroys Confidential Information, Recipient agrees to dispose of the Confidential Information in such a manner that the destroyed information cannot be read or reconstructed after its destruction. With respect to Confidential Information communicated through email or which has been scanned or otherwise stored electronically, Recipient will make commercially reasonable efforts to delete such information from its active storage medium. Upon the written request of the City, Recipient shall certify in writing that Recipient has complied with the obligations set forth in this Section 4(b). Recipient may retain Confidential Information to the extent it is backed up on its disaster recovery system, cannot be expunged without considerable effort, and is not readily available to an end user, with such retained information remaining subject to this Agreement.

5. **RESPONSE TO LEGAL PROCESS.** If Recipient (or any party to whom it transmits Confidential Information whether or not in compliance with this Agreement) is requested, pursuant to
subpoena or other legal or regulatory process, to disclose any Confidential Information, to the extent permitted by law. Recipient shall provide the City with prompt notice so that the City may seek a protective order or other appropriate remedy or waive compliance with the provisions of this Agreement. If a protective order or other remedy is not obtained, Recipient will disclose Confidential Information only to the extent required by applicable law, regulation or court order. If the City waives compliance with the provisions of this Agreement, Recipient (or such other person) shall coordinate with the City in an effort to limit the nature and scope of such disclosure.

6. **DISCLAIMER.** RECIPIENT ACKNOWLEDGES AND AGREES THAT ALL CONFIDENTIAL INFORMATION IS PROVIDED “AS-IS”, WITHOUT ANY WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED. THE CITY MAKES NO WARRANTY REGARDING THE ACCURACY, COMPLETENESS OR PERFORMANCE OF ANY CONFIDENTIAL INFORMATION.

7. **RECIPIENT INFORMATION.** The City does not wish to receive any confidential or proprietary information from Recipient, and the City assumes no obligation, either express or implied, with respect to any information disclosed by Recipient.

8. **TERM AND TERMINATION.** The term of this Agreement begins on the date that it is signed by the last party to sign it and will continue for a period of [XXX], whichever occurs last (the “Term”). Only the City may terminate this Agreement during the Term. Recipient’s obligations and the City’s rights under this Agreement will continue to survive: (A) with respect to trade secrets, for so long as they remain trade secrets; (B) with respect to personally identifiable information, information the disclosure of which may create a risk to public safety or to the security of the City’s IT systems, until the City notifies Recipient in writing that the information is no longer confidential or may otherwise be disclosed; and (C) with respect other information that is protected from disclosure by law, for so long as the applicable laws restrict its disclosure. For all other Confidential Information, Recipient’s obligations and the City’s rights under this Agreement will continue until the date that is five years after the date on which this Agreement is terminated.

9. **GENERAL PROVISIONS.**

(a) **Governing Law; Venue; Jurisdiction; Jury Waiver.** The laws of the State of New York, without reference to its choice of law principles, govern this Agreement and any claims arising out of or relating to this Agreement, its negotiation, execution, performance or breach. All disputes and controversies arising out of or relating to this Agreement, its negotiation, execution, performance or breach must be resolved in the state and federal courts in the City, County and State of New York, and each party irrevocably consents to the exclusive venue and personal jurisdiction of those courts for the resolution of such disputes and waives all objections thereto. To the fullest extent permitted by law, each party irrevocably waives its right to a jury in any litigation arising out of or relating to this Agreement, its negotiation, execution, performance or breach.

(b) **Injunctive Relief.** Recipient acknowledges that the remedy at law for any breach of this Agreement will be inadequate and that the damages resulting from such breach are not readily susceptible to being measured in monetary terms. Accordingly, in the event of a breach or threatened breach by Recipient of the terms of this Agreement, the City will be entitled to immediate injunctive relief and may obtain an order restraining any threatened or further breach, in addition to any and all remedies available at law. Nothing herein may be construed as prohibiting the City from pursuing any other remedies available to the City for such breach or threatened breach, including the recovery of damages
(c) **Notices.** For a notice under this Agreement to be valid, it must be sent by personal delivery, registered or certified mail (in each case return receipt requested) or nationally recognized overnight courier (e.g., FedEx or UPS), in each case with all fees and postage prepaid. All notices permitted or required under this Agreement will be effective upon receipt, and a notice will be deemed to be received when delivered in person or signed for by the receiving party as indicated by the signed delivery receipt. If the receiving party refuses to accept delivery, or if delivery is impossible because of a change in address for which no notice was given, notice will be deemed to be received upon the rejection or inability to deliver. If a notice is received after 5:00 p.m. at the receiving party’s location, or on a day other than a Business Day (as defined below), notice will be deemed to be received on the following Business Day. The notice must also be addressed to the receiving party at the address listed below for the receiving party or to any other address designated by the receiving party in a notice that meets the requirements of this Section 9(c).

If to DoITT:  General Counsel  
NYC Department of Information Technology and Telecommunications  
255 Greenwich Street, 9th Floor  
New York, NY 10007

If to Recipient:  [notice addressee]

(d) **Assignment.** Recipient may not assign or otherwise transfer its rights under this Agreement, including by operation of law, without the prior written consent of the City. The City may assign this Agreement at any time.

(e) **Amendments.** This Agreement may be amended or supplemented only by a writing that is signed by duly authorized representatives of both parties.

(f) **Miscellaneous.** This Agreement will be construed and interpreted in a neutral manner. No rule of construction or interpretation will apply against any particular party based on a contention that the Agreement was drafted by one of the parties. The headings in this Agreement are solely for convenience of reference and will not affect its interpretation. This Agreement does not create any third-party beneficiary rights. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which shall constitute the same agreement. A fully signed copy of this Agreement made by reliable means (e.g., a photocopy, facsimile or electronic image) will be considered an original. An electronic reproduction of this Agreement will be admissible in evidence as the original itself in any judicial or administrative proceeding (whether or not the original is in existence and whether or not such reproduction was made by each party in the regular course of business) and that any enlargement, facsimile or further reproduction of such reproduction will likewise be admissible in evidence. If any provision in this Agreement is determined to be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions in the Agreement shall not in any way be affected or impaired thereby and such provision shall be ineffective only to the extent of its invalidity, illegality or unenforceability. No waiver of any provision of this Agreement will be
effective unless it is in writing and signed by the waiving party, and no delay or failure to exercise or enforce any right or remedy hereunder will constitute a waiver of that right or remedy. Express waiver of any right or remedy in a particular instance will not constitute a waiver of that right or remedy in any other instance, or a waiver of any other right or remedy. Unless otherwise indicated, all references to a section of this Agreement are inclusive of all subsections. The word “including” is a term of expansion, not limitation. As used in this Agreement, “Business Day” means Monday through Friday, except for New Year’s Day, Martin Luther King’s Birthday, Presidents Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Election Day, Veterans Day, Thanksgiving Day, and Christmas Day. Unless otherwise indicated, all references to a day are references to a calendar day and all references to a time of day are references to the time in New York, NY.

(g) **Entire Agreement.** This Agreement constitutes the entire agreement between the parties relating to its subject matter and supersedes all prior or simultaneous representations, discussions, negotiations, and agreements, whether written or oral.

(h) **Representations.** Recipient represents that it has the requisite power and authority to execute and deliver this Agreement and to perform its obligations hereunder, that the execution and delivery of this Agreement will not conflict with or violate any provision of its charter, by-laws or other governing documents, and that each party has taken all necessary steps to execute this Agreement.

**The parties are signing this Agreement as of the dates set forth below their respective signatures.**

<table>
<thead>
<tr>
<th>THE CITY OF NEW YORK</th>
<th>RECIPIENT</th>
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<tr>
<td><strong>By its Department of Information Technology &amp; Telecommunications</strong></td>
<td><strong>[Vendor Information]</strong></td>
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By: ____________________________ By: ____________________________

Name: __________________________ Name: __________________________

Title: __________________________ Title: __________________________

Date: __________________________ Date: __________________________
ATTACHMENT SCY - SECURITY REQUIREMENTS

1. Definitions

(a) "City" means The City of New York and/or a county, borough, or other office, position, administration, department, division, bureau, board or commission, or a corporation, institution or agency of government, the expenses of which are paid in whole or in part from The City of New York’s treasury.

(b) "City Information Assets" means all City computer systems, electronic data stored, processed, transmitted, or printed by City computer systems, and such systems’ peripheral equipment, networks, or magnetic data, as well as any cloud computing system maintained by the City or any non-City entity for the City’s use, and any electronic data stored, processed, transmitted, or printed by such system.

(c) "City Information" means all Public City Information and Non-Public City Information (as these terms are defined below) concerning or embodying the scientific, statistical, or technical data, including designs, drawings, processes, statistics, software, components, data, databases, know-how, prototypes, samples, research and developments, meeting reports, systems, programs, research, development, strategic plans, or the like with respect to the operations and activities of the City or its agents, officers, employees or subcontractors, regardless of whether such disclosure is in oral, written, or electronic form.

(d) "Commissioner" or "Agency Head" means the head of a City entity.

(e) "Contractor" means a person or entity engaged by the City of New York to perform tasks pursuant to the Agreement.

(f) "Facility(ies)" means a physical structure operated by the City of New York.

(g) "Non-Public City Information" means all City Information that is considered Sensitive, Private or Confidential Information as those three categories are defined by the City of New York Data Classification Policy, as it may be modified from time to time, and which is currently available at <http://www.nyc.gov/html/doitt/downloads/pdf/data_classification.pdf>.

(h) "Person" means an officer, agent or employee of the Contractor or a subcontractor of the Contractor.

(i) "Project" means any type of work to be performed pursuant to the Agreement.

(j) "Public City Information" means all City Information other than Non-Public City Information.

(k) "Security Investigation" means a criminal history and background investigation in accordance with the requirements set forth herein. The City reserves the right to modify the scope of requisite investigations upon provision of reasonable notice to the Contractor.
2. **Citywide Information Security Policy**

All Persons, who may have access to any City Information or City Information Assets, in the course of carrying out their responsibilities or job function must comply with the Citywide Information Security Policies and Standards (“Policies and Standards”) established by DoITT as it may be modified from time to time, which are available on CityShare at [http://www.nyc.gov/html/doitt/html/business/security.shtml](http://www.nyc.gov/html/doitt/html/business/security.shtml) and will also be provided upon request.

3. **DoITT User Responsibility Policy**

The Contractor shall require that all Persons in the Contractor’s or subcontractors’ organizations who may have access to any City Information Assets in the course of performing work pursuant to the Agreement will be provided a copy of DoITT’s “User Responsibility Policy” (“URP”); and shall be required to sign the acknowledgement of same, prior to performing work. The Contractor shall provide a signed copy of the URP for each such Person to the DoITT Project Manager or a person designated by DoITT within fifteen days (15) days after a Person is assigned to a Project.

4. **Security Investigation**

The City may, prior to or during the course of a Project, request that the Contractor require a Person, or Persons, associated with a Project to undergo a Security Investigation before being granted access, or continued access, to Facilities, City Information or City Information Assets.

If Security Investigations are requested or required by the City prior to the commencement of a Project, the Contractor is required to submit the results of the Security Investigation for each Person that it proposes to assign to perform services on the Project sufficiently in advance to ensure that all security clearance procedures are complete without delaying the Contractor’s work performance. The City shall not be liable for payments or damages of any kind if the Contractor’s work is delayed or the Contractor is required to assign different individuals on account of the City’s reasonable delay or refusal to grant an individual a security clearance under the Agreement.

The Contractor shall assume, without any reimbursement by the City, all costs incurred in connection with the investigations.

Where an emergency or other circumstance occurs which renders immediate compliance impractical, the City may, in its sole judgment, defer a Person’s compliance and grant temporary access, pending the results of the Security Investigation. Such deferment shall not be construed as a waiver of the City’s right subsequently to require that a Security Investigation be performed.

The City reserves the right, in its sole discretion, to refuse access to City Facilities, City Information or City Information Assets: (i) to any individual who refuses to comply with the security or non-disclosure procedures required by the City or (ii) where the City determines that the individual may present a risk to its security interests.
5. **Compliance with Other Security Policies and Procedures**

The Contractor shall require that all Persons working on the Project comply with all applicable Facility, data processing and other security policies and procedures of the City in effect for the duration of the Project, including but not limited to Internet usage, office equipment usage and timekeeping procedures. This may include being required to sign in and out and enter time worked into a timekeeping system provided by the City.

6. **Notification of Termination, Reassignment or Cessation of Access**

The Contractor shall promptly notify the City liaison assigned to the Project, in writing, when any Person previously engaged by the Contractor to gain access to any Facilities, City Information or City Information Assets is no longer authorized by the Contractor to do so, and the Contractor shall make reasonable efforts to prevent any such Person from accessing any Facilities, City Information or City Information Assets from the point in time that such individual’s authorization ceases.

7. **Non-Disclosure Agreement**

If reasonably requested by the City, the Contractor shall require its officers, agents, employees and subcontractors who either work in direct support of the Project or who may reasonably be anticipated to unintentionally receive City Information to execute a Non-Disclosure Agreement in an appropriate form.

8. **Contractor-Provided Equipment**

The Contractor shall ensure that any products, services and other deliverables it provides to the City Agency are compliant with the Policies and Standards.

9. **No Introduction of Viruses**

The Contractor shall use industry standards to ensure that it does not introduce any viruses or any other form of malicious code to City systems.

10. **Cooperation with Accreditation**

The Contractor shall cooperate with and facilitate the successful completion of any security accreditation tasks and processes relevant to the services and/or deliverables it provides.

11. **Contractor’s Policies**

Upon request, the Contractor shall provide a copy of its information security policies relevant to this Agreement.

12. **City Audit(s)**

The City reserves the right to audit the IT infrastructure and information security controls and processes of the Contractor and to perform relevant tests to ensure that it is compliant with the Policies and Standards. The Contractor will permit the City to perform an IT audit, including an audit of physical security of any of the Contractor’s premises applicable to the services provided pursuant to this Agreement and will cooperate and furnish all requested materials in a timely manner.
13. **Independent Review(s)/Audit(s)**

Upon request, the Contractor shall provide evidence of an independent IT security review or audit commensurate with the security requirements of the Project, within a time specified by the City. The scope of the review/audit and the time by which the Contractor must provide evidence of the review/audit shall be determined in the City’s sole discretion.

14. **Suggestions**

The Contractor may surface issues, suggest options, and make recommendations to the City with regard to the Policies and Standards where appropriate.

15. **Liaison**

At the beginning of the Term of this Agreement, the Contractor shall identify and provide contact information for the Person who has been assigned overall responsibility for information security within its organization.

16. **No Exporting of City Information Outside United States**

The Contractor may not export City Information outside the United States except with the express written permission of the Commissioner or Agency Head of the City entity to which the City Information belongs, and then only for the City Information specified in that permission.

17. **Integrity of Public City Information**

The Contractor must use industry best practices to ensure that the value and state of all Public City Information is maintained and that the Public City Information is protected from unauthorized modification.

18. **Remote Access Methods**

The Contractor must obtain written permission from DoITT for each method of remote access it wishes to use to access City Information Assets.

19. **What to Do in Case of a Breach**

Should the Contractor learn or suspect that there has been a breach of its obligations under this Attachment, it shall immediately notify its DoITT liaison and the DoITT Service Desk. The Contractor shall then cooperate fully in any government investigation into any such possible breach.

20. **Material Breach**

Violations of any part of this Attachment or any of the Policies and Standards shall constitute a material breach of this Agreement.

21. **Headings**

Headings are inserted only as a matter of convenience and for reference and in no way define, limit, augment or describe the scope or intent of this Attachment.
ATTACHMENT A - PROPOSAL COVER LETTER

RFP TITLE: Next Generation 9-1-1 Emergency Services RFP

E-PIN #: 85817P0002

Proposer:

Business Name: ________________________________________________________________

Business Mailing Address:
_____________________________________________________________________________
_____________________________________________________________________________

Tax Identification #: ________________________________

Proposer’s Contact Person:

Name: ________________________________________________________________

Title: ________________________________________________________________

Telephone #: ________________________________

Proposer Certifies that it complies with the RFP Minimum Requirement(s) (See section II.D)
Proposer Certifies that it complies with the RFP Technical Requirement(s) (See section III.D)
Proposer Certifies that it complies with the Contract Terms (See Attachment I and I-1)

Proposer’s Authorized Representative:

Name: ________________________________________________________________

Title: ________________________________________________________________

Signature: ________________________________________________________________

Date: ________________________________

Is the response printed on both sides, on recycled paper containing the minimum percentage of
recovered fiber content as requested by the City in the instructions to this solicitation?

☐ Yes ☐ No
ATTACHMENT B - PRICE PROPOSAL WORKBOOK

Proposers should use the Excel file(s) included as Attachment B, and in accordance with Section IV.A.4 (Pricing Proposal) of this RFP.

**Note:** Attachment B, as it relates to each RFP Class, is a separate file attachment to this RFP, and must be downloaded from the DoITT web site at:

http://www1.nyc.gov/site/doitt/business/next-gen-911-emergency-services.page

Remainder of this page intentionally left blank
ATTACHMENT C - WHISTLEBLOWER PROTECTIVE EXPANSION ACT RIDER

1. In accordance with Local Law Nos. 30-2012 and 33-2012, codified at sections 6-132 and 12-113 of the New York City Administrative Code, respectively,

   (a) Contractor shall not take an adverse personnel action with respect to an officer or employee in retaliation for such officer or employee making a report of information concerning conduct which such officer or employee knows or reasonably believes to involve corruption, criminal activity, conflict of interest, gross mismanagement or abuse of authority by any officer or employee relating to this Contract to (i) the Commissioner of the Department of Investigation, (ii) a member of the New York City Council, the Public Advocate, or the Comptroller, or (iii) the City Chief Procurement Officer, ACCO, Agency head, or Commissioner.

   (b) If any of Contractor’s officers or employees believes that he or she has been the subject of an adverse personnel action in violation of subparagraph (a) of paragraph 1 of this rider, he or she shall be entitled to bring a cause of action against Contractor to recover all relief necessary to make him or her whole. Such relief may include but is not limited to: (i) an injunction to restrain continued retaliation, (ii) reinstatement to the position such employee would have had but for the retaliation or to an equivalent position, (iii) reinstatement of full fringe benefits and seniority rights, (iv) payment of two times back pay, plus interest, and (v) compensation for any special damages sustained as a result of the retaliation, including litigation costs and reasonable attorney’s fees.

   (c) Contractor shall post a notice provided by the City in a prominent and accessible place on any site where work pursuant to the Contract is performed that contains information about:

      (i) how its employees can report to the New York City Department of Investigation allegations of fraud, false claims, criminality or corruption arising out of or in connection with the Contract; and

      (ii) the rights and remedies afforded to its employees under New York City Administrative Code sections 7-805 (the New York City False Claims Act) and 12-113 (the Whistleblower Protection Expansion Act) for lawful acts taken in connection with the reporting of allegations of fraud, false claims, criminality or corruption in connection with the Contract.

   (d) For the purposes of this rider, “adverse personnel action” includes dismissal, demotion, suspension, disciplinary action, negative performance evaluation, any action resulting in loss of staff, office space, equipment or other benefit, failure to appoint, failure to promote, or any transfer or assignment or failure to transfer or assign against the wishes of the affected officer or employee.

   (e) This rider is applicable to all of Contractor’s subcontractors having subcontracts with a value in excess of $100,000; accordingly, Contractor shall include this rider in all subcontracts with a value a value in excess of $100,000.

2. Paragraph 1 is not applicable to this Contract if it is valued at $100,000 or less. Subparagraphs (a), (b), (d), and (e) of paragraph 1 are not applicable to this Contract if it was solicited pursuant to a finding of an emergency. Subparagraph (c) of paragraph 1 is neither applicable to this Contract if it was solicited prior to October 18, 2012 nor if it is a renewal of a contract executed prior to October 18, 2012.

   [No further Text on this page; Complete the Form attached on the Next Page]
**Whistleblower – Local Law 30 and 33**

This contract includes a provision concerning the protection of employees for whistleblowing activity, pursuant to New York City Local Law Nos. 30-2012 and 33-2012, effective October 18, 2012 and September 18, 2012, respectively. The provisions apply to contracts with a value in excess of $100,000.

Local Law No. 33-2012, the Whistleblower Protection Expansion Act ("WPEA"), prohibits a contractor or its subcontractor from taking an adverse personnel action against an employee or officer for whistleblowing activity in connection with a City contract; requires that certain City contracts include a provision to that effect; and provides that a contractor or subcontractor may be subject to penalties and injunctive relief if a court finds that it retaliated in violation of the WPEA. The WPEA is codified at §12-113 of the New York City Administrative Code.

Local Law No. 30-2012 requires a contractor to prominently post information explaining how its employees can report allegations of fraud, false claims, criminality, or corruption in connection with a City contract to City officials and the rights and remedies afforded to employees for whistleblowing activity. Local Law No. 30-2012 is codified at §6-132 of the New York City Administrative Code.

Vendor/Company Name: ____________________________________________

Vendor/Company Address: __________________________________________

Telephone Number: ________________ TIN/EIN: _____________________

Name of Duly Authorized Representative (Print): _______________________

Signature of Duly Authorized Representative: _________________________

Date Signed: ________________ E-mail Address: ______________________
ATTACHMENT D - IRAN DIVESTMENT ACT COMPLIANCE RIDER

The Iran Divestment Act of 2012, effective as of April 12, 2012, is codified at State Finance Law (“SFL”) §165-a and General Municipal Law (“GML”) §103-g. The Iran Divestment Act, with certain exceptions, prohibits municipalities, including the City, from entering into contracts with persons engaged in investment activities in the energy sector of Iran. Pursuant to the terms set forth in SFL §165-a and GML §103-g, a person engages in investment activities in the energy sector of Iran if:

(a) the person provides goods or services of twenty million dollars or more in the energy sector of Iran, including a person that provides oil or liquefied natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquefied natural gas, for the energy sector of Iran; or

(b) The person is a financial institution that extends twenty million dollars or more in credit to another person, for forty-five days or more, if that person will use the credit to provide goods or services in the energy sector in Iran and is identified on a list created pursuant to paragraph (b) of subdivision three of Section 165-a of the State Finance Law and maintained by the Commissioner of the Office of General Services.

A bid or proposal shall not be considered for award nor shall any award be made where the bidder or proposer fails to submit a signed and verified bidder’s certification.

Each bidder or proposer must certify that it is not on the list of entities engaged in investment activities in Iran created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law. In any case where the bidder or proposer cannot certify that they are not on such list, the bidder or proposer shall so state and shall furnish with the bid or proposal a signed statement which sets forth in detail the reasons why such statement cannot be made.

The City of New York may award a bid to a bidder who cannot make the certification on a case by case basis if:

(1) The investment activities in Iran were made before the effective date of this section (i.e., April 12, 2012), the investment activities in Iran have not been expanded or renewed after the effective date of this section and the person has adopted, publicized and is implementing a formal plan to cease the investment activities in Iran and to refrain from engaging in any new investments in Iran: or

(2) The City makes a determination that the goods or services are necessary for the City to perform its functions and that, absent such an exemption, the City would be unable to obtain the goods or services for which the contract is offered. Such determination shall be made in writing and shall be a public document.

[NO FURTHER TEXT ON THIS PAGE]
PROPOSER’S CERTIFICATION OF COMPLIANCE WITH IRAN DIVESTMENT ACT

Pursuant to General Municipal Law §103-g, which generally prohibits the City from entering into contracts with persons engaged in investment activities in the energy sector of Iran, the bidder/proposer submits the following certification:

[Please Check One]

PROPOSER’S CERTIFICATION

☐ By submission of this bid or proposal, each bidder/proposer and each person signing on behalf of any bidder/proposer certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief, that each bidder/proposer is not on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law.

☐ I am unable to certify that my name and the name of the bidder/proposer does not appear on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the State Finance Law. I have attached a signed statement setting forth in detail why I cannot so certify.

Dated: __________, New York

______, 20__

___________________________________
SIGNATURE

___________________________________
PRINTED NAME
TITLE

Sworn to before me this
_____ day of______, 20____

___________________________________
Notary Public

Dated:
ATTACHMENT E - SUB-CONTRACTING COMPLIANCE NOTICE

As of March 2013 the City has implemented a new web based subcontractor reporting system through the City's Payee Information Portal (PIP), available at [www.nyc.gov/PIP](http://www.nyc.gov/PIP). In order to use the new system, a PIP account will be required. Detailed instructions on creating a PIP account and using the new system are also available at that site. Additional assistance with PIP may be received by emailing the Financial Information Services Agency Help Desk at pip@fisa.nyc.gov.

In order to obtain subcontractor approval under section 3.02 of Appendix A or Article 17 of the Standard Construction Contract and PPB Rule § 4-13 Contractor is required to list the subcontractor in the system. For each subcontractor listed, Contractor is required to provide the following information: maximum contract value, description of subcontractor work, start and end date of the subcontract and identification of the subcontractor’s industry. Thereafter, Contractor will be required to report in the system the payments made to each subcontractor within 30 days of making the payment. If any of the required information changes throughout the term of the contract, Contractor will be required to revise the information in the system.

Failure of the Contractor to list a subcontractor and/or to report subcontractor payments in a timely fashion may result in the Agency declaring the Contractor in default of the Contract and will subject Contractor to liquidated damages in the amount of $100 per day for each day that the Contractor fails to identify a subcontractor along with the required information about the subcontractor and/or fails to report payments to a subcontractor, beyond the time frames set forth herein or in the notice from the City. For construction contracts, the provisions of Article 15 of the Standard Construction Contract shall govern the issue of liquidated damages.

**Contractor hereby agrees to these provisions.**
ATTACHMENT F - ACKNOWLEDGEMENT OF ADDENDA

Instructions: The Proposer is to complete either Part I or Part II of this form, whichever is applicable, and include the signed and dated form with their Technical Proposal submission. This form serves as the Proposer’s acknowledgment of the receipt of the Addenda to this Request for Proposals which may have been issued by the City prior to the Proposal Due Date and Time.

Part I: Fill in Below if Applicable:
Listed below are the dates of issue for each Addendum received concerning this Request for Proposals:

Addendum # 1, dated: ___/___/___     Addendum # 2, dated: ___/___/___
Addendum # 3, dated: ___/___/___     Addendum # 4, dated: ___/___/___
Addendum # 5, dated: ___/___/___     Addendum # 6, dated: ___/___/___
Addendum # 7, dated: ___/___/___     Addendum # 8, dated: ___/___/___
Addendum # 9, dated: ___/___/___     Addendum # 10, dated: ___/___/___
Addendum # 11, dated: ___/___/___    Addendum # 12, dated: ___/___/___
____________________________________________________________________

Part II: Check Here if Applicable: ____
No addendum was received in connection with this Request for Proposals.

Proposer’s Business Name: ________________________________

Proposer’s Authorized Representative:

Name: ________________________________
Title: ________________________________
Signature: ________________________________
Date: ________________________________
ATTACHMENT G - DOING BUSINESS DATA FORM

In addition to the SAMPLE Doing Business Data Form within this document, a Doing Business Data Form is provided with this Request for Proposals as a fillable form to be used in submitting a proposal.

**Note:** Attachment F is a separate file attachment to this RFP, and must be downloaded from the DoITT web site at: [http://www1.nyc.gov/site/doitt/business/next-gen-911-emergency-services.page](http://www1.nyc.gov/site/doitt/business/next-gen-911-emergency-services.page)

*No further Text on this page - Sample Doing Business Data Form follows on the next page.*
Doing Business Data Form

Any entity receiving, applying for or proposing on an award or agreement must complete a Doing Business Data Form (see Q&A sheet for more information). Please either type responses directly into this fillable form or print answers by hand in black ink, and be sure to fill out the certification box on the last page. Submission of a complete and accurate form is required for a proposal to be considered responsive or for any entity to receive an award or enter into an agreement.

This Data Form requires information to be provided on principal officers, owners and senior managers. The name, employer and title of each person identified on the Data Form will be included in a public database of people who do business with the City of New York; no other information reported on this form will be disclosed to the public. This Data Form is not related to the City’s VENDEX requirements.

Please return the completed Data Form to the City Agency that supplied it. Please contact the Doing Business Accountability Project at DoingBusiness@cityhall.nyc.gov or 212-788-8104 with any questions regarding this Data Form. Thank you for your cooperation.

Section 1: Entity Information

Entity Name: ____________________________

Entity EIN/TIN: ____________________________

Entity Filing Status (select one):
☐ Entity has never completed a Doing Business Data Form. Fill out the entire form.
☐ Change from previous Data Form dated ____________. Fill out only those sections that have changed, and indicate the name of the persons who no longer hold positions with the entity.
☐ No Change from previous Data Form dated ____________. Skip to the bottom of the last page.

Entity is a Non-Profit: ☐ Yes ☐ No

Entity Type: ☐ Corporation (any type) ☐ Joint Venture ☐ LLC ☐ Partnership (any type)
☐ Sole Proprietor ☐ Other (specify): _______________________

Address: __________________________________________________________

City: ___________________ State: _______ Zip: _______________________

Phone: ___________________ Fax: ___________________

E-mail: ___________________

Provide your e-mail address and/or fax number in order to receive notices regarding this form by e-mail or fax.

For information or assistance, call the Doing Business Accountability Project at 212-788-8104.
Section 2: Principal Officers

Please fill in the required identification information for each officer listed below. If the entity has no such officer or its equivalent, please check “This position does not exist.” If the entity is filing a Change Form and the person listed is replacing someone who was previously disclosed, please check “This person replaced...” and fill in the name of the person being replaced so his/her name can be removed from the Doing Business Database, and indicate the date that the change became effective.

Chief Executive Officer (CEO) or equivalent officer

The highest ranking officer or manager, such as the President, Executive Director, Sole Proprietor or Chairperson of the Board.

First Name: ___________________________ MI: _________ Last: ___________________________

Office Title: ___________________________

Employer (if not employed by entity): ___________________________

Birth Date (mm/dd/yy): ___________ Home Phone #: ___________

Home Address: ___________________________

☐ This person replaced former CEO: ___________________________ on date: ___________

Chief Financial Officer (CFO) or equivalent officer

The highest ranking financial officer, such as the Treasurer, Comptroller, Financial Director or VP for Finance.

First Name: ___________________________ MI: _________ Last: ___________________________

Office Title: ___________________________

Employer (if not employed by entity): ___________________________

Birth Date (mm/dd/yy): ___________ Home Phone #: ___________

Home Address: ___________________________

☐ This person replaced former CFO: ___________________________ on date: ___________

Chief Operating Officer (COO) or equivalent officer

The highest ranking operational officer, such as the Chief Planning Officer, Director of Operations or VP for Operations.

First Name: ___________________________ MI: _________ Last: ___________________________

Office Title: ___________________________

Employer (if not employed by entity): ___________________________

Birth Date (mm/dd/yy): ___________ Home Phone #: ___________

Home Address: ___________________________

☐ This person replaced former COO: ___________________________ on date: ___________

For information or assistance, call the Doing Business Accountability Project at 212-788-8104.
Section 3: Principal Owners

Please fill in the required identification information for all individuals who, through stock shares, partnership agreements or other means, own or control 10% or more of the entity. If no individual owners exist, please check the appropriate box to indicate why and skip to the next page. If the entity is owned by other companies, those companies do not need to be listed. If an owner was identified on the previous page, fill in his/her name and write "See above." If the entity is filing a Change Form, list any individuals who are no longer owners at the bottom of this page. If more space is needed, attach additional pages labeled "Additional Owners."

There are no owners listed because (select one):

☐ The entity is not-for-profit
☐ There are no individual owners
☐ No individual owner holds 10% or more shares in the entity
☐ Other (explain):

Principal Owners (who own or control 10% or more of the entity):

First Name:_________________________ MI:____ Last:_________________________
Office Title:_________________________
Employer (if not employed by entity):_________________________
Birth Date (mm/dd/yy):_________________________ Home Phone #:_________________________
Home Address:_________________________

First Name:_________________________ MI:____ Last:_________________________
Office Title:_________________________
Employer (if not employed by entity):_________________________
Birth Date (mm/dd/yy):_________________________ Home Phone #:_________________________
Home Address:_________________________

First Name:_________________________ MI:____ Last:_________________________
Office Title:_________________________
Employer (if not employed by entity):_________________________
Birth Date (mm/dd/yy):_________________________ Home Phone #:_________________________
Home Address:_________________________

Remove the following previously-reported Principal Owners:

Name:_________________________ Removal Date:_________________________
Name:_________________________ Removal Date:_________________________
Name:_________________________ Removal Date:_________________________

For information or assistance, call the Doing Business Accountability Project at 212-788-8104.
Section 4: Senior Managers

Please fill in the required identification information for all senior managers who oversee any of the entity’s relevant transactions with the City (e.g., contract managers if this form is for a contract award, proposal, grant, etc.). Senior managers include anyone who, either by title or duties, has substantial discretion and high-level oversight regarding the solicitation, letting or administration of any transaction with the City. At least one senior manager must be listed, or the Data Form will be considered incomplete. If a senior manager has been identified on a previous page, fill in his/her name and write “See above.” If the entity is filing a Change Form, list individuals who are no longer senior managers at the bottom of this section. If more space is needed, attach additional pages labeled “Additional Senior Managers.”

Senior Managers:

First Name: ___________________________ MI: ______ Last: ___________________________
Office Title: ___________________________________________
Employer (if not employed by entity): ___________________________________________
Birth Date (mm/dd/yy): ___________________________ Home Phone #: ___________________________
Home Address: ___________________________________________

First Name: ___________________________ MI: ______ Last: ___________________________
Office Title: ___________________________________________
Employer (if not employed by entity): ___________________________________________
Birth Date (mm/dd/yy): ___________________________ Home Phone #: ___________________________
Home Address: ___________________________________________

First Name: ___________________________ MI: ______ Last: ___________________________
Office Title: ___________________________________________
Employer (if not employed by entity): ___________________________________________
Birth Date (mm/dd/yy): ___________________________ Home Phone #: ___________________________
Home Address: ___________________________________________

Remove the following previously-reported Senior Managers:

Name: ___________________________ Removal Date: ___________________________
Name: ___________________________ Removal Date: ___________________________

Certification

I certify that the information submitted on these four pages and ________ additional pages is accurate and complete. I understand that willful or fraudulent submission of a materially false statement may result in the entity being found non-responsive and therefore denied future City awards.

Name: ___________________________ Signature: ___________________________ Date: ___________________________
Entity Name: ___________________________ Title: ___________________________ Work Phone #: ___________________________

Return the completed Data Form to the agency that supplied it.

For information or assistance, call the Doing Business Accountability Project at 212-788-6104.
What is the purpose of this Data Form?

To collect accurate, up-to-date identification information about entities that have business dealings with the City of New York in order to comply with Local Law 34 of 2007 (LL 34), the recently passed campaign finance reform law. LL 34 limits municipal campaign contributions from principal officers, owners and senior managers of these entities and mandates the creation of a Doing Business Database to allow the City to enforce the law. The information requested in this Data Form must be provided, regardless of whether the entity or the people associated with it make or intend to make campaign contributions. No sensitive personal information collected will be disclosed to the public.

Why have I received this Data Form?

The contract, franchise, concession, grant or economic development agreement you are proposing on, applying for or have already been awarded is considered a business dealing with the City under LL 34. No proposal or application will be considered and no award will be made unless this Data Form is completed. Most transactions valued at more than $5,000 are considered business dealings and require completion of the Data Form. Exceptions include transactions awarded on an emergency basis or by publicly advertised, non-pre-qualified competitive sealed bid. Other types of transactions that are considered business dealings include real property and land use actions with the City.

What entities will be included in the Doing Business Database?

Entities that hold $100,000 or more in grants, contracts for goods or services, franchises or concessions ($500,000 or more for construction contracts), along with entities that hold any economic development agreements or pension fund investment contracts, are considered to be doing business with the City for the purposes of LL 34 and will be included in the Doing Business Database. Because all of the business that an entity does or proposes to do with the City will be added together, the Data Form must be completed for all covered transactions even if an entity does not currently do enough business with the City to be listed in the Database.

What individuals will be included in the Doing Business Database?

The principal officers, owners and certain senior managers of entities listed in the Doing Business Database are themselves considered to be doing business with the City and will also be included in the Database.

- **Principal Officers** are the Chief Executive Officer (CEO), Chief Financial Officer (CFO) and Chief Operating Officer (COO), or their functional equivalents. See the Data Form for examples of titles that apply.
- **Principal Owners** are individuals who own or control 10% of more of the entity. This includes stockholders, partners and anyone else with an ownership or controlling interest in the entity.
- **Senior Managers** include anyone who, either by job title or actual duties, has substantial discretion and high-level oversight regarding the solicitation, letting or administration of any contract, concession, franchise, grant or economic development agreement with the City. At least one Senior Manager must be listed or the Data Form will be considered incomplete.

I provided some of this information on the VENDEX Questionnaire; do I have to provide it again? Although the Doing Business Data Form and the VENDEX Questionnaire request some of
the same information, they serve entirely different purposes. In addition, the Data Form requests information concerning senior managers, which is not part of the VENDEX Questionnaire.

My organization is proposing on a contract with another firm as a Joint Venture that does not exist yet; how should the Data Form be completed?
A joint venture that does not yet exist must submit Data Forms from each of its component firms. If the joint venture receives the award, it must then complete a form in the name of the joint venture.

Will the information on this Data Form be available to the public?
The names and titles of the officers, owners and senior managers reported on the Data Form will be made available to the public, as will information about the entity itself. However, personal identifying information, such as home address, home phone and date of birth, will not be disclosed to the public, and home address and phone number information will not be used for communication purposes.

No one in my organization plans to contribute to a candidate; do I have to fill out this Data Form? Yes. All entities are required to return this Data Form with complete and accurate information, regardless of the history or intention of the entity or its officers, owners or senior managers to make campaign contributions. The Doing Business Database must be complete so that the Campaign Finance Board can verify whether future contributions are in compliance with the law.

I have already completed a Doing Business Data Form; do I have to submit another one? Yes. An entity is required to submit a Doing Business Data Form each time it proposes on or enters a transaction considered business dealings with the City. However, the Data Form has both a No Change option, which only requires an entity to report its EIN and sign the last page, and a Change option, which allows an entity to only fill in applicable information that has changed since the previous completion of the Data Form. No entity should have to fill out the entire Data Form more than once.

How does a person remove him/herself from the Doing Business Database?
Any person who believes that s/he should not be listed may apply for removal from the Database by submitting a Request for Removal. Reasons that a person would be removed include his/her no longer being the principal officer, owner or senior manager of the entity, or the entity no longer being in business. Entities may also update their database information by submitting an update form. Both of these forms are available online at www.nyc.gov/mocs (once there, click MOCS Programs) or by calling 212-788-8104.

How long will an entity and its officers, owners and senior managers remain listed on the Doing Business Database?
- **Contract, Concession and Economic Development Agreement holders**: generally for the term of the transaction, plus one year.
- **Franchise and Grant holders**: from the commencement or renewal of the transaction, plus one year.
- **Pension investment contracts**: from the time of presentation on an investment opportunity or the submission of a proposal, whichever is earlier, until the end of the contract, plus one year.
- **Line item and discretionary appropriations**: from the date of budget adoption until the end of the contract, plus one year.
- **Contract proposers**: for one year from the proposal date or date of public advertisement of the solicitation, whichever is later.
- **Franchise and Concession proposers**: for one year from the proposal submission date.
For information on other transaction types, contact the Doing Business Accountability Project.

**What are the new campaign contribution limits for people doing business with the City?**

Contributions to City Council candidates are limited to $250 per election cycle; $320 to Borough President candidates; and $400 to candidates for citywide office. Please contact the NYC Campaign Finance Board for more information at [www.nyccfb.info](http://www.nyccfb.info), or 212-306-7100.

**The Data Form is to be returned to the contracting agency.**

If you have any questions about the *Data Form* please contact the Doing Business Accountability Project at 212-788-8104 or [DoingBusiness@cityhall.nyc.gov](mailto:DoingBusiness@cityhall.nyc.gov).

5/16/08
ATTACHMENT H - DISPLACEMENT DETERMINATION FORM

The Agency has determined that the contract(s) to be awarded through this Request for Proposals will not result in the displacement of any New York City employee within this Agency. See attached Displacement Determination Form.

The Agency has determined that the contract(s) to be awarded through this Request for Proposals will result in the displacement of New York City employee(s) within this Agency. See attached Displacement Determination Form.

The contract to be awarded through this Request for Proposals is a task order contract that does not simultaneously result in the award of a first task order; a displacement determination will be made in conjunction with the issuance of each task order pursuant to such task order contract. Determinations for any subsequent task orders will be made in conjunction with such subsequent task orders.

[Signature]

(Commissioner) / (Agency Chief Contracting Officer)

6/12/2017

Date
ATTACHMENT I - CONTRACT TERMS

GENERAL PROVISIONS GOVERNING CONTRACTS FOR
CONSULTANTS, PROFESSIONAL, TECHNICAL, HUMAN and CLIENT SERVICES

ARTICLE 1 - DEFINITIONS

Section 1.01 Definitions

The following words and expressions, or pronouns used in their stead, shall, wherever they appear in this Agreement, be construed as follows, unless a different meaning is clear from the context:

A. “Agency Chief Contracting Officer” or “ACCO” shall mean the position delegated authority by the Agency Head to organize and supervise the procurement activity of subordinate Agency staff in conjunction with the City Chief Procurement Officer.

B. “Agreement” shall mean the various documents, including this Attachment I, that constitute the contract between the Contractor and the City.

C. “City” shall mean The City of New York.

D. “City Chief Procurement Officer” or “CCPO” shall mean the position delegated authority by the Mayor to coordinate and oversee the procurement activity of Mayoral agency staff, including the ACCOs.

E. “Commissioner” or “Agency Head” shall mean the head of the Department or his or her duly authorized representative. The term “duly authorized representative” shall include any person or persons acting within the limits of his or her authority.

F. “Comptroller” shall mean the Comptroller of the City of New York.

G. “Contractor” shall mean the entity entering into this Agreement with the Department.

H. “Days” shall mean calendar days unless otherwise specifically noted to mean business days.

I. “Department” or “Agency” shall mean the City agency that has entered into this Agreement.

J. “Law” or “Laws” shall mean the New York City Charter (“Charter”), the New York City Administrative Code (“Admin. Code”), a local rule of the City of New York, the Constitutions of the United States and the State of New York, a statute of the United States or of the State of New York and any ordinance, rule or regulation having the force of law and adopted pursuant thereto, as amended, and common law.

K. “Procurement Policy Board” or “PPB” shall mean the board established pursuant to Charter § 311 whose function is to establish comprehensive and consistent procurement policies and rules which have broad application throughout the City.

L. “PPB Rules” shall mean the rules of the Procurement Policy Board as set forth in Title 9 of the Rules of the City of New York (“RCNY”), § 1-01 et seq.

M. “State” shall mean the State of New York.
ARTICLE 2 - REPRESENTATIONS AND WARRANTIES

Section 2.01 Procurement of Agreement

A. The Contractor represents and warrants that no person or entity (other than an officer, partner, or employee working solely for the Contractor) has been employed or retained to solicit or secure this Agreement upon any agreement or understanding for a commission, percentage, brokerage fee, contingent fee or any other direct or indirect compensation. Notwithstanding the preceding sentence, the Contractor may retain consultants to draft proposals, negotiate contracts, and perform other similar services. The Contractor further represents and warrants that no payment, gift, or thing of value has been made, given, or promised to obtain this or any other agreement between the parties. The Contractor makes such representations and warranties to induce the City to enter into this Agreement and the City relies upon such representations and warranties in the execution of this Agreement.

B. For any breach or violation of the representations and warranties set forth in Paragraph A above, the Commissioner shall have the right to annul this Agreement without liability, entitling the City to recover all monies paid to the Contractor; and the Contractor shall not make claim for, or be entitled to recover, any sum or sums due under this Agreement. The rights and remedies of the City provided in this Section are not exclusive and are in addition to all other rights and remedies allowed by Law or under this Agreement.

Section 2.02 Conflicts of Interest

A. The Contractor represents and warrants that neither it nor any of its directors, officers, members, partners or employees, has any interest nor shall they acquire any interest, directly or indirectly, which conflicts in any manner or degree with the performance of this Agreement. The Contractor further represents and warrants that no person having such interest or possible interest shall be employed by or connected with the Contractor in the performance of this Agreement.

B. Consistent with Charter § 2604 and other related provisions of the Charter, the Admin. Code and the New York State Penal Law, no elected official or other officer or employee of the City, nor any person whose salary is payable, in whole or in part, from the City Treasury, shall participate in any decision relating to this Agreement which affects his or her personal interest or the interest of any corporation, partnership or other entity in which he or she is, directly or indirectly, interested; nor shall any such official, officer, employee, or person have any interest in, or in the proceeds of, this Agreement. This Paragraph B shall not prevent directors, officers, members, partners, or employees of the Contractor from participating in decisions relating to this Agreement where their sole personal interest is in the Contractor.

C. The Contractor shall not employ a person or permit a person to serve as a member of the Board of Directors or as an officer of the Contractor if such employment or service would violate Chapter 68 of the Charter.
[PARAGRAPHS D-H ARE APPLICABLE ONLY TO HUMAN OR CLIENT SERVICE CONTRACTS.]

D. Except as provided in Paragraph E below, the Contractor’s employees and members of their immediate families, as defined in Paragraph F below, may not serve on the Board of Directors of the Contractor (“Board”), or any committee with authority to order personnel actions affecting his or her job, or which, either by rule or by practice, regularly nominates, recommends or screens candidates for employment in the program to be operated pursuant to this Agreement.

E. If the Board has more than five (5) members, then Contractor’s employees and members of their immediate families may serve on the Board, or any committee with authority to order personnel actions affecting his or her job, or which, either by rule or by practice, regularly nominates, recommends or screens candidates for employment in the program to be operated pursuant to this Agreement, provided that (i) Contractor’s employees and members of their immediate families are prohibited from voting on any such personnel matters, including but not limited to any matters directly affecting their own salary or other compensation, and shall fully disclose all conflicts and potential conflicts to the Board, and (ii) Contractor’s employees and members of their immediate families may not serve in the capacity either of Chairperson or Treasurer of the Board (or equivalent titles), nor constitute more than one-third of either the Board or any such committee.

F. Without the prior written consent of the Commissioner, no person may hold a job or position with the Contractor over which a member of his or her immediate family exercises any supervisory, managerial or other authority whatsoever whether such authority is reflected in a job title or otherwise, unless such job or position is wholly voluntary and unpaid. A member of an immediate family includes: husband, wife, domestic partner, father, father-in-law, mother, mother-in-law, brother, brother-in-law, sister, sister-in-law, son, son-in-law, daughter, daughter-in-law, niece, nephew, aunt, uncle, first cousin, and separated spouse. Where a member of an immediate family has that status because of that person’s relationship to a spouse (e.g., father-in-law), that status shall also apply to a relative of a domestic partner. For purposes of this Section, a member of the Board is deemed to exercise authority over all employees of the Contractor.

G. If the Contractor has contracts with the City that in the aggregate during any twelve-month period have a value of more than One Million Dollars ($1,000,000) and such amount constitutes more than fifty percent (50%) of the Contractor’s total revenues, then the Contractor must have a minimum of five (5) persons on its Board.

H. Paragraphs D-H of this Section 2.02 apply only if Contractor is a not-for-profit corporation.

Section 2.03 Fair Practices

A. The Contractor and each person signing on its behalf certifies, under penalties of perjury, that to the best of its, his or her knowledge and belief:

1. The prices and other material terms set forth in this Agreement have been arrived at independently, without collusion, consultation, communication, or agreement with any other bidder or proposer or with any competitor as to any matter relating to such prices or terms for the purpose of restricting competition;
2. Unless otherwise required by Law or where a schedule of rates or prices is uniformly established by a government agency through regulation, policy or directive, the prices and other material terms set forth in this Agreement which have been quoted in this Agreement and on the bid or proposal submitted by the Contractor have not been knowingly disclosed by the Contractor, directly or indirectly, to any other bidder or proposer or to any competitor prior to the bid or proposal opening; and

3. No attempt has been made or will be made by the Contractor to induce any other person or entity to submit or not to submit a bid or proposal for the purpose of restricting competition.

B. The fact that the Contractor (i) has published price lists, rates, or tariffs covering items being procured, (ii) has informed prospective customers of proposed or pending publication of new or revised price lists for such items, or (iii) has sold the same items to other customers at the same prices and/or terms being bid or proposed, does not constitute, without more, a disclosure within the meaning of this Section.

Section 2.04 VENDEX

The Contractor represents and warrants that it and its principals have duly executed and filed all required VENDEX Questionnaires and, if applicable, Certificates of No Change, pursuant to PPB Rule § 2-08 and in accordance with the policies and procedures of the Mayor’s Office of Contract Services. The Contractor understands that the Department's reliance upon the completeness and veracity of the information stated therein is a material condition to the execution of this Agreement, and represents and warrants that the information it and its principals have provided is accurate and complete.

Section 2.05 Political Activity

The Contractor’s provision of services under this Agreement shall not include any partisan political activity or any activity to further the election or defeat of any candidate for public, political, or party office, nor shall any of the funds provided under this Agreement be used for such purposes.

Section 2.06 Religious Activity

There shall be no religious worship, instruction or proselytizing as part of or in connection with the Contractor’s provision of services under this Agreement, nor shall any of the funds provided under this Agreement be used for such purposes.

Section 2.07 Unlawful Discriminatory Practices: Admin. Code § 6-123

As required by Admin. Code § 6-123, the Contractor will not engage in any unlawful discriminatory practice as defined in and pursuant to the terms of Title 8 of the City Administrative Code. The Contractor shall include a provision in any agreement with a first-level subcontractor performing services under this Agreement for an amount in excess of Fifty Thousand Dollars ($50,000) that such subcontractor shall not engage in any such unlawful discriminatory practice.
Section 2.08 Bankruptcy and Reorganization

In the event that the Contractor files for bankruptcy or reorganization under Chapter Seven or Chapter Eleven of the United States Bankruptcy Code, the Contractor shall disclose such action to the Department within seven (7) days of filing.

ARTICLE 3 - ASSIGNMENT AND SUBCONTRACTING

Section 3.01 Assignment

A. The Contractor shall not assign, transfer, convey or otherwise dispose of this Agreement, or the right to execute it, or the right, title or interest in or to it or any part of it, or assign, by power of attorney or otherwise, any of the monies due or to become due under this Agreement, without the prior written consent of the Commissioner. The giving of any such consent to a particular assignment shall not dispense with the necessity of such consent to any further or other assignments. Any such assignment, transfer, conveyance or other disposition without such written consent shall be void.

B. Before entering into any such assignment, transfer, conveyance or other disposal of this Agreement, the Contractor shall submit a written request for approval to the Department giving the name and address of the proposed assignee. The proposed assignee’s VENDEX questionnaire must be submitted within thirty (30) Days after the ACCO has granted preliminary written approval of the proposed assignee, if required. Upon the request of the Department, the Contractor shall provide any other information demonstrating that the proposed assignee has the necessary facilities, skill, integrity, past experience and financial resources to perform the specified services in accordance with the terms and conditions of this Agreement. The Agency shall make a final determination in writing approving or disapproving the assignee after receiving all requested information.

C. Failure to obtain the prior written consent to such an assignment, transfer, conveyance, or other disposition may result in the revocation and annulment of this Agreement, at the option of the Commissioner. The City shall thereupon be relieved and discharged from any further liability and obligation to the Contractor, its assignees, or transferees, who shall forfeit all monies earned under this Agreement, except so much as may be necessary to pay the Contractor’s employees.

D. The provisions of this Section shall not hinder, prevent, or affect an assignment by the Contractor for the benefit of its creditors made pursuant to the Laws of the State.

E. This Agreement may be assigned, in whole or in part, by the City to any corporation, agency, or instrumentality having authority to accept such assignment. The City shall provide the Contractor with written notice of any such assignment.

Section 3.02 Subcontracting

A. The Contractor shall not enter into any subcontract for an amount greater than Five Thousand Dollars ($5,000) for the performance of its obligations, in whole or in part, under this Agreement without the prior approval by the Department of the subcontractor. The Department hereby grants approval for all subcontracts for an amount that does not exceed Five Thousand
Dollars ($5,000). The Contractor must submit monthly reports to the Department indicating all such subcontractors. All subcontracts must be in writing.

B. Prior to entering into any subcontract for an amount greater than Five Thousand Dollars ($5,000), the Contractor shall submit a written request for the approval of the proposed subcontract to the Department giving the name and address of the proposed subcontractor and the portion of the services that it is to perform and furnish. At the request of the Department, a copy of the proposed subcontract shall be submitted to the Department. The proposed subcontractor’s VENDEX Questionnaire must be submitted, if required, within thirty (30) Days after the ACCO has granted preliminary approval of the proposed subcontractor. Upon the request of the Department, the Contractor shall provide any other information demonstrating that the proposed subcontractor has the necessary facilities, skill, integrity, past experience and financial resources to perform the specified services in accordance with the terms and conditions of this Agreement. The Agency shall make a final determination in writing approving or disapproving the subcontractor after receiving all requested information. For proposed subcontracts that do not exceed Twenty-five Thousand Dollars ($25,000), the Department’s approval shall be deemed granted if the Department does not issue a written approval or disapproval within forty-five (45) Days of the Department’s receipt of the written request for approval or, if applicable, within forty-five (45) Days of the Department’s acknowledged receipt of fully completed VENDEX Questionnaires for the subcontractor.

C. All subcontracts shall contain provisions specifying that:

1. The work performed by the subcontractor must be in accordance with the terms of the agreement between the City and the Contractor;

2. Nothing contained in the agreement between the Contractor and the subcontractor shall impair the rights of the City;

3. Nothing contained in the agreement between the Contractor and the subcontractor, or under the agreement between the City and the Contractor, shall create any contractual relation between the subcontractor and the City; and

4. The subcontractor specifically agrees to be bound by Section 4.07 and Article 5 of this Attachment I and specifically agrees that the City may enforce such provisions directly against the subcontractor as if the City were a party to the subcontract.

D. The Contractor agrees that it is as fully responsible to the Department for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by such subcontractors as it is for the acts and omissions of any person directly employed by it.

E. For determining the value of a subcontract, all subcontracts with the same subcontractor shall be aggregated.

F. The Department may revoke the approval of a subcontractor granted or deemed granted pursuant to Paragraphs (A) and (B) of this section if revocation is deemed to be in the interest of the City in writing on no less than ten (10) Days notice unless a shorter period is warranted by considerations of health, safety, integrity issues or other similar factors. Upon the effective date of such revocation, the Contractor shall cause the subcontractor to cease all work under the Agreement. The City shall not incur any further obligation for services performed by
such subcontractor pursuant to this Agreement beyond the effective date of the revocation. The City shall pay for services provided by the subcontractor in accordance with this Agreement prior to the effective date of revocation.

G. The Department’s approval of a subcontractor shall not relieve the Contractor of any of its responsibilities, duties and liabilities under this Agreement. At the request of the Department, the Contractor shall provide the Department a copy of any subcontract.

H. Individual employer-employee contracts are not subcontracts subject to the requirements of this Section.

ARTICLE 4 - LABOR PROVISIONS

Section 4.01 Independent Contractor Status

The Contractor and the Department agree that the Contractor is an independent contractor and not an employee of the Department or the City. Accordingly, neither the Contractor nor its employees or agents will hold themselves out as, or claim to be, officers or employees of the City, or of any department, agency or unit of the City, by reason of this Agreement, and they will not, by reason of this Agreement, make any claim, demand or application to or for any right or benefit applicable to an officer or employee of the City, including, but not limited to, Workers’ Compensation coverage, Disability Benefits coverage, Unemployment Insurance benefits, Social Security coverage or employee retirement membership or credit.

Section 4.02 Employees

All persons who are employed by the Contractor and all consultants or independent contractors who are retained by the Contractor to perform services under this Agreement are neither employees of the City nor under contract with the City. The Contractor, and not the City, is responsible for their work, direction, compensation, and personal conduct while engaged under this Agreement. Nothing in the Agreement shall impose any liability or duty on the City for the acts, omissions, liabilities or obligations of the Contractor, or any officer, employee, or agent of the Contractor, or for taxes of any nature, or for any right or benefit applicable to an officer or employee of the City, including, but not limited to, Workers’ Compensation coverage, Disability Benefits coverage, Unemployment Insurance benefits, Social Security coverage or employee retirement membership or credit. Except as specifically stated in this Agreement, nothing in this Agreement shall impose any liability or duty on the City to any person or entity.

Section 4.03 Removal of Individuals Performing Work

The Contractor shall not have anyone perform work under this Agreement who is not competent, faithful and skilled in the work for which he or she shall be employed. Whenever the Commissioner shall inform the Contractor, in writing, that any individual is, in his or her opinion, incompetent, unfaithful, or unskilled, such individual shall no longer perform work under this Agreement. Prior to making a determination to direct a Contractor that an individual shall no longer perform work under this Agreement, the Commissioner shall provide the Contractor an opportunity to be heard on no less than five (5) Days’ written notice. The Commissioner may
direct the Contractor not to allow the individual from performing work under the Agreement pending the opportunity to be heard and the Commissioner’s determination.

Section 4.04 Minimum Wage

Except for those employees whose minimum wage is required to be fixed pursuant to Sections 220 or 230 of the New York State Labor Law or by City Administrative Code § 6-109, all persons employed by the Contractor in the performance of this Agreement shall be paid, without subsequent deduction or rebate, unless expressly authorized by Law, not less than the minimum wage as prescribed by Law. Any breach of this Section shall be deemed a material breach of this Agreement.

Section 4.05 Non-Discrimination: New York State Labor Law § 220-e

A. If this Agreement is for the construction, alteration or repair of any public building or public work or for the manufacture, sale, or distribution of materials, equipment, or supplies, the Contractor agrees, as required by New York State Labor Law § 220-e, that:

1. In the hiring of employees for the performance of work under this Agreement or any subcontract hereunder, neither the Contractor, subcontractor, nor any person acting on behalf of such Contractor or subcontractor, shall by reason of race, creed, color, disability, sex or national origin discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates;

2. Neither the Contractor, subcontractor, nor any person on his or her behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under this Agreement on account of race, creed, color, disability, sex or national origin;

3. There may be deducted from the amount payable to the Contractor by the City under this Agreement a penalty of Fifty Dollars ($50) for each person for each calendar day during which such person was discriminated against or intimidated in violation of the provisions of this Agreement; and

4. This Agreement may be terminated by the City, and all monies due or to become due hereunder may be forfeited, for a second or any subsequent violation of the terms or conditions of this Section.

B. The provisions of this Section shall be limited to operations performed within the territorial limits of the State of New York.

Section 4.06 Non-Discrimination: Admin. Code § 6-108

If this Agreement is for the construction, alteration or repair of buildings or the construction or repair of streets or highways, or for the manufacture, sale, or distribution of materials, equipment or supplies, the Contractor agrees, as required by New York City Administrative Code § 6-108, that:

A. It shall be unlawful for any person engaged in the construction, alteration or repair of buildings or engaged in the construction or repair of streets or highways pursuant to a contract with the City or engaged in the manufacture, sale or distribution of materials, equipment or
supplies pursuant to a contract with the City to refuse to employ or to refuse to continue in any employment any person on account of the race, color or creed of such person.

B. It shall be unlawful for any person or any servant, agent or employee of any person, described in Paragraph A above, to ask, indicate or transmit, orally or in writing, directly or indirectly, the race, color, creed or religious affiliation of any person employed or seeking employment from such person, firm or corporation.

C. Breach of the foregoing provisions shall be deemed a breach of a material provision of this Agreement.

D. Any person, or the employee, manager or owner of or officer of such firm or corporation who shall violate any of the provisions of this Section shall, upon conviction thereof, be punished by a fine of not more than One Hundred Dollars ($100) or by imprisonment for not more than thirty (30) Days, or both.

Section 4.07 Non-Discrimination: E.O. 50 -- Equal Employment Opportunity

A. This Agreement is subject to the requirements of City Executive Order No. 50 (1980) (“E.O. 50”), as revised, and the rules set forth at 66 RCNY § 10-01 et seq. No agreement will be awarded unless and until these requirements have been complied with in their entirety. The Contractor agrees that it:

1. Will not discriminate unlawfully against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability, marital status, sexual orientation or citizenship status with respect to all employment decisions including, but not limited to, recruitment, hiring, upgrading, demotion, downgrading, transfer, training, rates of pay or other forms of compensation, layoff, termination, and all other terms and conditions of employment;

2. Will not discriminate unlawfully in the selection of subcontractors on the basis of the owners’, partners’ or shareholders’ race, color, creed, national origin, sex, age, disability, marital status, sexual orientation, or citizenship status;

3. Will state in all solicitations or advertisements for employees placed by or on behalf of the Contractor that all qualified applicants will receive consideration for employment without unlawful discrimination based on race, color, creed, national origin, sex, age, disability, marital status, sexual orientation or citizenship status, and that it is an equal employment opportunity employer;

4. Will send to each labor organization or representative of workers with which it has a collective bargaining agreement or other contract or memorandum of understanding, written notification of its equal employment opportunity commitments under E.O. 50 and the rules and regulations promulgated thereunder;

5. Will furnish before this Agreement is awarded all information and reports including an Employment Report which are required by E.O. 50, the rules and regulations promulgated thereunder, and orders of the City Department of Small Business Services, Division of Labor Services (“DLS”); and
6. Will permit DLS to have access to all relevant books, records, and accounts for the purposes of investigation to ascertain compliance with such rules, regulations, and orders.

B. The Contractor understands that in the event of its noncompliance with the nondiscrimination clauses of this Agreement or with any of such rules, regulations, or orders, such noncompliance shall constitute a material breach of this Agreement and noncompliance with E.O. 50 and the rules and regulations promulgated thereunder. After a hearing held pursuant to the rules of DLS, the Director of DLS may direct the Commissioner to impose any or all of the following sanctions:

1. Disapproval of the Contractor; and/or
2. Suspension or termination of the Agreement; and/or
3. Declaring the Contractor in default; and/or
4. In lieu of any of the foregoing sanctions, imposition of an employment program.

C. Failure to comply with E.O. 50 and the rules and regulations promulgated thereunder in one or more instances may result in the Department declaring the Contractor to be non-responsible.

D. The Contractor agrees to include the provisions of the foregoing Paragraphs in every subcontract or purchase order in excess of One Hundred Thousand Dollars ($100,000) to which it becomes a party unless exempted by E.O. 50 and the rules and regulations promulgated thereunder, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as may be directed by the Director of DLS as a means of enforcing such provisions including sanctions for noncompliance. A supplier of unfinished products to the Contractor needed to produce the item contracted for shall not be considered a subcontractor or vendor for purposes of this Paragraph.

E. The Contractor further agrees that it will refrain from entering into any subcontract or modification thereof subject to E.O. 50 and the rules and regulations promulgated thereunder with a subcontractor who is not in compliance with the requirements of E.O. 50 and the rules and regulations promulgated thereunder. A supplier of unfinished products to the Contractor needed to produce the item contracted for shall not be considered a subcontractor for purposes of this Paragraph.

F. Nothing contained in this Section shall be construed to bar any religious or denominational institution or organization, or any organization operated for charitable or educational purposes, that is operated, supervised or controlled by or in connection with a religious organization, from lawfully limiting employment or lawfully giving preference to persons of the same religion or denomination or from lawfully making such selection as is calculated by such organization to promote the religious principles for which it is established or maintained.
ARTICLE 5 - RECORDS, AUDITS, REPORTS, AND INVESTIGATIONS

Section 5.01 Books and Records

The Contractor agrees to maintain separate and accurate books, records, documents and other evidence, and to utilize appropriate accounting procedures and practices, which sufficiently and properly reflect all direct and indirect costs of any nature expended in the performance of this Agreement.

Section 5.02 Retention of Records

The Contractor agrees to retain all books, records, and other documents relevant to this Agreement, including those required pursuant to Section 5.01, for six years after the final payment or expiration or termination of this Agreement, or for a period otherwise prescribed by Law, whichever is later. In addition, if any litigation, claim, or audit concerning this Agreement has commenced before the expiration of the six-year period, the records must be retained until the completion of such litigation, claim, or audit. Any books, records and other documents that are created in an electronic format in the regular course of business may be retained in an electronic format. Any books, records, and other documents that are created in the regular course of business as a paper copy may be retained in an electronic format provided that the records satisfy the requirements of New York Civil Practice Law and Rules (“CPLR”) 4539(b), including the requirement that the reproduction is created in a manner “which does not permit additions, deletions, or changes without leaving a record of such additions, deletions, or changes.” Furthermore, the Contractor agrees to waive any objection to the admissibility of any such books, records or other documents on the grounds that such documents do not satisfy CPLR 4539(b).

Section 5.03 Inspection

A. At any time during the Agreement or during the record retention period set forth in section 5.02, the City, including the Department and the Department’s Office of the Inspector General, as well as City, State and federal auditors and any other persons duly authorized by the City shall, upon reasonable notice, have full access to and the right to examine and copy all books, records, and other documents maintained or retained by or on behalf of the Contractor pursuant to this Article. Notwithstanding any provision herein regarding notice of inspection, all books, records and other documents of the Contractor kept pursuant to this Agreement shall be subject to immediate inspection, review, and copying by the Department’s Office of the Inspector General and/or the Comptroller without prior notice and at no additional cost to the City. The Contractor shall make such books, records and other documents available for inspection in the City of New York or shall reimburse the City for expenses associated with the out-of-City inspection.

B. The Department shall have the right to have representatives of the Department or of the City, State or federal government present to observe the services being performed.

C. The Contractor shall not be entitled to final payment until the Contractor has complied with any request for inspection or access given under this Section.
Section 5.04 Audit

A. This Agreement and all books, records, documents, and other evidence required to be maintained or retained pursuant to this Agreement, including all vouchers or invoices presented for payment and the books, records, and other documents upon which such vouchers or invoices are based (e.g., reports, cancelled checks, accounts, and all other similar material), are subject to audit by (i) the City, including the Comptroller, the Department, and the Department’s Office of the Inspector General, (ii) the State, (iii) the federal government, and (iv) other persons duly authorized by the City. Such audits may include examination and review of the source and application of all funds whether from the City, the State, the federal government, private sources or otherwise.

B. Audits by the City, including the Comptroller, the Department, and the Department’s Office of the Inspector General, are performed pursuant to the powers and responsibilities conferred by the Charter and the Admin. Code, as well as all orders, rules, and regulations promulgated pursuant to the Charter and Admin. Code.

C. The Contractor shall submit any and all documentation and justification in support of expenditures or fees under this Agreement as may be required by the Department and by the Comptroller in the exercise of his/her powers under Law.

D. The Contractor shall not be entitled to final payment until the Contractor has complied with the requirements of this Section.

Section 5.05 No Removal of Records from Premises

Where performance of this Agreement involves use by the Contractor of any City books, records, documents, or data (in hard copy, or electronic or other format now known or developed in the future) at City facilities or offices, the Contractor shall not remove any such data (in the format in which it originally existed, or in any other converted or derived format) from such facility or office without the prior written approval of the Department’s designated official. Upon the request by the Department at any time during the Agreement or after the Agreement has expired or terminated, the Contractor shall return to the Department any City books, records, documents, or data that has been removed from City premises.

Section 5.06 Electronic Records

As used in this Attachment I, the terms books, records, documents, and other data refer to electronic versions as well as hard copy versions.

Section 5.07 Investigations Clause

A. The Contractor agrees to cooperate fully and faithfully with any investigation, audit or inquiry conducted by a State or City agency or authority that is empowered directly or by designation to compel the attendance of witnesses and to examine witnesses under oath, or conducted by the Inspector General of a governmental agency that is a party in interest to the transaction, submitted bid, submitted proposal, contract, lease, permit, or license that is the subject of the investigation, audit or inquiry.
B. 1. If any person who has been advised that his or her statement, and any information from such statement, will not be used against him or her in any subsequent criminal proceeding refuses to testify before a grand jury or other governmental agency or authority empowered directly or by designation to compel the attendance of witnesses and to examine witnesses under oath concerning the award of or performance under any transaction, agreement, lease, permit, contract, or license entered into with the City, or State, or any political subdivision or public authority thereof, or the Port Authority of New York and New Jersey, or any local development corporation within the City, or any public benefit corporation organized under the Laws of the State, or;

2. If any person refuses to testify for a reason other than the assertion of his or her privilege against self-incrimination in an investigation, audit or inquiry conducted by a City or State governmental agency or authority empowered directly or by designation to compel the attendance of witnesses and to take testimony under oath, or by the Inspector General of the governmental agency that is a party in interest in, and is seeking testimony concerning the award of, or performance under, any transaction, agreement, lease, permit, contract, or license entered into with the City, the State, or any political subdivision thereof or any local development corporation within the City, then;

C. 1. The Commissioner or Agency Head whose agency is a party in interest to the transaction, submitted bid, submitted proposal, contract, lease, permit, or license shall convene a hearing, upon not less than five (5) Days written notice to the parties involved to determine if any penalties should attach for the failure of a person to testify.

2. If any non-governmental party to the hearing requests an adjournment, the Commissioner or Agency Head who convened the hearing may, upon granting the adjournment, suspend any contract, lease, permit, or license pending the final determination pursuant to Paragraph E below without the City incurring any penalty or damages for delay or otherwise.

D. The penalties that may attach after a final determination by the Commissioner or Agency Head may include but shall not exceed:

1. The disqualification for a period not to exceed five (5) years from the date of an adverse determination for any person, or any entity of which such person was a member at the time the testimony was sought, from submitting bids for, or transacting business with, or entering into or obtaining any contract, lease, permit or license with or from the City; and/or

2. The cancellation or termination of any and all such existing City contracts, leases, permits or licenses that the refusal to testify concerns and that have not been assigned as permitted under this Agreement, nor the proceeds of which pledged, to an unaffiliated and unrelated institutional lender for fair value prior to the issuance of the notice scheduling the hearing, without the City incurring any penalty or damages on account of such cancellation or termination; monies lawfully due for goods delivered, work done, rentals, or fees accrued prior to the cancellation or termination shall be paid by the City.

E. The Commissioner or Agency Head shall consider and address in reaching his or her determination and in assessing an appropriate penalty the factors in Paragraphs (1) and (2)
below. He or she may also consider, if relevant and appropriate, the criteria established in Paragraphs (3) and (4) below, in addition to any other information that may be relevant and appropriate:

1. The party’s good faith endeavors or lack thereof to cooperate fully and faithfully with any governmental investigation or audit, including but not limited to the discipline, discharge, or disassociation of any person failing to testify, the production of accurate and complete books and records, and the forthcoming testimony of all other members, agents, assignees or fiduciaries whose testimony is sought.

2. The relationship of the person who refused to testify to any entity that is a party to the hearing, including, but not limited to, whether the person whose testimony is sought has an ownership interest in the entity and/or the degree of authority and responsibility the person has within the entity.

3. The nexus of the testimony sought to the subject entity and its contracts, leases, permits or licenses with the City.

4. The effect a penalty may have on an unaffiliated and unrelated party or entity that has a significant interest in an entity subject to penalties under Paragraph D above, provided that the party or entity has given actual notice to the Commissioner or Agency Head upon the acquisition of the interest, or at the hearing called for in Paragraph (C)(1) above gives notice and proves that such interest was previously acquired. Under either circumstance, the party or entity must present evidence at the hearing demonstrating the potential adverse impact a penalty will have on such person or entity.

F. Definitions

1. The term “license” or “permit” as used in this Section shall be defined as a license, permit, franchise, or concession not granted as a matter of right.

2. The term “person” as used in this Section shall be defined as any natural person doing business alone or associated with another person or entity as a partner, director, officer, principal or employee.

3. The term “entity” as used in this Section shall be defined as any firm, partnership, corporation, association, or person that receives monies, benefits, licenses, leases, or permits from or through the City, or otherwise transacts business with the City.

4. The term “member” as used in this Section shall be defined as any person associated with another person or entity as a partner, director, officer, principal, or employee.

G. In addition to and notwithstanding any other provision of this Agreement, the Commissioner or Agency Head may in his or her sole discretion terminate this Agreement upon not less than three (3) Days written notice in the event the Contractor fails to promptly report in writing to the City Commissioner of Investigation any solicitation of money, goods, requests for future employment or other benefits or thing of value, by or on behalf of any employee of the City or other person or entity for any purpose that may be related to the procurement or obtaining of this Agreement by the Contractor, or affecting the performance of this Agreement.
Section 5.08 Confidentiality

A. The Contractor agrees to hold confidential, both during and after the completion or termination of this Agreement, all of the reports, information, or data, furnished to, or prepared, assembled or used by, the Contractor under this Agreement. The Contractor agrees that such reports, information, or data shall not be made available to any person or entity without the prior written approval of the Department. The Contractor agrees to maintain the confidentiality of such reports, information, or data by using a reasonable degree of care, and using at least the same degree of care that the Contractor uses to preserve the confidentiality of its own confidential information. In the event that the data contains social security numbers or other Personal Identifying Information, as such term is defined in Paragraph B of this Section, the Contractor shall utilize best practice methods (e.g., encryption of electronic records) to protect the confidentiality of such data. The obligation under this Section to hold reports, information or data confidential shall not apply where the City would be required to disclose such reports, information or data pursuant to the State Freedom of Information Law (“FOIL”), provided that the Contractor provides advance notice to the City, in writing or by e-mail, that it intends to disclose such reports, information or data and the City does not inform the contractor, in writing or by e-mail, that such reports, information, or data are not subject to disclosure under FOIL.

B. The Contractor shall provide notice to the Department within three (3) days of the discovery by the Contractor of any breach of security, as defined in Admin. Code § 10-501(b), of any data, encrypted or otherwise, in use by the Contractor that contains social security numbers or other personal identifying information as defined in Admin. Code § 10-501 (“Personal Identifying Information”), where such breach of security arises out of the acts or omissions of the Contractor or its employees, subcontractors, or agents. Upon the discovery of such security breach, the Contractor shall take reasonable steps to remediate the cause or causes of such breach, and shall provide notice to the Department of such steps. In the event of such breach of security, without limiting any other right of the City, the City shall have the right to withhold further payments under this Agreement for the purpose of set-off in sufficient sums to cover the costs of notifications and/or other actions mandated by any Law, or administrative or judicial order, to address the breach, and including any fines or disallowances imposed by the State or federal government as a result of the disclosure. The City shall also have the right to withhold further payments hereunder for the purpose of set-off in sufficient sums to cover the costs of credit monitoring services for the victims of such a breach of security by a national credit reporting agency, and/or any other commercially reasonable preventive measure. The Department shall provide the Contractor with written notice and an opportunity to comment on such measures prior to implementation. Alternatively, at the City’s discretion, or if monies remaining to be earned or paid under this Agreement are insufficient to cover the costs detailed above, the Contractor shall pay directly for the costs, detailed above, if any.

C. The Contractor shall restrict access to confidential information to persons who have a legitimate work related purpose to access such information. The Contractor agrees that it will instruct its officers, employees, and agents to maintain the confidentiality of any and all information required to be kept confidential by this Agreement.

D. The Contractor, and its officers, employees, and agents shall notify the Department, at any time either during or after completion or termination of this Agreement, of any intended statement to the press or any intended issuing of any material for publication in any media of
communication (print, news, television, radio, Internet, etc.) regarding the services provided or the data collected pursuant to this Agreement at least twenty-four (24) hours prior to any statement to the press or at least five (5) business Days prior to the submission of the material for publication, or such shorter periods as are reasonable under the circumstances. The Contractor may not issue any statement or submit any material for publication that includes confidential information as prohibited by this Section 5.08.

E. At the request of the Department, the Contractor shall return to the Department any and all confidential information in the possession of the Contractor or its subcontractors. If the Contractor or its subcontractors are legally required to retain any confidential information, the Contractor shall notify the Department in writing and set forth the confidential information that it intends to retain and the reasons why it is legally required to retain such information. The Contractor shall confer with the Department, in good faith, regarding any issues that arise from the Contractor retaining such confidential information. If the Department does not request such information, or the Law does not require otherwise, such information shall be maintained in accordance with the requirements set forth in Section 5.02.

F. A breach of this Section shall constitute a material breach of this Agreement for which the Department may terminate this Agreement pursuant to Article 10. The Department reserves any and all other rights and remedies in the event of unauthorized disclosure.

ARTICLE 6 - COPYRIGHTS, PATENTS, INVENTIONS, AND ANTITRUST

Section 6.01 Copyrights

A. Any reports, documents, data, photographs, deliverables, and/or other materials produced pursuant to this Agreement, and any and all drafts and/or other preliminary materials in any format related to such items produced pursuant to this Agreement, shall upon their creation become the exclusive property of the City.

B. Any reports, documents, data, photographs, deliverables, and/or other materials provided pursuant to this Agreement (“Copyrightable Materials”) shall be considered “work-made-for-hire” within the meaning and purview of Section 101 of the United States Copyright Act, 17 U.S.C. § 101, and the City shall be the copyright owner thereof and of all aspects, elements and components thereof in which copyright protection might exist. To the extent that the Copyrightable Materials do not qualify as “work-made-for-hire,” the Contractor hereby irrevocably transfers, assigns and conveys exclusive copyright ownership in and to the Copyrightable Materials to the City, free and clear of any liens, claims, or other encumbrances. The Contractor shall retain no copyright or intellectual property interest in the Copyrightable Materials. The Copyrightable Materials shall be used by the Contractor for no purpose other than in the performance of this Agreement without the prior written permission of the City. The Department may grant the Contractor a license to use the Copyrightable Materials on such terms as determined by the Department and set forth in the license.

C. The Contractor acknowledges that the City may, in its sole discretion, register copyright in the Copyrightable Materials with the United States Copyright Office or any other government agency authorized to grant copyright registrations. The Contractor shall fully
cooperate in this effort, and agrees to provide any and all documentation necessary to accomplish this.

D. The Contractor represents and warrants that the Copyrightable Materials: (i) are wholly original material not published elsewhere (except for material that is in the public domain); (ii) do not violate any copyright Law; (iii) do not constitute defamation or invasion of the right of privacy or publicity; and (iv) are not an infringement, of any kind, of the rights of any third party. To the extent that the Copyrightable Materials incorporate any non-original material, the Contractor has obtained all necessary permissions and clearances, in writing, for the use of such non-original material under this Agreement, copies of which shall be provided to the City upon execution of this Agreement.

E. If the services under this Agreement are supported by a federal grant of funds, the federal and State government reserves a royalty-free, non-exclusive irrevocable license to reproduce, publish, or otherwise use and to authorize others to use, for federal or State government purposes, the copyright in any Copyrightable Materials developed under this Agreement.

F. If the Contractor publishes a work dealing with any aspect of performance under this Agreement, or with the results of such performance, the City shall have a royalty-free, non-exclusive irrevocable license to reproduce, publish, or otherwise use such work for City governmental purposes.

Section 6.02 Patents and Inventions

The Contractor shall promptly and fully report to the Department any discovery or invention arising out of or developed in the course of performance of this Agreement. If the services under this Agreement are supported by a federal grant of funds, the Contractor shall promptly and fully report to the federal government for the federal government to make a determination as to whether patent protection on such invention shall be sought and how the rights in the invention or discovery, including rights under any patent issued thereon, shall be disposed of and administered in order to protect the public interest.

Section 6.03 Pre-existing Rights

In no case shall Sections 6.01 and 6.02 apply to, or prevent the Contractor from asserting or protecting its rights in any discovery, invention, report, document, data, photograph, deliverable, or other material in connection with or produced pursuant to this Agreement that existed prior to or was developed or discovered independently from the activities directly related to this Agreement.

Section 6.04 Antitrust

The Contractor hereby assigns, sells, and transfers to the City all right, title and interest in and to any claims and causes of action arising under the antitrust laws of the State or of the United States relating to the particular goods or services procured by the City under this Agreement.
ARTICLE 7 - INSURANCE

Section 7.01 Agreement to Insure

The Contractor shall not commence performing services under this Agreement unless and until all insurance required by this Article is in effect, and shall ensure continuous insurance coverage in the manner, form, and limits required by this Article throughout the term of the Agreement.

Section 7.02 Commercial General Liability Insurance

A. The Contractor shall maintain Commercial General Liability Insurance covering the Contractor as Named Insured and the City as an Additional Insured in the amount of at least One Million Dollars ($1,000,000) per occurrence. Such insurance shall protect the City and the Contractor from claims for property damage and/or bodily injury, including death that may arise from any of the operations under this Agreement. Coverage under this insurance shall be at least as broad as that provided by the most recently issued Insurance Services Office (“ISO”) Form CG 0001, and shall be "occurrence" based rather than “claims-made.”

B. Such Commercial General Liability Insurance shall name the City, together with its officials and employees, as an Additional Insured with coverage at least as broad as the most recently issued ISO Form CG 20 10.

Section 7.03 Professional Liability Insurance

A. At the Department’s direction, if professional services are provided pursuant to this Agreement, the Contractor shall maintain and submit evidence of Professional Liability Insurance appropriate to the type(s) of such services to be provided under this Agreement in the amount of at least One Million Dollars ($1,000,000) per claim. The policy or policies shall include an endorsement to cover the liability assumed by the Contractor under this Agreement arising out of the negligent performance of professional services or caused by an error, omission or negligent act of the Contractor or anyone employed by the Contractor.

B. All subcontractors of the Contractor providing professional services under this Agreement for which Professional Liability Insurance is reasonably commercially available shall also maintain such insurance in the amount of at least One Million Dollars ($1,000,000) per claim, and the Contractor shall provide to the Department, at the time of the request for subcontractor approval, evidence of such Professional Liability Insurance on forms acceptable to the Department.

C. Claims-made policies will be accepted for Professional Liability Insurance. All such policies shall have an extended reporting period option or automatic coverage of not less than two (2) years. If available as an option, the Contractor shall purchase extended reporting period coverage effective on cancellation or termination of such insurance unless a new policy is secured with a retroactive date, including at least the last policy year.
Section 7.04 Workers’ Compensation, Disability Benefits, and Employer’s Liability Insurance

The Contractor shall maintain, and ensure that each subcontractor maintains, Workers’ Compensation Insurance, Disability Benefits Insurance, and Employer’s Liability Insurance in accordance with the Laws of the State on behalf of, or with regard to, all employees providing services under this Agreement.

Section 7.05 Unemployment Insurance

To the extent required by Law, the Contractor shall provide Unemployment Insurance for its employees.

Section 7.06 Business Automobile Liability Insurance

A. If vehicles are used in the provision of services under this Agreement, then the Contractor shall maintain Business Automobile Liability insurance in the amount of at least One Million Dollars ($1,000,000) each accident combined single limit for liability arising out of ownership, maintenance or use of any owned, non-owned, or hired vehicles to be used in connection with this Agreement. Coverage shall be at least as broad as the most recently issued ISO Form CA0001.

B. If vehicles are used for transporting hazardous materials, the Business Automobile Liability Insurance shall be endorsed to provide pollution liability broadened coverage for covered vehicles (endorsement CA 99 48) as well as proof of MCS-90.

Section 7.07 General Requirements for Insurance Coverage and Policies

A. All required insurance policies shall be maintained with companies that may lawfully issue the required policy and have an A.M. Best rating of at least A- / “VII” or a Standard and Poor’s rating of at least A, unless prior written approval is obtained from the City Law Department.

B. All insurance policies shall be primary (and non-contributing) to any insurance or self-insurance maintained by the City.

C. The Contractor shall be solely responsible for the payment of all premiums for all required insurance policies and all deductibles or self-insured retentions to which such policies are subject, whether or not the City is an insured under the policy.

D. There shall be no self-insurance program with regard to any insurance required under this Article unless approved in writing by the Commissioner. Any such self-insurance program shall provide the City with all rights that would be provided by traditional insurance required under this Article, including but not limited to the defense obligations that insurers are required to undertake in liability policies.

E. The City’s limits of coverage for all types of insurance required under this Article shall be the greater of (i) the minimum limits set forth in this Article or (ii) the limits provided to
the Contractor as Named Insured under all primary, excess, and umbrella policies of that type of coverage.

Section 7.08 Proof of Insurance

A. For Workers’ Compensation Insurance, Disability Benefits Insurance, and Employer’s Liability Insurance, the Contractor shall file one of the following within ten (10) Days of award of this Agreement. ACORD forms are not acceptable proof of workers’ compensation coverage.

1. C-105.2 Certificate of Workers’ Compensation Insurance;
2. U-26.3 -- State Insurance Fund Certificate of Workers’ Compensation Insurance;
3. Request for WC/DB Exemption (Form CE-200);
4. Equivalent or successor forms used by the New York State Workers’ Compensation Board; or
5. Other proof of insurance in a form acceptable to the City.

B. For each policy required under this Agreement, except for Workers’ Compensation Insurance, Disability Benefits Insurance, Employer’s Liability Insurance, and Unemployment Insurance, the Contractor shall file a Certificate of Insurance with the Department within ten (10) Days of award of this Agreement. All Certificates of Insurance shall be (a) in a form acceptable to the City and certify the issuance and effectiveness of such policies of insurance, each with the specified minimum limits; and (b) accompanied by the endorsement in the Contractor’s general liability policy by which the City has been made an additional insured pursuant to Section 7.02(B). All Certificate(s) of Insurance shall be accompanied by either a duly executed “Certification by Broker” in the form attached to this Attachment I or copies of all policies referenced in the Certificate of Insurance. If complete policies have not yet been issued, binders are acceptable, until such time as the complete policies have been issued, at which time such policies shall be submitted.

C. Certificates of Insurance confirming renewals of insurance shall be submitted to the Commissioner prior to the expiration date of coverage of policies required under this Article. Such Certificates of Insurance shall comply with the requirements of Section 7.08 (A) and Section 7.08(B), as applicable.

D. The Contractor shall provide the City with a copy of any policy required under this Article upon the demand for such policy by the Commissioner or the New York City Law Department.

E. Acceptance by the Commissioner of a certificate or a policy does not excuse the Contractor from maintaining policies consistent with all provisions of this Article (and ensuring that subcontractors maintain such policies) or from any liability arising from its failure to do so.

F. In the event the Contractor receives notice, from an insurance company or other person, that any insurance policy required under this Article shall expire or be cancelled or terminated for any reason, the Contractor shall immediately forward a copy of such notice to both the Commissioner [insert Agency name and appropriate address], and the New York City Comptroller, Attn:
Section 7.09 Miscellaneous

A. Whenever notice of loss, damage, occurrence, accident, claim or suit is required under a general liability policy maintained in accordance with this Article, the Contractor shall provide the insurer with timely notice thereof on behalf of the City. Such notice shall be given even where the Contractor may not have coverage under such policy (for example, where one of Contractor’s employees was injured). Such notice shall expressly specify that “this notice is being given on behalf of the City of New York as Additional Insured” and contain the following information: the number of the insurance policy; the name of the named insured; the date and location of the damage, occurrence, or accident; the identity of the persons or things injured, damaged, or lost; and the title of the claim or suit, if applicable. The Contractor shall simultaneously send a copy of such notice to the City of New York c/o Insurance Claims Specialist, Affirmative Litigation Division, New York City Law Department, 100 Church Street, New York, New York 10007. If the Contractor fails to comply with the requirements of this paragraph, the Contractor shall indemnify the City for all losses, judgments, settlements and expenses, including reasonable attorneys’ fees, arising from an insurer’s disclaimer of coverage citing late notice by or on behalf of the City.

B. The Contractor’s failure to maintain any of the insurance required by this Article shall constitute a material breach of this Agreement. Such breach shall not be waived or otherwise excused by any action or inaction by the City at any time.

C. Insurance coverage in the minimum amounts required in this Article shall not relieve the Contractor or its subcontractors of any liability under this Agreement, nor shall it preclude the City from exercising any rights or taking such other actions as are available to it under any other provisions of this Agreement or Law.

D. The Contractor waives all rights against the City, including its officials and employees for any damages or losses that are covered under any insurance required under this Article (whether or not such insurance is actually procured or claims are paid thereunder) or any other insurance applicable to the operations of the Contractor and/or its subcontractors in the performance of this Agreement.

E. In the event the Contractor requires any subcontractor to procure insurance with regard to any operations under this Agreement and requires such subcontractor to name the Contractor as an additional insured under such insurance, the Contractor shall ensure that such entity also name the City, including its officials and employees, as an additional insured with coverage at least as broad as the most recently issued ISO form CG 20 26.

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ARTICLE 8 - PROTECTION OF PERSONS AND PROPERTY
AND INDEMNIFICATION

Section 8.01 Reasonable Precautions

The Contractor shall take all reasonable precautions to protect all persons and the property of the City and of others from damage, loss or injury resulting from the Contractor’s and/or its subcontractors’ operations under this Agreement.

Section 8.02 Protection of City Property

The Contractor assumes the risk of, and shall be responsible for, any loss or damage to City property, including property and equipment leased by the City, used in the performance of this Agreement, where such loss or damage is caused by any tortious act, or failure to comply with the provisions of this Agreement or of Law by the Contractor, its officers, employees, agents or subcontractors.

Section 8.03 Indemnification

The Contractor shall defend, indemnify and hold the City, its officers and employees harmless from any and all claims (even if the allegations of the lawsuit are without merit) or judgments for damages on account of any injuries or death to any person or damage to any property and from costs and expenses to which the City, its officers and employees may be subjected or which it may suffer or incur allegedly arising out of or in connection with any operations of the Contractor and/or its subcontractors to the extent resulting from any negligent act of commission or omission, any intentional tortious act, or failure to comply with the provisions of this Agreement or of the Laws. Insofar as the facts or Law relating to any claim would preclude the City from being completely indemnified by the Contractor, the City shall be partially indemnified by the Contractor to the fullest extent permitted by Law.

Section 8.04 Infringement Indemnification

The Contractor shall defend, indemnify and hold the City harmless from any and all claims (even if the allegations of the lawsuit are without merit) or judgments for damages and from costs and expenses to which the City may be subject to or which it may suffer or incur allegedly arising out of or in connection with any infringement by the Contractor of any copyright, trade secrets, trademark or patent rights or any other property or personal right of any third party by the Contractor and/or its subcontractors in the performance of this Agreement. The Contractor shall defend, indemnify, and hold the City harmless regardless of whether or not the alleged infringement arises out of compliance with the Agreement’s scope of services/scope of work. Insofar as the facts or Law relating to any claim would preclude the City from being completely indemnified by the Contractor, the City shall be partially indemnified by the Contractor to the fullest extent permitted by Law.

Section 8.05 Indemnification Obligations Not Limited By Insurance Obligation

The indemnification provisions set forth in this Article shall not be limited in any way by the Contractor’s obligations to obtain and maintain insurance as provided in this Agreement.
Section 8.06 Actions By or Against Third Parties

A. In the event any claim is made or any action brought in any way relating to Agreement, other than an action between the City and the Contractor, the Contractor shall diligently render to the City without additional compensation all assistance which the City may reasonably require of the Contractor.

B. The Contractor shall report to the Department in writing within five (5) business Days of the initiation by or against the Contractor of any legal action or proceeding in connection with or relating to this Agreement.

Section 8.07 Withholding of Payments

A. In the event that any claim is made or any action is brought against the City for which the Contractor may be required to indemnify the City pursuant to this Agreement, the City shall have the right to withhold further payments under this Agreement for the purpose of set-off in sufficient sums to cover the said claim or action.

B. In the event that any City property is lost or damaged as set forth in Section 8.02, except for normal wear and tear, the City shall have the right to withhold further payments under this Agreement for the purpose of set-off in sufficient sums to cover such loss or damage.

C. The City shall not, however, impose a setoff in the event that an insurance company that provided liability insurance pursuant to Article 7 above has accepted the City's tender of the claim or action without a reservation of rights.

D. The Department may, at its option, withhold for purposes of set-off any monies due to the Contractor under this Agreement up to the amount of any disallowances or questioned costs resulting from any audits of the Contractor or to the amount of any overpayment to the Contractor with regard to this Agreement.

E. The rights and remedies of the City provided for in this Section shall not be exclusive and are in addition to any other rights and remedies provided by Law or this Agreement.

Section 8.08 No Third Party Rights

The provisions of this Agreement shall not be deemed to create any right of action in favor of third parties against the Contractor or the City or their respective officers and employees.

ARTICLE 9 - CONTRACT CHANGES

Section 9.01 Contract Changes

Changes to this Agreement may be made only as duly authorized by the ACCO or his or her designee and in accordance with the PPB Rules. Any amendment or change to this Agreement shall not be valid unless made in writing and signed by authorized representatives of both parties. Contractors deviating from the requirements of this Agreement without a duly approved and executed change order document, or written contract modification or amendment, do so at their own risk.
Section 9.02 Changes Through Fault of Contractor

In the event that any change is required in the data, documents, deliverables, or other services to be provided under this Agreement because of negligence or error of the Contractor, no additional compensation shall be paid to the Contractor for making such change, and the Contractor is obligated to make such change without additional compensation.

ARTICLE 10 - TERMINATION, DEFAULT, AND REDUCTIONS IN FUNDING

Section 10.01 Termination by the City Without Cause

A. The City shall have the right to terminate this Agreement, in whole or in part, without cause, in accordance with the provisions of Section 10.05.

B. If the City terminates this Agreement pursuant to this Section, the following provisions apply. The City shall not incur or pay any further obligation pursuant to this Agreement beyond the termination date set by the City pursuant to Section 10.05. The City shall pay for services provided in accordance with this Agreement prior to the termination date. In addition, any obligation necessarily incurred by the Contractor on account of this Agreement prior to receipt of notice of termination and falling due after the termination date shall be paid by the City in accordance with the terms of this Agreement. In no event shall such obligation be construed as including any lease or other occupancy agreement, oral or written, entered into between the Contractor and its landlord.

Section 10.02 Reductions in Federal, State and/or City Funding

A. This Agreement is funded in whole or in part by funds secured from the federal, State and/or City governments. Should there be a reduction or discontinuance of such funds by action of the federal, State and/or City governments, the City shall have, in its sole discretion, the right to terminate this Agreement in whole or in part, or to reduce the funding and/or level of services of this Agreement caused by such action by the federal, State and/or City governments, including, in the case of the reduction option, but not limited to, the reduction or elimination of programs, services or service components; the reduction or elimination of contract-reimbursable staff or staff-hours, and corresponding reductions in the budget of this Agreement and in the total amount payable under this Agreement. Any reduction in funds pursuant to this Section shall be accompanied by an appropriate reduction in the services performed under this Agreement.

B. In the case of the reduction option referred to in Paragraph A, above, any such reduction shall be effective as of the date set forth in a written notice thereof to the Contractor, which shall be not less than thirty (30) Days from the date of such notice. Prior to sending such notice of reduction, the Department shall advise the Contractor that such option is being exercised and afford the Contractor an opportunity to make within seven (7) Days any suggestion(s) it may have as to which program(s), service(s), service component(s), staff or staff-hours might be reduced or eliminated, provided, however, that the Department shall not be bound to utilize any of the Contractor’s suggestions and that the Department shall have sole discretion as to how to effectuate the reductions.

C. If the City reduces funding pursuant to this Section, the following provisions apply. The City shall pay for services provided in accordance with this Agreement prior to the reduction
date. In addition, any obligation necessarily incurred by the Contractor on account of this Agreement prior to receipt of notice of reduction and falling due after the reduction date shall be paid by the City in accordance with the terms of this Agreement. In no event shall such obligation be construed as including any lease or other occupancy agreement, oral or written, entered into between the Contractor and its landlord.

D. To the extent that the reduction in public funds is a result of the State determining that the Contractor may receive medical assistance funds pursuant to title eleven of article five of the Social Services Law to fund the services contained within the scope of a program under this Agreement, then the notice and effective date provisions of this section shall not apply, and the Department may reduce such public funds authorized under this Agreement by informing the Contractor of the amount of the reduction and revising attachments to this agreement as appropriate.

Section 10.03 Contractor Default

A. The City shall have the right to declare the Contractor in default:

1. Upon a breach by the Contractor of a material term or condition of this Agreement, including unsatisfactory performance of the services;

2. Upon insolvency or the commencement of any proceeding by or against the Contractor, either voluntarily or involuntarily, under the Bankruptcy Code or relating to the insolvency, receivership, liquidation, or composition of the Contractor for the benefit of creditors;

3. If the Contractor refuses or fails to proceed with the services under the Agreement when and as directed by the Commissioner;

4. If the Contractor or any of its officers, directors, partners, five percent (5%) or greater shareholders, principals, or other employee or person substantially involved in its activities are indicted or convicted after execution of the Agreement under any state or federal law of any of the following:

   a. a criminal offense incident to obtaining or attempting to obtain or performing a public or private contract;

   b. fraud, embezzlement, theft, bribery, forgery, falsification, or destruction of records, or receiving stolen property;

   c. a criminal violation of any state or federal antitrust law;

   d. violation of the Racketeer Influence and Corrupt Organization Act, 18 U.S.C. § 1961 et seq., or the Mail Fraud Act, 18 U.S.C. § 1341 et seq., for acts in connection with the submission of bids or proposals for a public or private contract;

   e. conspiracy to commit any act or omission that would constitute grounds for conviction or liability under any statute described in subparagraph (d) above; or
f. an offense indicating a lack of business integrity that seriously and directly affects responsibility as a City vendor.

5. If the Contractor or any of its officers, directors, partners, five percent (5%) or greater shareholders, principals, or other employee or person substantially involved in its activities are subject to a judgment of civil liability under any state or federal antitrust law for acts or omissions in connection with the submission of bids or proposals for a public or private contract; or

6. If the Contractor or any of its officers, directors, partners, five percent (5%) or greater shareholders, principals, or other employee or person substantially involved in its activities makes or causes to be made any false, deceptive, or fraudulent material statement, or fail to make a required material statement in any bid, proposal, or application for City or other government work.

B. The right to declare the Contractor in default shall be exercised by sending the Contractor a written notice of the conditions of default, signed by the Commissioner, setting forth the ground or grounds upon which such default is declared (“Notice to Cure”). The Contractor shall have ten (10) Days from receipt of the Notice to Cure or any longer period that is set forth in the Notice to Cure to cure the default. The Commissioner may temporarily suspend services under the Agreement pending the outcome of the default proceedings pursuant to this Section.

C. If the conditions set forth in the Notice to Cure are not cured within the period set forth in the Notice to Cure, the Commissioner may declare the Contractor in default pursuant to this Section. Before the Commissioner may exercise his or her right to declare the Contractor in default, the Commissioner shall give the Contractor an opportunity to be heard upon not less than five (5) business days notice. The Commissioner may, in his or her discretion, provide for such opportunity to be in writing or in person. Such opportunity to be heard shall not occur prior to the end of the cure period but notice of such opportunity to be heard may be given prior to the end of the cure period and may be given contemporaneously with the Notice to Cure.

D. After the opportunity to be heard, the Commissioner may terminate the Agreement, in whole or in part, upon finding the Contractor in default pursuant to this Section, in accordance with the provisions of Section 10.05.

E. The Commissioner, after declaring the Contractor in default, may have the services under the Agreement completed by such means and in such manner, by contract with or without public letting, or otherwise, as he or she may deem advisable in accordance with applicable PPB Rules. After such completion, the Commissioner shall certify the expense incurred in such completion, which shall include the cost of re-letting. Should the expense of such completion, as certified by the Commissioner, exceed the total sum which would have been payable under the Agreement if it had been completed by the Contractor, any excess shall be promptly paid by the Contractor upon demand by the City. The excess expense of such completion, including any and all related and incidental costs, as so certified by the Commissioner, and any liquidated damages assessed against the Contractor, may be charged against and deducted out of monies earned by the Contractor.
Section 10.04 Force Majeure

A. For purposes of this Agreement, a force majeure event is an act or event beyond the control and without any fault or negligence of the Contractor (“Force Majeure Event”). Such events may include, but are not limited to, fire, flood, earthquake, storm or other natural disaster, civil commotion, war, terrorism, riot, and labor disputes not brought about by any act or omission of the Contractor.

B. In the event the Contractor cannot comply with the terms of the Agreement (including any failure by the Contractor to make progress in the performance of the services) because of a Force Majeure Event, then the Contractor may ask the Commissioner to excuse the nonperformance and/or terminate the Agreement. If the Commissioner, in his or her reasonable discretion, determines that the Contractor cannot comply with the terms of the Agreement because of a Force Majeure Event, then the Commissioner shall excuse the nonperformance and may terminate the Agreement. Such a termination shall be deemed to be without cause.

C. If the City terminates the Agreement pursuant to this Section, the following provisions apply. The City shall not incur or pay any further obligation pursuant to this Agreement beyond the termination date. The City shall pay for services provided in accordance with this Agreement prior to the termination date. Any obligation necessarily incurred by the Contractor on account of this Agreement prior to receipt of notice of termination and falling due after the termination date shall be paid by the City in accordance with the terms of this Agreement. In no event shall such obligation be construed as including any lease or other occupancy agreement, oral or written, entered into between the Contractor and its landlord.

Section 10.05 Procedures for Termination

A. The Department and/or the City shall give the Contractor written notice of any termination of this Agreement. Such notice shall specify the applicable provision(s) under which the Agreement is terminated and the effective date of the termination. Except as otherwise provided in this Agreement, the notice shall comply with the provisions of this Section. For termination without cause, the effective date of the termination shall not be less than ten (10) Days from the date the notice is personally delivered, or fifteen (15) Days from the date the notice is either sent by certified mail, return receipt requested, or sent by fax and deposited in a post office box regularly maintained by the United States Postal Service in a postage pre-paid envelope. In the case of termination for default, the effective date of the termination shall be as set forth above for a termination without cause or such earlier date as the Commissioner may determine. If the City terminates the Agreement in part, the Contractor shall continue the performance of the Agreement to the extent not terminated.

B. Upon termination or expiration of this Agreement, the Contractor shall comply with the City close-out procedures, including but not limited to:

1. Accounting for and refunding to the Department, within forty-five (45) Days, any unexpended funds which have been advanced to the Contractor pursuant to this Agreement;

2. Furnishing within forty-five (45) Days an inventory to the Department of all equipment, appurtenances and property purchased through or provided under this
Agreement and carrying out any Department or City directive concerning the disposition of such equipment, appurtenances and property;

3. Turning over to the Department or its designees all books, records, documents and material specifically relating to this Agreement that the Department has requested be turned over;

4. Submitting to the Department, within ninety (90) Days, a final statement and report relating to the Agreement. The report shall be made by a certified public accountant or a licensed public accountant; and

5. Providing reasonable assistance to the Department in the transition, if any, to a new contractor.

**Section 10.06 Miscellaneous Provisions**

A. The Commissioner, in addition to any other powers set forth in this Agreement or by operation of Law, may suspend, in whole or in part, any part of the services to be provided under this Agreement whenever in his or her judgment such suspension is required in the best interest of the City. If the Commissioner suspends this Agreement pursuant to this Section, the City shall not incur or pay any further obligation pursuant to this Agreement beyond the suspension date until such suspension is lifted. The City shall pay for services provided in accordance with this Agreement prior to the suspension date. In addition, any obligation necessarily incurred by the Contractor on account of this Agreement prior to receipt of notice of suspension and falling due during the suspension period shall be paid by the City in accordance with the terms of this Agreement.

B. Notwithstanding any other provisions of this Agreement, the Contractor shall not be relieved of liability to the City for damages sustained by the City by virtue of the Contractor’s breach of the Agreement, and the City may withhold payments to the Contractor for the purpose of set-off in the amount of damages due to the City from the Contractor.

C. The rights and remedies of the City provided in this Article shall not be exclusive and are in addition to all other rights and remedies provided by Law or under this Agreement.

**ARTICLE 11 - PROMPT PAYMENT AND ELECTRONIC FUNDS TRANSFER**

**Section 11.01 Prompt Payment**

A. The prompt payment provisions of PPB Rule § 4-06 are applicable to payments made under this Agreement. The provisions generally require the payment to the Contractor of interest on payments made after the required payment date, as set forth in the PPB Rules.

B. The Contractor shall submit a proper invoice to receive payment, except where the Agreement provides that the Contractor will be paid at predetermined intervals without having to submit an invoice for each scheduled payment.

C. Determination of interest due will be made in accordance with the PPB Rules and the applicable rate of interest shall be the rate in effect at the time of payment.
Section 11.02 Electronic Funds Transfer

A. In accordance with Admin. Code § 6-107.1, the Contractor agrees to accept payments under this Agreement from the City by electronic funds transfer. An electronic funds transfer is any transfer of funds, other than a transaction originated by check, draft, or similar paper instrument, which is initiated through an electronic terminal, telephonic instrument or computer or magnetic tape so as to order, instruct, or authorize a financial institution to debit or credit an account. Prior to the first payment made under this Agreement, the Contractor shall designate one financial institution or other authorized payment agent and shall complete the “EFT Vendor Payment Enrollment Form” available from the Agency or at http://www.nyc.gov/dof in order to provide the commissioner of the Department of Finance with information necessary for the Contractor to receive electronic funds transfer payments through the designated financial institution or authorized payment agent. The crediting of the amount of a payment to the appropriate account on the books of a financial institution or other authorized payment agent designated by the Contractor shall constitute full satisfaction by the City for the amount of the payment under this Agreement. The account information supplied by the Contractor to facilitate the electronic funds transfer shall remain confidential to the fullest extent provided by Law.

B. The Agency Head may waive the application of the requirements of this Section to payments on contracts entered into pursuant to Charter § 315. In addition, the commissioner of the Department of Finance and the Comptroller may jointly issue standards pursuant to which the Agency may waive the requirements of this Section for payments in the following circumstances: (i) for individuals or classes of individuals for whom compliance imposes a hardship; (ii) for classifications or types of checks; or (iii) in other circumstances as may be necessary in the best interest of the City.

C. This Section is applicable to contracts valued at Twenty-Five Thousand Dollars ($25,000) and above.

ARTICLE 12 - CLAIMS

Section 12.01 Choice of Law

This Agreement shall be deemed to be executed in the City and State of New York, regardless of the domicile of the Contractor, and shall be governed by and construed in accordance with the Laws of the State of New York (notwithstanding New York choice of law or conflict of law principles) and the Laws of the United States, where applicable.

Section 12.02 Jurisdiction and Venue

The parties agree that any and all claims asserted by or against the City arising under or related to this Agreement shall solely be heard and determined either in the courts of the United States located in the City or in the courts of the State located in the City and County of New York. The parties shall consent to the dismissal and/or transfer of any claims asserted in any other venue or forum to the proper venue or forum. If the Contractor initiates any action in breach of this Section, the Contractor shall be responsible for and shall promptly reimburse the City for any attorneys’ fees incurred by the City in removing the action to a proper court consistent with this Section.
Section 12.03 Resolution of Disputes

A. Except as provided in Subparagraphs (A)(1) and (A)(2) below, all disputes between the City and the Contractor that arise under, or by virtue of, this Agreement shall be finally resolved in accordance with the provisions of this Section and PPB Rule § 4-09. This procedure shall be the exclusive means of resolving any such disputes.

1. This Section shall not apply to disputes concerning matters dealt with in other sections of the PPB Rules or to disputes involving patents, copyrights, trademarks, or trade secrets (as interpreted by the courts of New York State) relating to proprietary rights in computer software, or to termination other than for cause.

2. For construction and construction-related services this Section shall apply only to disputes about the scope of work delineated by the Agreement, the interpretation of Agreement documents, the amount to be paid for extra work or disputed work performed in connection with the Agreement, the conformity of the Contractor’s work to the Agreement, and the acceptability and quality of the Contractor’s work; such disputes arise when the City Engineer, City Resident Engineer, City Engineering Audit Officer, or other designee of the Agency Head makes a determination with which the Contractor disagrees. For construction, this Section shall not apply to termination of the Agreement for cause or other than for cause.

B. All determinations required by this Section shall be clearly stated, with a reasoned explanation for the determination based on the information and evidence presented to the party making the determination. Failure to make such determination within the time required by this Section shall be deemed a non-determination without prejudice that will allow application to the next level.

C. During such time as any dispute is being presented, heard, and considered pursuant to this Section, the Agreement terms shall remain in full force and effect and, unless otherwise directed by the ACCO or Engineer, the Contractor shall continue to perform work in accordance with the Agreement and as directed by the ACCO or City Engineer, City Resident Engineer, City Engineering Audit Officer, or other designee of the Agency Head. Failure of the Contractor to continue the work as directed shall constitute a waiver by the Contractor of any and all claims being presented pursuant to this Section and a material breach of contract.

D. Presentation of Dispute to Agency Head.

1. Notice of Dispute and Agency Response. The Contractor shall present its dispute in writing (“Notice of Dispute”) to the Agency Head within the time specified herein, or, if no time is specified, within thirty (30) Days of receiving written notice of the determination or action that is the subject of the dispute. This notice requirement shall not be read to replace any other notice requirements contained in the Agreement. The Notice of Dispute shall include all the facts, evidence, documents, or other basis upon which the Contractor relies in support of its position, as well as a detailed computation demonstrating how any amount of money claimed by the Contractor in the dispute was arrived at. Within thirty (30) Days after receipt of the complete Notice of Dispute, the ACCO or, in the case of construction or construction-related services, the City Engineer, City Resident Engineer, City Engineering Audit Officer, or other designee of the Agency Head, shall submit to the Agency Head all materials he or she deems pertinent to the dispute. Following initial
submissions to the Agency Head, either party may demand the other the production of any document or other material the demanding party believes may be relevant to the dispute. The requested party shall produce all relevant materials that are not otherwise protected by a legal privilege recognized by the courts of New York State. Any question of relevancy shall be determined by the Agency Head whose decision shall be final. Willful failure of the Contractor to produce any requested material whose relevancy the Contractor has not disputed, or whose relevancy has been affirmatively determined, shall constitute a waiver by the Contractor of its claim.

2. Agency Head Inquiry. The Agency Head shall examine the material and may, in his or her discretion, convene an informal conference with the Contractor and the ACCO and, in the case of construction or construction-related services, the City Engineer, City Resident Engineer, City Engineering Audit Officer, or other designee of the Agency Head, to resolve the issue by mutual consent prior to reaching a determination. The Agency Head may seek such technical or other expertise as he or she shall deem appropriate, including the use of neutral mediators, and require any such additional material from either or both parties as he or she deems fit. The Agency Head’s ability to render, and the effect of, a decision hereunder shall not be impaired by any negotiations in connection with the dispute presented, whether or not the Agency Head participated therein. The Agency Head may or, at the request of any party to the dispute, shall compel the participation of any other contractor with a contract related to the work of this Agreement and that contractor shall be bound by the decision of the Agency Head. Any contractor thus brought into the dispute resolution proceeding shall have the same rights and obligations under this Section as the Contractor initiating the dispute.

3. Agency Head Determination. Within thirty (30) Days after the receipt of all materials and information, or such longer time as may be agreed to by the parties, the Agency Head shall make his or her determination and shall deliver or send a copy of such determination to the Contractor and ACCO and, in the case of construction or construction-related services, the City Engineer, City Resident Engineer, City Engineering Audit Officer, or other designee of the Agency Head, together with a statement concerning how the decision may be appealed.

4. Finality of Agency Head Decision. The Agency Head’s decision shall be final and binding on all parties, unless presented to the Contract Dispute Resolution Board (“CDRB”) pursuant to this Section. The City may not take a petition to the CDRB. However, should the Contractor take such a petition, the City may seek, and the CDRB may render, a determination less favorable to the Contractor and more favorable to the City than the decision of the Agency Head.

E. Presentation of Dispute to the Comptroller. Before any dispute may be brought by the Contractor to the CDRB, the Contractor must first present its claim to the Comptroller for his or her review, investigation, and possible adjustment.

1. Time, Form, and Content of Notice. Within thirty (30) Days of receipt of a decision by the Agency Head, the Contractor shall submit to the Comptroller and to the Agency Head a Notice of Claim regarding its dispute with the Agency. The Notice of Claim shall consist of (i) a brief statement of the substance of the dispute, the amount of money, if any, claimed and the reason(s) the Contractor contends the dispute was wrongly decided
by the Agency Head; (ii) a copy of the decision of the Agency Head; and (iii) a copy of all materials submitted by the Contractor to the Agency, including the Notice of Dispute. The Contractor may not present to the Comptroller any material not presented to the Agency Head, except at the request of the Comptroller.

2. Agency Response. Within thirty (30) Days of receipt of the Notice of Claim, the Agency shall make available to the Comptroller a copy of all material submitted by the Agency to the Agency Head in connection with the dispute. The Agency may not present to the Comptroller any material not presented to the Agency Head, except at the request of the Comptroller.

3. Comptroller Investigation. The Comptroller may investigate the claim in dispute and, in the course of such investigation, may exercise all powers provided in Admin. Code §§ 7-201 and 7-203. In addition, the Comptroller may demand of either party, and such party shall provide, whatever additional material the Comptroller deems pertinent to the claim, including original business records of the Contractor. Willful failure of the Contractor to produce within fifteen (15) Days any material requested by the Comptroller shall constitute a waiver by the Contractor of its claim. The Comptroller may also schedule an informal conference to be attended by the Contractor, Agency representatives, and any other personnel desired by the Comptroller.

4. Opportunity of Comptroller to Compromise or Adjust Claim. The Comptroller shall have forty-five (45) Days from his or her receipt of all materials referred to in Paragraph (E)(3) above to investigate the disputed claim. The period for investigation and compromise may be further extended by agreement between the Contractor and the Comptroller, to a maximum of ninety (90) Days from the Comptroller’s receipt of all the materials. The Contractor may not present its petition to the CDRB until the period for investigation and compromise delineated in this Paragraph has expired. In compromising or adjusting any claim hereunder, the Comptroller may not revise or disregard the terms of the Agreement.

F. Contract Dispute Resolution Board. There shall be a Contract Dispute Resolution Board composed of:

1. the chief administrative law judge of the Office of Administrative Trials and Hearings (“OATH”) or his or her designated OATH administrative law judge, who shall act as chairperson, and may adopt operational procedures and issue such orders consistent with this Section as may be necessary in the execution of the CDRB’s functions, including, but not limited to, granting extensions of time to present or respond to submissions;

2. the City Chief Procurement Officer (“CCPO”) or his or her designee; any designee shall have the requisite background to consider and resolve the merits of the dispute and shall not have participated personally and substantially in the particular matter that is the subject of the dispute or report to anyone who so participated; and

3. a person with appropriate expertise who is not an employee of the City. This person shall be selected by the presiding administrative law judge from a prequalified panel of individuals, established, and administered by OATH, with appropriate background to act as decision-makers in a dispute. Such individuals may not have a contract or dispute
with the City or be an officer or employee of any company or organization that does, or regularly represent persons, companies, or organizations having disputes with the City.

G. Petition to CDRB. In the event the claim has not been settled or adjusted by the Comptroller within the period provided in this Section, the Contractor, within thirty (30) Days thereafter, may petition the CDRB to review the Agency Head determination.

1. Form and Content of Petition by the Contractor. The Contractor shall present its dispute to the CDRB in the form of a petition, which shall include (i) a brief statement of the substance of the dispute, the amount of money, if any, claimed, and the reason(s) the Contractor contends that the dispute was wrongly decided by the Agency Head; (ii) a copy of the decision of the Agency Head; (iii) copies of all materials submitted by the Contractor to the Agency; (iv) a copy of the decision of the Comptroller, if any, and (v) copies of all correspondence with, and material submitted by the Contractor to, the Comptroller’s Office. The Contractor shall concurrently submit four complete sets of the petition: one to the Corporation Counsel (Attn: Commercial and Real Estate Litigation Division), and three to the CDRB at OATH’s offices, with proof of service on the Corporation Counsel. In addition, the Contractor shall submit a copy of the statement of the substance of the dispute, cited in (i) above, to both the Agency Head and the Comptroller.

2. Agency Response. Within thirty (30) Days of receipt of the petition by the Corporation Counsel, the Agency shall respond to the statement of the Contractor and make available to the CDRB all material it submitted to the Agency Head and Comptroller. Three complete copies of the Agency response shall be submitted to the CDRB at OATH’s offices and one to the Contractor. Extensions of time for submittal of the Agency response shall be given as necessary upon a showing of good cause or, upon the consent of the parties, for an initial period of up to thirty (30) Days.

3. Further Proceedings. The CDRB shall permit the Contractor to present its case by submission of memoranda, briefs, and oral argument. The CDRB shall also permit the Agency to present its case in response to the Contractor by submission of memoranda, briefs, and oral argument. If requested by the Corporation Counsel, the Comptroller shall provide reasonable assistance in the preparation of the Agency’s case. Neither the Contractor nor the Agency may support its case with any documentation or other material that was not considered by the Comptroller, unless requested by the CDRB. The CDRB, in its discretion, may seek such technical or other expert advice as it shall deem appropriate and may seek, on its own or upon application of a party, any such additional material from any party as it deems fit. The CDRB, in its discretion, may combine more than one dispute between the parties for concurrent resolution.

4. CDRB Determination. Within forty-five (45) Days of the conclusion of all submissions and oral arguments, the CDRB shall render a decision resolving the dispute. In an unusually complex case, the CDRB may render its decision in a longer period of time, not to exceed ninety (90) Days, and shall so advise the parties at the commencement of this period. The CDRB’s decision must be consistent with the terms of this Agreement. Decisions of the CDRB shall only resolve matters before the CDRB and shall not have precedential effect with respect to matters not before the CDRB.
5. Notification of CDRB Decision. The CDRB shall send a copy of its decision to the Contractor, the ACCO, the Corporation Counsel, the Comptroller, the CCPO, and, in the case of construction or construction-related services, the City Engineer, City Resident Engineer, City Engineering Audit Officer, or other designee of the Agency Head. A decision in favor of the Contractor shall be subject to the prompt payment provisions of the PPB Rules. The required payment date shall be thirty (30) Days after the date the parties are formally notified of the CDRB’s decision.

6. Finality of CDRB Decision. The CDRB’s decision shall be final and binding on all parties. Any party may seek review of the CDRB’s decision solely in the form of a challenge, filed within four months of the date of the CDRB’s decision, in a court of competent jurisdiction of the State of New York, County of New York pursuant to Article 78 of the Civil Practice Law and Rules. Such review by the court shall be limited to the question of whether or not the CDRB’s decision was made in violation of lawful procedure, was affected by an error of Law, or was arbitrary and capricious or an abuse of discretion. No evidence or information shall be introduced or relied upon in such proceeding that was not presented to the CDRB in accordance with PPB Rules § 4-09.

H. Any termination, cancellation, or alleged breach of the Agreement prior to or during the pendency of any proceedings pursuant to this Section shall not affect or impair the ability of the Agency Head or CDRB to make a binding and final decision pursuant to this Section.

Section 12.04 Claims and Actions

A. Any claim against the City or Department based on this Agreement or arising out of this Agreement that is not subject to dispute resolution under the PPB Rules or this Agreement shall not be made or asserted in any legal proceeding, unless the Contractor shall have strictly complied with all requirements relating to the giving of notice and of information with respect to such claims as provided in this Agreement.

B. No action shall be instituted or maintained on any such claims unless such action shall be commenced within six (6) months after the date of filing with the Comptroller of the certificate for the final payment under this Agreement, or within six (6) months of the termination or expiration of this Agreement, or within six (6) months after the accrual of the cause of action, whichever first occurs.

Section 12.05 No Claim Against Officers, Agents or Employees

No claim shall be made by the Contractor against any officer, agent, or employee of the City in their personal capacity for, or on account of, anything done or omitted in connection with this Agreement.

Section 12.06 General Release

The acceptance by the Contractor or its assignees of the final payment under this Agreement, whether by check, wire transfer, or other means, and whether pursuant to invoice, voucher, judgment of any court of competent jurisdiction or any other administrative means, shall constitute and operate as a release of the City from any and all claims of and liability to the Contractor, of which the Contractor was aware or should reasonably have been aware, arising out
of the performance of this Agreement based on actions of the City prior to such acceptance of final payment, excepting any disputes that are the subject of pending dispute resolution procedures.

**Section 12.07 No Waiver**

Waiver by either the Department or the Contractor of a breach of any provision of this Agreement shall not be deemed to be a waiver of any other or subsequent breach and shall not be construed to be a modification of the terms of the Agreement unless and until the same shall be agreed to in writing by the parties as set forth in Section 9.01.

**ARTICLE 13 - APPLICABLE LAWS**

**Section 13.01 PPB Rules**

This Agreement is subject to the PPB Rules. In the event of a conflict between the PPB Rules and a provision of this Agreement, the PPB Rules shall take precedence.

**Section 13.02 All Legal Provisions Deemed Included**

Each and every provision required by Law to be inserted in this Agreement is hereby deemed to be a part of this Agreement, whether actually inserted or not.

**Section 13.03 Severability / Unlawful Provisions Deemed Stricken**

If this Agreement contains any unlawful provision not an essential part of the Agreement and which shall not appear to have been a controlling or material inducement to the making of this Agreement, the unlawful provision shall be deemed of no effect and shall, upon notice by either party, be deemed stricken from the Agreement without affecting the binding force of the remainder.

**Section 13.04 Compliance With Laws**

The Contractor shall perform all services under this Agreement in accordance with all applicable Laws as are in effect at the time such services are performed.

**Section 13.05 Americans with Disabilities Act (ADA)**

A. This Agreement is subject to the provisions of Subtitle A of Title II of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12131 et seq. (“ADA”) and regulations promulgated pursuant thereto, see 28 CFR Part 35. The Contractor shall not discriminate against an individual with a disability, as defined in the ADA, in providing services, programs, or activities pursuant to this Agreement. If directed to do so by the Department to ensure the Contractor’s compliance with the ADA during the term of this Agreement, the Contractor shall prepare a plan (“Compliance Plan”) which lists its program site(s) and describes in detail, how it intends to make the services, programs and activities set forth in the scope of services herein readily accessible and usable by individuals with disabilities at such site(s). In the event that the program site is not readily accessible and usable by individuals with disabilities, contractor shall also include in the Compliance Plan, a description of reasonable alternative means and methods that result in making
the services, programs or activities provided under this Agreement, readily accessible to and usable by individuals with disabilities, including but not limited to people with visual, auditory or mobility disabilities. The Contractor shall submit the Compliance Plan to the ACCO for review within ten (10) Days after being directed to do so and shall abide by the Compliance Plan and implement any action detailed in the Compliance Plan to make the services, programs, or activities accessible and usable by the disabled.

B. The Contractor’s failure to either submit a Compliance Plan as required herein or implement an approved Compliance Plan may be deemed a material breach of this Agreement and result in the City terminating this Agreement.

Section 13.06 Voter Registration

A. Participating Agencies. Pursuant to Charter § 1057-a, if this Agreement is with a participating City agency and the Contractor has regular contact with the public in the daily administration of its business, the Contractor must comply with the requirements of this Section. The participating City agencies are: the Administration for Children’s Services; the City Clerk; the Civilian Complaint Review Board; the Commission on Human Rights; Community Boards; the Department of Small Business Services; the Department of Citywide Administrative Services; the Department of Consumer Affairs; the Department of Correction; the Department of Environmental Protection; the Department of Finance; the Department of Health and Mental Health; the Department of Homeless Services; the Department of Housing Preservation and Development; the Department of Parks and Recreation; the Department of Probation; the Taxi and Limousine Commission; the Department of Transportation; and the Department of Youth and Community Development.

B. Distribution of Voter Registration Forms. In accordance with Charter § 1057-a, the Contractor, if it has regular contact with the public in the daily administration of its business under this Agreement, hereby agrees as follows:

1. The Contractor shall provide and distribute voter registration forms to all persons together with written applications for services, renewal, or recertification for services and change of address relating to such services. Such voter registration forms shall be provided to the Contractor by the City. The Contractor should be prepared to provide forms written in Spanish or Chinese, and shall obtain a sufficient supply of such forms from the City.

2. The Contractor shall also include a voter registration form with any Contractor communication sent through the United States mail for the purpose of supplying clients with materials for application, renewal, or recertification for services and change of address relating to such services. If forms written in Spanish or Chinese are not provided in such mailing, the Contractor shall provide such forms upon the Department’s request.

3. The Contractor shall, subject to approval by the Department, incorporate an opportunity to request a voter registration application into any application for services, renewal, or recertification for services and change of address relating to such services provided on computer terminals, the World Wide Web or the Internet. Any person indicating that they wish to be sent a voter registration form via computer terminals, the World Wide Web or the Internet shall be sent such a form by the Contractor or be directed,
in a manner subject to approval by the Department, to a link on that system where such a form may be downloaded.

4. The Contractor shall, at the earliest practicable or next regularly scheduled printing of its own forms, subject to approval by the Department, physically incorporate the voter registration forms with its own application forms in a manner that permits the voter registration portion to be detached therefrom. Until such time when the Contractor amends its form, the Contractor should affix or include a postage-paid City Board of Elections voter registration form to or with its application, renewal, recertification, and change of address forms.

5. The Contractor shall prominently display in its public office, subject to approval by the Department, promotional materials designed and approved by the City or State Board of Elections.

6. For the purposes of Paragraph A of this Section, the word “Contractor” shall be deemed to include subcontractors having regular contact with the public in the daily administration of their business.

7. The provisions of Paragraph A of this Section shall not apply to services that must be provided to prevent actual or potential danger to life, health, or safety of any individual or of the public.

C. Assistance in Completing Voter Registration Forms. In accordance with Charter § 1057-a, the Contractor hereby agrees as follows:

1. In the event the Department provides assistance in completing distributed voter registration forms, the Contractor shall also provide such assistance, in the manner and to the extent specified by the Department.

2. In the event the Department receives and transmits completed registration forms from applicants who wish to have the forms transmitted to the City Board of Elections, the Contractor shall similarly provide such service, in the manner and to the extent specified by the Department.

3. If, in connection with the provision of services under this Agreement, the Contractor intends to provide assistance in completing distributed voter registration forms or to receive and transmit completed registration forms from applicants who wish to have the forms transmitted to the City Board of Elections, the Contractor shall do so only by prior arrangement with the Department.

4. The provision of Paragraph B services by the Contractor may be subject to Department protocols, including protocols regarding confidentiality.

D. Required Statements. In accordance with Charter § 1057-a, the Contractor hereby agrees as follows:

1. The Contractor shall advise all persons seeking voter registration forms and information, in writing together with other written materials provided by the Contractor or by appropriate publicity, that the Contractor’s or government services are not conditioned on being registered to vote.
2. No statement shall be made and no action shall be taken by the Contractor or an employee of the Contractor to discourage an applicant from registering to vote or to encourage or discourage an applicant from enrolling in any particular political party.

3. The Contractor shall communicate to applicants that the completion of voter registration forms is voluntary.

4. The Contractor and the Contractor’s employees shall not:
   a. seek to influence an applicant’s political preference or party designation;
   b. display any political preference or party allegiance;
   c. make any statement to an applicant or take any action the purpose or effect of which is to discourage the applicant from registering to vote; or
   d. make any statement to an applicant or take any action the purpose or effect of which is to lead the applicant to believe that a decision to register or not to register has any bearing on the availability of services or benefits.

E. The Contractor, as defined above and in this Agreement, agrees that the covenants and representations in this Section are material conditions of this Agreement.

F. The provisions of this Section do not apply where the services under this Agreement are supported by a federal or State grant of funds and the source of funds prohibits the use of federal or State funds for the purposes of this Section.

Section 13.07 Participation in an International Boycott

A. The Contractor agrees that neither the Contractor nor any substantially-owned affiliated company is participating or shall participate in an international boycott in violation of the provisions of the federal Export Administration Act of 1979, as amended, 50 U.S.C. Appendix. §§ 2401 et seq., or the regulations of the United States Department of Commerce promulgated thereunder.

B. Upon the final determination by the Commerce Department or any other agency of the United States as to, or conviction of, the Contractor or a substantially-owned affiliated company thereof, of participation in an international boycott in violation of the provisions of the Export Administration Act of 1979, as amended, or the regulations promulgated thereunder, the Comptroller may, at his or her option, render forfeit and void this Agreement.

C. The Contractor shall comply in all respects, with the provisions of Admin. Code § 6-114 and the rules issued by the Comptroller thereunder.

Section 13.08 MacBride Principles

A. In accordance with and to the extent required by Admin. Code § 6-115.1, the Contractor stipulates that the Contractor and any individual or legal entity in which the Contractor holds a ten percent (10%) or greater ownership interest and any individual or legal entity that holds a ten percent (10%) or greater ownership interest in the Contractor either (a) have no business operations in Northern Ireland, or (b) shall take lawful steps in good faith to conduct any business
operations they have in Northern Ireland in accordance with the MacBride Principles, and shall permit independent monitoring of their compliance with such principles.

B. The Contractor agrees that the covenants and representations in Paragraph A above are material conditions to this Agreement.

C. This Section does not apply if the Contractor is a not-for-profit corporation.

Section 13.09 Access to Public Health Insurance Coverage Information

A. Participating Agencies. Pursuant to Charter § 1069, if this Agreement is with a participating City agency and the Contractor is one to whom this Section applies as provided in Paragraph B of this Section, the Contractor hereby agrees to fulfill the obligations in Paragraph C of this Section. The participating City agencies are: the Administration for Children’s Services; the City Clerk; the Commission on Human Rights; the Department for the Aging; the Department of Corrections; the Department of Homeless Services; the Department of Housing Preservation and Development; the Department of Juvenile Justice; the Department of Health and Mental Hygiene; the Department of Probation; the Department of Social Services/Human Resources Administration; the Taxi and Limousine Commission; the Department of Youth and Community Development; the Office to Combat Domestic Violence; and the Office of Immigrant Affairs.

B. Applicability to Certain Contractors. This Section shall be applicable to a Contractor operating pursuant to an Agreement which (i) is in excess of $250,000 and (ii) requires such Contractor to supply individuals with a written application for, or written renewal or recertification of services, or request for change of address form in the daily administration of its contractual obligation to such participating City agency. “Contractors” to whom this Section applies shall be deemed to include subcontractors if the subcontract requires the subcontractor to supply individuals with a written application for, or written renewal or recertification of services, or request for change of address form in the daily administration of the subcontractor’s contractual obligation.

C. Distribution of Public Health Insurance Pamphlet. In accordance with Charter § 1069, when the participating City agency supplies the Contractor with the public health insurance program options pamphlet published by the Department of Health and Mental Hygiene pursuant to Section 17-183 of the Admin. Code (hereinafter “pamphlet”), the Contractor hereby agrees as follows:

1. The Contractor will distribute the pamphlet to all persons requesting a written application for services, renewal or recertification of services or request for a change of address relating to the provision of services.

2. The Contractor will include a pamphlet with any Contractor communication sent through the United States mail for the purpose of supplying an individual with a written application for services, renewal or recertification of services or with a request for a change of address form relating to the provision of services.
3. The Contractor will provide an opportunity for an individual requesting a written application for services, renewal or recertification for services or change of address form relating to the provision of services via the Internet to request a pamphlet, and will provide such pamphlet by United States mail or an Internet address where such pamphlet may be viewed or downloaded, to any person who indicates via the Internet that they wish to be sent a pamphlet.

4. The Contractor will ensure that its employees do not make any statement to an applicant for services or client or take any action the purpose or effect of which is to lead the applicant or client to believe that a decision to request public health insurance or a pamphlet has any bearing on their eligibility to receive or the availability of services or benefits.

5. The Contractor will comply with: (i) any procedures established by the participating City agency to implement Charter §1069; (ii) any determination of the commissioner or head of the participating City agency (which is concurred in by the commissioner of the Department of Health and Mental Hygiene) to exclude a program, in whole or in part, from the requirements of Charter § 1069; and (iii) any determination of the commissioner or head of the participating City agency (which is concurred in by the commissioner of the Department of Health and Mental Hygiene) as to which Workforce Investment Act of 1998 offices providing workforce development services shall be required to fulfill the obligations under Charter § 1069.

D. Non-applicability to Certain Services. The provisions of this Section shall not apply to services that must be provided to prevent actual or potential danger to the life, health or safety of any individual or to the public.

Section 13.10 Distribution of Personal Identification Materials

A. Participating Agencies. Pursuant to City Executive Order No. 150 of 2011 (“E.O. 150”), if this Agreement is with a participating City agency and the Contractor has regular contact with the public in the daily administration of its business, the Contractor must comply with the requirements of this Section. The participating City agencies are: Administration for Children’s Services, Department of Consumer Affairs, Department of Correction, Department of Health and Mental Hygiene, Department of Homeless Services, Department of Housing Preservation and Development, Human Resources Administration, Department of Parks and Recreation, Department of Probation, and Department of Youth and Community Development.

B. Policy. As expressed in E.O. 150, it is the policy of the City to provide information to individuals about how they can obtain the various forms of City, State, and Federal government-issued identification and, where appropriate, to assist them with the process for applying for such identification.

C. Distribution of Materials. If the Contractor has regular contact with the public in the daily administration of its business, the Contractor hereby agrees to provide and distribute materials and information related to whether and how to obtain various forms of City, State, and Federal government-issued identification as the Agency directs in accordance with the Agency’s plans developed pursuant to E.O. 150.
ARTICLE 14 - MISCELLANEOUS PROVISIONS

Section 14.01 Conditions Precedent

A. This Agreement shall be neither binding nor effective unless and until it is registered pursuant to Charter § 328.

B. The requirements of this Section shall be in addition to, and not in lieu of, any approval or authorization otherwise required for this Agreement to be effective and for the expenditure of City funds.

Section 14.02 Merger

This written Agreement contains all the terms and conditions agreed upon by the parties, and no other agreement, oral or otherwise, regarding the subject matter of this Agreement shall be deemed to exist or to bind either of the parties, or to vary any of the terms contained in this Agreement, other than a written change, amendment or modification duly executed by both parties pursuant to Article 9 of this Attachment I.

Section 14.03 Headings

Headings are inserted only as a matter of convenience and therefore are not a part of and do not affect the substance of this Agreement.

Section 14.04 Notice

A. The Contractor and the Department hereby designate the business addresses specified at the beginning of this Agreement as the places where all notices, directions, or communications from one such party to the other party shall be delivered, or to which they shall be mailed. Either party may change its notice address at any time by an instrument in writing executed and acknowledged by the party making such change and delivered to the other party in the manner as specified below.

B. Any notice, direction, or communication from either party to the other shall be in writing and shall be deemed to have been given when (i) delivered personally; (ii) sent by certified mail, return receipt requested; (iii) delivered by overnight or same day courier service in a properly addressed envelope with confirmation; or (iv) sent by fax or email and, unless receipt of the fax or email is acknowledged by the recipient by fax or e-mail, deposited in a post office box regularly maintained by the United States Postal Service in a properly addressed, postage pre-paid envelope.

C. Nothing in this Section shall be deemed to serve as a waiver of any requirements for the service of notice or process in the institution of an action or proceeding as provided by Law, including the New York Civil Practice Law and Rules.

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AFFIRMATION

The undersigned proposer or bidder affirms and declares that said proposer or bidder is not in arrears to the City of New York upon debt, contract or taxes and is not a defaulter, as surety or otherwise, upon obligation to the City of New York, and has not been declared not responsible, or disqualified, by any agency of the City of New York, nor is there any proceeding pending relating to the responsibility or qualification of the proposer or bidder to receive public contract except _____________________________.

Full name of Proposer or Bidder [below]

____________________________________________________________________________

Address_____________________________________________________________________

City___________________________ State_____________________ Zip Code____________

CHECK ONE BOX AND INCLUDE APPROPRIATE NUMBER:

☐ A - Individual or Sole Proprietorships
   SOCIAL SECURITY NUMBER: ____________________________

☐ B - Partnership, Joint Venture or other unincorporated organization
   EMPLOYER IDENTIFICATION NUMBER: ____________________________

☐ C - Corporation
   EMPLOYER IDENTIFICATION NUMBER: ____________________________

By____________________________________
Signature

_____________________________
________________________
Title
If a corporation place seal here

Must be signed by an officer or duly authorized representative.

* Under the Federal Privacy Act, the furnishing of Social Security numbers by bidders or proposers on City contracts is voluntary. Failure to provide a Social Security number will not result in a bidder’s/proposer’s disqualification. Social Security numbers will be used to identify bidders, proposers or vendors to ensure their compliance with laws, to assist the City in enforcement of laws, as well as to provide the City a means of identifying businesses seeking City contracts.
CERTIFICATES OF INSURANCE

Instructions to New York City Agencies, Departments, and Offices

All certificates of insurance (except certificates of insurance solely evidencing Workers’ Compensation Insurance, Employer’s Liability Insurance, and/or Disability Benefits Insurance) must be accompanied by one of the following:

(1) the Certification by Insurance Broker or Agent on the following page setting forth the required information and signatures;

-- OR --

(2) copies of all policies as certified by an authorized representative of the issuing insurance carrier that are referenced in such certificate of insurance. If any policy is not available at the time of submission, certified binders may be submitted until such time as the policy is available, at which time a certified copy of the policy shall be submitted.
CITY OF NEW YORK  
CERTIFICATION BY INSURANCE BROKER OR AGENT

The undersigned insurance broker or agent represents to the City of New York that the attached Certificate of Insurance is accurate in all material respects.

_____________________________________________________
[Name of broker or agent (typewritten)]

_____________________________________________________
[Address of broker or agent (typewritten)]

_____________________________________________________
[Email address of broker or agent (typewritten)]

_____________________________________________________
[Phone number/Fax number of broker or agent (typewritten)]

_____________________________________________________
[Signature of authorized official, broker, or agent]

_____________________________________________________
[Name and title of authorized official, broker, or agent (typewritten)]

State of ……………………….)

) ss.:

County of …………………….)

Sworn to before me this _____ day of ______________ 20___

________________________________________________________________________

NOTARY PUBLIC FOR THE STATE OF __________________________
ATTACHMENT I-1 - SUPPLEMENTAL CONTRACT PROVISIONS

SUPPLEMENTAL PROVISIONS GOVERNING TECHNOLOGY PROJECTS CITYWIDE

Article 1 Definitions

1.1 Defined Terms. Whenever used in the Agreement, except for Attachment I, the words and phrases listed below have the meanings given below. Terms not defined in the Agreement have their plain meaning as commonly interpreted in the industry.

“Agreement” means the document titled “Agreement” and all attachments and appendices thereto.

“Accept” or “Acceptance” means a final determination by the City that a Deliverable, including all of its components, satisfies all applicable Performance Specifications and other requirements of the Agreement and has successfully completed all acceptance testing procedures that are based upon testing criteria agreed to by the Parties.

“Attachment I” means the General Provisions Governing Contracts for Consultants, Professional, Technical, Human and Client Services attached to the Agreement.

“City Confidential Information” has the meaning expressed in section 17.1.

“City Data” has the meaning expressed in section 15.1.

“Confidential Information” has the meaning expressed in section 17.1.

“Contractor Affiliate” means any entity that is directly or indirectly in control of, controlled by, or under common control with the Contractor.

“Contractor Confidential Information” has the meaning expressed in section 17.1.

“Contractor Personnel” has the meaning expressed in section 9.1.

“Critical Milestone” means any Milestone for which a delay in completion would materially adversely affect the Schedule and which is designated as a Critical Milestone in the Schedule.

“Custom Products” has the meaning expressed in section 11.1.

“Deliverable” means any Products or Services that Contractor is required by the Agreement to provide to the City.

“Department” means New York City’s Department of Information Technology and Telecommunications.

“Document Deliverable” has the meaning expressed in section 7.1.

“Documentation” has the meaning expressed in section 11.1.

“Effective Date” means the date the Agreement is registered by the Office of the Comptroller of the City of New York. That date will be set forth in the Notice to Proceed that the Department sends to the Contractor.

“Existing Products” has the meaning expressed in section 11.1.

“Final Acceptance” has the meaning expressed in section 7.1.

“Final Acceptance Period” has the meaning expressed in section 7.1.

“Good Working Order” has the meaning expressed in section 7.1.
“Hourly Rate” means the rate prescribed in Attachment PRC for payment for labor that meets the labor category qualifications of a labor category specified therein.

“Invention” has the meaning expressed in section 11.7.

“Key Personnel” has the meaning expressed in section 9.5.

“Licensed Software” has the meaning expressed in section 11.1.

“Milestone” means an event or occurrence that entitles the Contractor to a payment for work completed.

“Notice of Deficiency” has the meaning expressed in section 7.1.

“Object Code” has the meaning expressed in section 11.1.

“Party” means either the City or the Contractor, collectively the “Parties.”

“Performance Specification” means the performance standards and criteria set forth in the Agreement that are associated with a Deliverable. Performance Specifications are distinct from the specifications (i.e. exit criteria) for performance or load testing of an application or system.

“Preliminary Acceptance” has the meaning expressed in section 7.1.

“Products” means hardware, software, documentation, data, or other equipment or supplies furnished by or through Contractor under the Agreement, including but not limited to: (i) hardware components; (ii) printed materials, preliminary, final or otherwise, whether printed in hard or on electronic media (including but not limited to, training manuals, Documentation for software, systems or users, reports, designs, and drawings); (iii) software programs and related documentation; (iv) data, databases, and other data compilations; (v) photographs, film, CDs, DVDs, or other pictorial forms of media; (vi) modifications, customizations, custom programs, program listings, programming tools, modules, and components; (vii) System(s); and (viii) any properties embodied therein, whether tangible or intangible (including but not limited to, utilities, interfaces, templates, subroutines, algorithms, formulas, Source Code, and Object Code). Products do not include City Data.

“Reject,” “Rejected” or “Rejection” means the act of denying Acceptance of a Deliverable for failure to meet the requirements associated with the Deliverable.

“Repair” has the meaning expressed in section 21.1.

“Respond” or “Response” has the meaning expressed in section 21.1.

“Retainage” means a percentage of the charges associated with an otherwise undisputed payment or invoice that the City may withhold pending the occurrence of a pre-defined event or achievement of a mutually agreed upon subsequent Milestone.

“Schedule” means the schedule of due dates required for the provision of Services and/or Products under the SOW.
“Service Credit” means a credit against undisputed charges otherwise due to the Contractor that the City may be entitled to because of a failure by the Contractor to meet the Service Level Requirements.

“Service Element” has the meaning expressed in section 21.1.

“Service Event” has the meaning expressed in section 21.1.

“Service Level Requirements” or “SLRs” means service criteria that the Contractor must satisfy during the Final Acceptance Period, Warranty Period, or while providing maintenance Services. SLRs may be mutually agreed upon and set forth in the SOW.

“Source Code” has the meaning expressed in section 11.1.

“Subject Invention” has the meaning expressed in section 11.7.

“System” means fully integrated and functional hardware and software components as well as the complete set of manuals (e.g., user, installation, instruction or diagnostic manuals) in either hard or electronic copy, that are necessary to enable the City to properly test, install, operate and enjoy full use of the System.

“System Deliverables” means all Deliverables and components constituting a System, either individually or as integrated, or an enhancement, release or update of a System.

“Systems Integration Services” or “Services” means designing, installing and fully integrating projects into live operating environments. Systems Integration Services include but are not limited to: analysis of existing technological environments, including hardware, software, live operations and transaction volumes; design and development of new systems; add-ons or modifications to existing architecture, including single platform computer systems and distributed systems; development of functional and/or design specifications and requirements, technical writing and documentation; provision of operating system and/or applications programming recommendations, including acquisition of off-the-shelf products, or integration of custom programming products; acquisition of hardware/software products and services; coordination and supervision of multiple service or product providers; installing, testing, auditing and integration of new systems within existing environments; maintenance and support services; and providing cultural transitioning of workforces to new environments, including training of employees and other end users.

“SOW or Statement of Work” means a document agreed upon by the Contractor, the Department describing the Statement of Services the Contractor is required to provide to the City.

“Third-party Products” means any Products procured or to be procured by the Contractor from a third-party. Third-party Products do not include City Data or Custom Products.

“Warranty Period” has the meaning expressed in subsection 8.2(a).
1.2 Other Definitions.

The terms defined in section 1.1 include the plural as well as the singular. Unless otherwise expressly stated, the words “herein,” “hereof,” and “hereunder” and other words of similar import refer to the Agreement as a whole and not to any particular section, subsection, or other subdivision. Section and subsection references in the Agreement or an Attachment refer to sections and subsections of, respectively, the Agreement or the Attachment, unless stated otherwise. References to “Attachments” mean the Attachments to the Agreement unless provided otherwise. The words “include” and “including” are not terms of limitation. The word “or” means “and/or” unless the context requires otherwise. The words “writing” or “written” mean preserved or presented in retrievable or reproducible written form, whether electronic (including e-mail, but excluding voice-mail) or hard copy, unless otherwise stated.

1.3 References to time.

The words “day,” “month,” and “year” mean, respectively, calendar day, calendar month and calendar year. “Business hours” or “business day” means 9:00 a.m. through 5:00 p.m. (EST) Monday through Friday, excluding the following City holidays: New Year’s Day, Martin Luther King, Jr. Birthday, Presidents’ Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Election Day, Veterans’ Day, Thanksgiving Day, and Christmas Day.

Article 2 Term; Survival

2.1 Term

(a) The term of the Agreement is three (3) years, commencing on the Effective Date. The City may renew the Agreement for up to one (1) additional three (3)-year period.

2.2 Survival

(a) Every provision of the Agreement that by its nature is intended to survive will survive the expiration or termination of the Agreement or part thereof.

(b) The foregoing does not limit or impair any claim of a party with respect to alleged breach of this Agreement that occurred prior to expiration or termination.

Article 3 Contractor’s Services

3.1 Statement of Work

(a) The Contractor shall provide Services in accordance with the requirements of the Agreement and the SOW for a project entered into by the Contractor and the City.

(b) The Contractor shall acquire any Products necessary to complete the Agreement. The cost of the Products so acquired will be calculated in accordance with the requirements of Attachment PRC.

(c) Except as may otherwise expressly be set forth in the Agreement, the Contractor shall provide all the services and comply with all of the requirements and obligations of the Contractor set forth in the SOW.
(d) Contractor shall provide the Department an annotated outline of each major Deliverable (as determined by the Department) before beginning development of the Deliverable. This outline will be reviewed by the Department and approved by the Department program manager pursuant to section 7.2.

(e) If the SOW requires the Contractor to perform maintenance and support services for Licensed Software, maintenance and support must include, but not be limited to:

(i) Promptly notifying the Department of any defects or malfunctions in the Licensed Software or Documentation of which the Contractor is or becomes aware and using best efforts to correct these defects or malfunctions;

(ii) Providing to the Department, without additional charge during the maintenance and support term, all corrections, enhancements, upgrades, updates, revisions, fixes, and new releases of the Licensed Software which Contractor generally makes available to its customers;

(iii) Providing help desk assistance by toll free or local telephone service and on-line accessibility (via email or internet) to diagnose and correct defects arising with the use of the Licensed Software; and

(iv) Replacing the Licensed Software at no charge if the media becomes destroyed or damaged to such an extent that the Licensed Software becomes unusable.

To the extent that the Contractor developed Custom Products in which Licensed Software is integrated, the maintenance and support obligations applicable to Licensed Software under this section 3.1(e) are deemed to apply to these Custom Products.

3.2 Details of Work Performance. The Contractor shall provide the services set forth in the SOW. If the Parties decide it is necessary or appropriate to amend the SOW, they must do so by agreeing to an amendment.

3.3 Deliverables and Reports. The Contractor shall provide the Deliverables and reports described in the SOW, in the format and frequency required or set forth in the SOW or each respective Attachment.

3.4 RESERVED

3.5 RESERVED

Article 4 Contractor Delay

4.1 The Contractor’s performance of the Services within the time frames agreed to by the Parties (as may be set forth in a Schedule) is a material obligation of the Contractor. The Contractor’s failure to timely meet its obligations, including failure to complete one or more Critical Milestones within the time frames agreed to by the Parties (as may be set forth in a Schedule) will have a materially adverse impact on the City and cause it to suffer damages.

4.2 In the event of the Contractor’s failure to perform Services within the time frames agreed to by the Parties (as may be set forth in a Schedule), the Contractor shall pay to the City damages calculated as set forth in this section 4.2.
(a) Unless the SOW specifies damages that will be calculated under subsection 4.2(b), damages resulting from the Contractor’s delay consist of the following fair and reasonable costs which may be incurred by the City:

(i) additional services necessary to support or advance the project, including the costs of City and City contractor resources who are unable to perform work required on the project and who cannot be reassigned to other work;

(ii) extended warranties and maintenance costs for Third-party Products, to the extent a delay impacts the duration of manufacturer’s warranties;

(iii) maintenance fees for legacy systems, to the extent these fees exceed maintenance fees that the City would have been obligated to pay for replacement systems facilities;

(iv) additional storage charges; and

(v) with respect to an engagement where the Contractor is obligated to provide a System, the following unique depreciation schedule for the purpose of calculating damages for late delivery of the System: the per day depreciation value for the System for the period of delay, based upon the total cost of capital funding for the System, assuming a ten (10) year useful life and calculating on the straight line method with a five percent (5%) salvage value.

(b) If the measure of damages described in subsection 4.2(a) would not be an accurate calculation of the City’s costs resulting from the Contractor’s failure to timely perform the work described in the SOW, the Parties may agree to an alternate calculation of actual damages in the SOW. Any alternate calculation of actual damages must take into consideration the damages described in subsection 4.2(a)(v).

(c) If the measures of actual damages described in subsection 4.2(a) or (b) would not adequately encompass every element of the City’s losses and the amount of any element(s) of loss would be difficult to accurately calculate (e.g. losses related to inconvenience to the public, reputation, etc.), then in addition to the actual damages in subsection 4.2(a) or (b) the Parties may agree to the imposition of liquidated damages in amounts which are reasonably related to the anticipated loss to the City related to these element(s) of loss and are not a penalty for failure to timely perform the work. Liquidated damages will be assessed daily for each day, or part of a day, until the Contractor meets its obligations, including the completion of one or more Critical Milestones (as may be set forth in a Schedule).

4.3 The City shall make reasonable efforts to mitigate the costs of the Contractor’s delay and cooperate with the Contractor in its efforts to reduce both the duration of the delay and associated costs.

4.4 To the extent practicable, the City will submit a formal damages claim to the Contractor within ninety (90) days after Final Acceptance of the affected System(s) or within ninety (90) days of the end of the delay. The Contractor may provide information with respect to the City’s damages claim for the City’s consideration, and the City may thereafter revise this claim. If the Contractor disagrees with the damages claim, the Contractor may dispute the damages claim pursuant to the dispute resolution procedures in Section 12.03 of Attachment I.
4.5 The Parties agree that damages assessed under this Article do not constitute, and are not intended to be, either a partial or full waiver or discharge of the City’s right to indemnification or the Contractor’s obligation to indemnify the City pursuant to the indemnification provisions of the Agreement.

4.6 The City may deduct and retain out of monies which may become due under the Agreement the amount of any damages assessed under this Article, and in case the amount which may become due is less than the amount of damages suffered by the City, the Contractor shall pay the difference within thirty (30) days of receipt of notification from the City of the amount owed by the Contractor.

4.7 For purposes of assessing damages under this Article, the Contractor shall not be deemed to have delayed in meeting its obligations, including completion of one or more Critical Milestones (as may be set forth in a Schedule) during:

(a) the period of fifteen (15) days (or a longer period as may be agreed to by the Parties in the SOW) following the Contractor’s receipt of notice from the City providing Contractor with an opportunity to complete its obligations; or

(b) the period of time, if any, during which completion of its obligations are delayed because the City has exceeded the specified period of review for a Deliverable, but not including any period of time during which the Contractor is remediating deficiencies and any subsequent period of time during which the City is reviewing the corrected Deliverable.

4.8 The City’s failure to assess damages hereunder does not constitute a waiver or release of any claim the City may have against the Contractor for either actual or liquidated damages.

4.9 Notwithstanding any inconsistent provision of this Agreement, the Contractor’s liability to the City under this Article will in no event exceed ten percent (10%) of the total value of the Agreement, and this amount of liability is deemed to not be included as part of the Contractor’s total liability set forth in Article 20 of the Agreement. If the City assesses damages pursuant to this Article 4, this assessment is the City’s exclusive remedy for damages for delay by the Contractor. Nothing in this provision affects the City’s right to declare the Contractor in default under subsection A of section 10.03 of Attachment I.

Article 5 New Technologies

The Contractor acknowledges the City’s substantial interest in state-of-the-art technology that offers improved performance and more efficient and cost-effective ways to meet the Department’s requirements. The City is aware that technology is evolving rapidly and that the Contractor may be in the process of improving its existing products or services, or making available new technologies to its commercial and governmental customers. In this regard, the Contractor shall have the following obligations:

5.1 promptly inform the Department of all improvements to the Contractor’s existing technologies relevant to the SOW and the expected or actual availability of these technologies;

5.2 promptly inform the City of the actual release of updated Third-party Products relevant to the SOW;
5.3 provide recommendations to the Department as to whether to use a more recent, up-to-date version of the technology or to proceed with the previously specified version;

5.4 if the Parties agree to use a more recent version of the technology in a change order, furnish the more recent, up-to-date version of the technology at the time when the Contractor is required to furnish the Products; and

5.5 at the Department’s request and at no additional charge, the Contractor shall provide the Department with any new features, functions, revisions, enhancements, modifications or improvements to the Contractor owned or controlled technology that the Contractor makes available to other customers without charge. Any new features, functions, revisions, enhancements, modifications or improvements must be documented in a change order.

Article 6 Third-Party Products

6.1 Where the Services consist of or include the delivery of Products, the Contractor shall coordinate delivery and installation (if applicable) with suppliers, and the Contractor is liable for any cost(s) of reinstating standard manufacturers’ warranties or Acceptance periods which have lapsed due to untimely coordination by the Contractor.

6.2 In procuring Third-party Products, the Contractor shall obtain the best value for the City and comply with all procedures and requirements of the Agreement. To the extent possible, Contractor shall purchase Third-party Products directly from the manufacturer or at prices that do not include a mark-up attributable to a secondary source.

6.3 The Contractor shall deliver, or arrange for delivery of, all Third-party Products to the City’s site and notify a designated City representative that the Third-party Products are ready for inspection.

6.4 Risk of loss on Products passes from the Contractor to the City upon delivery and possession by the City of the Products. If the Contractor retakes possession of a Product prior to Acceptance, risk of loss passes back to the Contractor until Acceptance. The Contractor assumes risk of loss while a Product is in the care, custody or control of the Contractor or its suppliers. Title to Products passes from the Contractor to the City when the Products have been received, inspected and Accepted by the City. Mere acknowledgement by City personnel of the delivery or receipt of the Products (as in a signed bill of lading) is not deemed or construed as Acceptance of the Products delivered or received. Upon transfer of title, the Contractor shall provide the City with all associated documentation, including warranty information.

6.5 Third-party Products provided by the Contractor are governed exclusively by the terms and conditions of the Agreement. To the extent that any quotation, purchase order, or any other document provided by the Contractor or a third-party supplier contains any provisions, including but not limited to payment, cost, or delivery provisions that conflict with the Agreement, the Agreement will take precedence. This provision does not require that the Contractor warrant the Third-party Products.

6.6 The Contractor shall ensure that Products meet all applicable Performance Specifications and other requirements of the Agreement. Unless otherwise provided in the Agreement,
Performance Specifications for Third-party Products are deemed to include a third-party supplier’s published product specifications. If the Products do not meet the Performance Specifications, the Contractor is responsible for securing satisfactory performance at its own expense. Notwithstanding the foregoing, this provision does not require that the Contractor warrant the Third-party Products.

(a) Where Third-party Products are procured by the Contractor at the request of the City and the Contractor is not required to integrate the Third-party Products into a System or release, or provide the Third-party Products as part of a System or release, Acceptance of the Third-party Products occurs after the City receives and inspects the Third-party Products, and provides written confirmation of same.

(b) Where Third-party Products are procured by the Contractor for the purposes of integration by the Contractor into a System or release: (1) Performance Specifications shall be developed by the Contractor and the City; and (2) Final Acceptance of the Third-party Products by the City shall be in accordance with section 7.5 herein.

6.7 The Contractor shall grant, transfer, convey or assign, or cause to be granted, transferred, conveyed or assigned, to the City all rights to any Contractor-supplied Products, including Licensed Software, necessary for the City to use the Products for the intended purpose. Contractor warrants and represents that it has the right or will obtain the right to grant, transfer, convey or assign, or to cause to be granted, transferred, conveyed or assigned, the rights for the City to use any Contractor-supplied Products, including Licensed Software, for the intended purpose.

6.8 Contractor is not authorized to purchase on behalf of the City any Products subject to a license or use agreement without the prior written approval of the Department’s General Counsel or designee. Prior to execution of a purchase of these Products, Contractor shall present the proposed license, use agreement or other document setting forth the terms and conditions of the purchase to the Department’s General Counsel or designee for review and the opportunity to object to any terms or conditions set forth therein.

Article 7 Review and Acceptance of Deliverables; Inspection of Deliverables

7.1 Definitions

(a) “Document Deliverables” means all documentation required to be provided by the Contractor under the Agreement, including but not limited to, requirements documents, design documents, software documentation, Acceptance criteria, and test plans.

(b) “Final Acceptance” means a final determination by the City, in its sole discretion, that a System Deliverable satisfies all applicable Performance Specifications and other requirements of the Agreement, including successful completion of the Final Acceptance Period. Final Acceptance marks the point in time when the City takes ownership of the System Deliverable (and all previously Accepted components, if any) and the Warranty Period commences.

(c) “Final Acceptance Period” means the time period between Preliminary Acceptance and Final Acceptance of a System Deliverable, during which time period a System Deliverable must operate in Good Working Order in its intended live production environment for
thirty (30) consecutive days without the occurrence of a Severity Level 1 or Severity Level 2 defect.

(d) “Good Working Order” means the uninterrupted, trouble-free operation of the Product or System Deliverable, and all components thereof, in conformity with all applicable Performance Specifications and other requirements of the Agreement.

(e) “Incremental Release of Product Functionality” means the release of one or more of the predetermined, component parts of a System Deliverable that capture the Performance Specifications for specific user or System functionality and that are identified in the SOW.

(f) “Notice of Deficiency” means a notice to the Contractor that contains the reasons for Rejection of the Deliverable, including a reasonably detailed description of the deficiencies that must be remedied and a description of the Acceptance criteria that have not been satisfied. This notice may be in soft- or hard-copy, including email, and does not need to be referenced as such.

(g) “Preliminary Acceptance” means a determination of the City that a System Deliverable satisfies all applicable Performance Specifications and other requirements of the Agreement, including all Acceptance testing criteria that are agreed to by the Parties in writing, has no known Severity Level 1 or 2 defects, and has completed the City’s security accreditation requirements. Preliminary Acceptance constitutes authorization for the Contractor to commence operation of the System Deliverable in its intended live production environment, and marks the commencement of the Final Acceptance Period.

(h) “Severity Level(s)” means the Severity Levels described in Article 21 of the Agreement. The City shall make the determination of Severity Level for all purposes in accordance with these descriptions.

7.2 Document Deliverables

(a) All Document Deliverables are subject to the City’s review and Acceptance. The City shall use reasonable efforts to complete its review within seven (7) business days (unless the Parties agree to another period of time in the SOW) following receipt of the Document Deliverable, following which the City shall advise the Contractor in writing that:

(i) the Document Deliverable is Accepted. Acceptance must be evidenced by a Notice of Acceptance that is signed by a duly authorized representative of the City. A Notice of Acceptance is effective on the date of receipt by the Contractor;

(ii) the Document Deliverable is Rejected, in which case the City will provide a Notice of Deficiency; or

(iii) the City needs to extend the review period by an additional five (5) business days to complete its review.

If the Contractor has not received written confirmation that the Document Deliverable is Accepted or Rejected, the Contractor shall send a written inquiry as to the status of the Deliverable to the Department’s program manager. If the City does not Accept or Reject the Document Deliverable in writing within ten (10) business days of receipt of this inquiry, the Contractor shall escalate the issue in accordance with the governance structure set forth in the SOW. Failure by the City to Reject a Document Deliverable or
provide a Notice of Deficiency will not be deemed Acceptance by the City. Regardless of the City’s Acceptance of a Document Deliverable containing technical or functional requirements, designs, drawings or plans for a Deliverable, the Contractor shall provide the Deliverable with the proper technical and/or functional features, designs, and qualities to efficiently perform the work and carry out the requirements and intent of the SOW. Acceptance does not relieve the Contractor from responsibility for design or other errors of any sort in the technical or functional requirements, designs, drawings or plans.

(b) Following receipt of a Notice of Deficiency, the Contractor shall remedy the described deficiencies at no additional costs to the City within five (5) business days, unless the SOW sets forth a shorter period or the Notice of Deficiency sets forth a longer period, or as otherwise agreed to by the Parties in writing. Upon receipt of a revised Document Deliverable from the Contractor, the review period recommences, during which the City will review the corrected Document Deliverable to determine whether it is suitable for Acceptance. Except as otherwise agreed to by the Parties in writing, this process of correcting deficiencies will continue at no additional charge to the City until all deficiencies have been corrected. If the Contractor fails to remedy all deficiencies in a Document Deliverable within five (5) business days after receipt of a third Notice of Deficiency for a Deliverable, then the City may at any time thereafter declare the Contractor in default and terminate the Agreement, in whole or in part, pursuant to section 10.03 of Attachment I.

7.3 Incremental Releases of Product Functionality

(a) All Incremental Releases of Product Functionality are subject to the City’s review and Acceptance. In order to achieve Acceptance of an Incremental Release of Product Functionality, the Contractor shall demonstrate to the City a working version of the Incremental Release of Product Functionality that meets the Performance Specifications for the Incremental Release of Product Functionality, including showing the final user experience design, as well as functioning and fully-tested code. The City shall use reasonable efforts to complete its review within seven (7) business days following the end of Contractor’s demonstration of the Incremental Release of Product Functionality (unless the City requires a longer period of time in the SOW or the Parties agree to a longer period of time in the SOW), following which the City shall advise the Contractor in writing that:

(i) the Incremental Release of Product Functionality is Accepted. Acceptance must be evidenced by a Notice of Acceptance that is signed by a duly authorized representative of the City. A Notice of Acceptance is effective on the date of receipt by the Contractor;

(ii) the Incremental Release of Product Functionality is Rejected, in which case the City will provide a Notice of Deficiency; or

(iii) the City needs to extend the review period by an additional five (5) business days to complete its review.
If the Contractor has not received written confirmation that the Incremental Release of Product Functionality is Accepted or Rejected, the Contractor shall send a written inquiry as to the status of the Incremental Release of Product Functionality to the Department’s program manager. If the City does not Accept or Reject the Incremental Release of Product Functionality in writing within ten (10) business days of receipt of this inquiry, the Contractor shall escalate the issue in accordance with the governance structure set forth in the SOW. Failure by the City to Reject an Incremental Release of Product Functionality or provide a Notice of Deficiency will not be deemed Acceptance by the City. Acceptance of an Incremental Release of Product Functionality does not preclude Rejection of any System Deliverable.

(b) Following receipt of a Notice of Deficiency, the Contractor shall remedy the described deficiencies at no additional costs to the City within five (5) business days, unless the SOW sets forth a shorter period or the Notice of Deficiency sets forth a longer period, or as otherwise agreed to by the Parties in writing. Upon receipt of a revised Incremental Release of Product Functionality from the Contractor, the Contractor shall again demonstrate to the City a working version of the Incremental Release of Product Functionality that meets the applicable Performance Specifications and the review period recommences, during which the City will review the corrected Incremental Release of Product Functionality to determine whether it is suitable for Acceptance. Except as otherwise agreed to by the Parties in writing, this process of correcting deficiencies will continue at no additional charge to the City until all deficiencies have been corrected. If the Contractor fails to remedy all deficiencies in an Incremental Release of Product Functionality within five (5) business days after receipt of a third Notice of Deficiency for an Incremental Release of Product Functionality, then the City may at any time thereafter declare the Contractor in default and terminate the Agreement, in whole or in part, pursuant to section 10.03 of Attachment I.

(c) Additional acceptance criteria for Incremental Release of Product Functionality will be defined in the SOW.

7.4 Preliminary Acceptance of System Deliverables

(a) When the Contractor has determined that the conditions for Preliminary Acceptance of the System Deliverable have been satisfied, it shall notify the City in writing and shall submit all testing results and other documentation upon which this determination is based. Except as otherwise agreed to by the Parties in writing, the City shall have up to seven (7) business days following receipt of notification to review the Deliverables to determine whether the conditions for Preliminary Acceptance have been satisfied, following which the City shall:

(i) Issue to the Contractor a Notice of Preliminary Acceptance that is signed by a duly authorized representative of the City. A Notice of Preliminary Acceptance is effective on the date of receipt by the Contractor;
(ii) Issue to the Contractor a Notice of Deficiency, which includes but is not limited to a description of the Preliminary Acceptance criteria that have not been satisfied; or

(iii) Advise the Contractor in writing that the City needs to extend the review period by an additional five (5) business days to complete its review.

(b) If the Contractor has not received either a Notice of Deficiency or a Notice of Preliminary Acceptance, the Contractor shall send a written inquiry as to the status of the Deliverable to the Department’s program manager. If the City does not issue a Notice of Deficiency or Notice of Preliminary Acceptance within ten (10) business days of receipt of this inquiry, the Contractor shall escalate the issue in accordance with the governance structure set forth in the SOW. Failure by the City to provide a Notice of Deficiency will not be deemed Acceptance by the City.

(c) Following receipt of a Notice of Deficiency, the Contractor shall remedy the described deficiencies at no additional cost to the City within five (5) business days, unless the SOW sets forth a shorter period or the Notice of Deficiency sets forth a longer period, or as otherwise agreed to by the Parties in writing. Upon receipt of a notification from the Contractor that the deficiencies have been corrected, the City shall review the corrected System Deliverable to determine whether the conditions for Preliminary Acceptance have been satisfied. This process of correcting deficiencies will continue at no additional charge to the City until all deficiencies have been corrected and the Preliminary Acceptance criteria have been satisfied. If the Contractor fails to remedy all deficiencies in a Deliverable within five (5) business days after receipt of a second Notice of Deficiency for a Deliverable, then the City may at any time thereafter declare the Contractor in default and terminate the Agreement, in whole or in part, pursuant to section 10.03 of Attachment I.

7.5 Final Acceptance of System Deliverables

(a) Final Acceptance of a System Deliverable is conditioned upon the successful completion of the Final Acceptance Period, Contractor’s provision of an acceptable Resolution Plan as required by subsection 7.5(b), and issuance by the City of a Notice of Final Acceptance. Fulfillment of all required conditions is determined solely by the City. Upon the issuance of the Notice of Final Acceptance, Final Acceptance is deemed to occur retroactively on the date of completion of the Final Acceptance Period. If the Contractor has not received either a Notice of Deficiency or a Notice of Final Acceptance, the Contractor shall send a written inquiry as to the status of the Deliverable to the Department’s program manager. If the City does not issue a Notice of Deficiency or Notice of Final Acceptance within ten (10) business days of receipt of this inquiry, the Contractor shall escalate the issue in accordance with the governance structure set forth in the SOW. Failure by the City to provide a Notice of Deficiency will not be deemed Final Acceptance by the City under any circumstances.

(b) As a requirement to achieve Final Acceptance of a System Deliverable, the Contractor shall provide a plan acceptable to the Department for resolution of all Severity Level 3 deficiencies in the System Deliverable (“Resolution Plan”). The Resolution Plan must include a list of all Severity Level 3 deficiencies in existence as of the end of the Final Acceptance Period and dates by which the Contractor shall the correct these deficiencies.
The dates for correction in the Resolution Plan must be no later than the end of the Warranty Period.

(c) During the Final Acceptance Period, if the City provides notice to the Contractor of any Severity Level defects, the Contractor shall Respond to and Repair these defects in accordance with the Service Level Requirements.

7.6 Procedure if Acceptance Not Attained

(a) The Contractor shall not proceed with any activity under the Agreement that is conditioned upon the City’s Acceptance of a Deliverable in the absence of the City’s Acceptance, except as expressly authorized by the City in writing. An authorization to proceed does not constitute Acceptance of the Deliverable and does not obligate the City to pay for the Deliverable.

(b) In addition to the City’s right to declare the Contractor in default and terminate the Agreement, in whole or in part, if the Contractor cannot successfully complete the Final Acceptance Period within sixty (60) days or a longer time period as permitted by the City in writing, the City may notify the Contractor that it intends to:

   (i) Accept the System Deliverable as substantially completed and make payment in full; or

   (ii) Accept the System Deliverable as incomplete at a reduced rate determined by the City to reflect the reduced value of the System Deliverable to the City. The Contractor may provide information with respect to the reduced value of the Deliverable for the City’s consideration, and the City may thereafter revise the reduced rate.

7.7 Inspection of Deliverables

(a) The Contractor shall provide and maintain an inspection system acceptable to the City for inspection and/or testing of all Deliverables in accordance with this section 7.7. Complete records of all inspection work performed by the Contractor must be maintained and made available to the City during the term of the Agreement and for six (6) years thereafter.

(b) The City may inspect and test all Deliverables at all times and places during the term of the Agreement.

(c) If the City performs inspections and/or tests of Deliverables on the premises of the Contractor or a subcontractor, the Contractor shall furnish, and shall require subcontractors to furnish, at no cost to the City and at all times, all facilities and assistance necessary for the safe and convenient performance of these inspections and/or tests. For routine or scheduled inspections and/or tests of Deliverables, the City shall provide the Contractor with reasonable advance notice thereof. For urgent or emergency situations that require inspections and/or tests of Deliverables, as determined by the City, the City shall attempt to provide the Contractor with such advance notice as is possible under the circumstances, but in any event the Contractor shall grant the City immediate access to the Deliverable. Further, Contractor shall reimburse the City for all costs for travel, meals and lodging for up to two (2) City resources for each visit to any facility.
(d) If any of the Deliverables do not conform to all applicable Performance Specification and other requirements of the Agreement, the City may require the Contractor to provide the Deliverables again in conformity with the Performance Specifications and requirements, at no increase in contract amount. When the deficiencies in the Deliverables cannot be corrected by reperformance, the City may:

(i) Require the Contractor to take necessary action to ensure that future performance conforms to all applicable Performance Specification and other requirements of the Agreement; and

(ii) Reduce the cost of the Deliverables to reflect the reduced value of the Deliverables provided.

(e) If the Contractor fails to promptly provide the Deliverables again or to take the necessary action to ensure future performance in conformity with all applicable Performance Specification and other requirements of the Agreement, the City may:

(i) By contract or otherwise, obtain or procure the Deliverables and charge to the Contractor any cost incurred by the City that is related to the performance of the Deliverable; or

(ii) Terminate the Agreement, in whole or in part, for cause.

(f) At any point in the development of the System, the City may require an inspection and/or test of the System to determine whether or not the System is of the appropriate quality, contains bugs or security issues, and satisfies all applicable Performance Specifications and other requirements of the Agreement, including the SOW, appropriate to the phase of the project in which the inspection and/or test is performed. This inspection and/or test may include reviewing any code included within the System, other than the Third-party Products. The code review may consist of a systematic examination of computer source code intended to identify mistakes, evaluate overall quality and efficiency of the software, ensure all system components have the latest software patches, ensure compliance with the security requirements, and search for other common vulnerabilities. The review may include a combination of vulnerability scanning, penetration testing, static analysis of the source code, and expert code review by experts with intimate knowledge of “best practices” coding techniques.

4.3 At the discretion of the City, the inspection and/or test may be conducted by the City, or an independent third-party of its choosing.

4.4 If the City elects to undertake a code review, the System must pass the code review as part of the criteria for Final Acceptance of the System.

4.5 The City shall bear the costs of engaging a third-party to conduct the inspection and/or test of the System; provided, however, that if the System fails to satisfy all applicable Performance Standards and other requirements of the Agreement, Contractor shall reimburse the City for all costs associated with the inspection and/or test.
Article 8 Covenants, Representations and Warranties

8.1 Warranty of Products/Workmanship. The Contractor warrants that all Products furnished by or through Contractor pursuant to the Agreement will perform in accordance with all applicable Performance Specifications and other requirements of the Agreement, that the Documentation fully describes the proper procedure for using the Products, and that the Services will be provided in a workmanlike manner in accordance with industry standards.

8.2 Warranty of System Deliverables

(a) The Contractor warrants that it shall return all System Deliverables to Good Working Order for a minimum of three (3) months (or longer as set forth in the SOW) from the date of Final Acceptance (“Warranty Period”). The Contractor shall Repair all deficiencies in performance in System Deliverables that are identified prior to or during the Warranty Period, including but not limited to those deficiencies listed in the Resolution Plan, at no cost or expense to the City. The Contractor shall Repair all deficiencies identified after Final Acceptance in accordance with the Service Level Requirements. The obligation to Repair all deficiencies survives expiration of the Warranty Period.

(b) The Warranty Period for System Deliverables will be extended by the cumulative period(s) of time during which the System Deliverables experience a Severity 1 or Severity 2 deficiency lasting seventy-two (72) hours or longer.

(c) If the Contractor provides maintenance services during the course of the Warranty Period, charges for maintenance services will be supplemental to the warranty provided under this Section 8.2, and the cost of the maintenance services must reflect the value of the warranty. The Contractor shall not bill for the correction of any defect listed in the Resolution Plan.

8.3 Warranty of New Products. The Contractor warrants that, unless otherwise provided in the applicable Performance Specifications or other requirements of the Agreement, any Product specified and furnished by or through the Contractor will be new and the most current model or most recent release of regular stock product with all parts regularly used with the type of Product offered, with no attachment or part substituted or applied contrary to the manufacturer’s recommendations and standard commercial practice in the industry.

8.4 Manufacturer’s Warranties. Where a Product furnished by or through the Contractor is otherwise subject to a standard commercial warranty:

(a) The Contractor shall notify the City and pass through the manufacturer’s standard commercial warranty to the City at no additional charge.

(b) The standard warranty is in addition to, and does not relieve the Contractor from, any warranty obligations of the Contractor under the Agreement.

(c) The Contractor shall ensure that manufacturers’ warranties commence at the same time as any warranty obligations of the Contractor under the Agreement. The Contractor shall bear any additional costs associated with having the manufacturers’ warranty periods begin at the same time as the Contractor’s warranties if the Contractor owns, creates or controls the Product or if the additional cost is due to the Contractor’s delay.
(d) During the period of any warranty obligations of the Contractor, the Contractor shall also submit and coordinate all manufacturers’ warranty claims on behalf of the City for the Products furnished by the Contractor under the Agreement.

8.5 Software Virus Warranty. The Contractor warrants that the Products provided pursuant to the Agreement contain no viruses, worms, spyware or malware.

8.6 Software Disabling Mechanisms

(a) Induced Inhibiting Code. The Contractor warrants that the Licensed Software and any reports and data provided to the City under the Agreement do not contain any Induced Inhibiting Code (“IIC”) or any other inhibitor data or coding. “IIC” means any deliberately included application or coding that may degrade performance, result in inaccurate data, deny accessibility, or in any manner adversely affect programs or data or use of the Licensed Software or its operating environment.

(b) Hardstop/Passive License Monitoring. The Contractor warrants that the Licensed Software provided pursuant to the Agreement does not contain any coding that may disable the Licensed Software or impair in any way its operation based on the elapsing of a period of time, exceeding an authorized number of copies, advancement to a particular date or other numerals, or other similar self-destruct mechanisms (sometimes referred to as “time bombs,” “time locks,” or “drop dead” devices) or that would permit the Contractor to access the Licensed Software to cause disablement or impairment (sometimes referred to as a “trap door” device).

(c) Other Destructive Mechanisms. The Contractor warrants that the Licensed Software contains no destructive programming that (i) is designed to permit Contractor or third parties unauthorized access to, or use of, the City’s systems or networks; or (ii) would have the effect of disabling or otherwise shutting down all or any portion of the Licensed Software.

(d) Remedies. The Contractor agrees that in the event of a breach or alleged breach of this section 8.6, the City may not have an adequate remedy at law, including monetary damages, and that the City is consequently entitled to seek a temporary restraining order, injunction, or other form of equitable relief against the continuance of the breach, in addition to any and all remedies to which the City may be entitled.

8.7 Covenant of Right to Use. To the extent that the Contractor is procuring any Products for the City, the Contractor shall obtain on behalf of the City the necessary rights for the City to use and possess the Product, by, at the City’s sole discretion, lease, license, ownership or otherwise, provided that if ownership is specified, Contractor shall ensure that the City acquires clear title free of all liens.

8.8 Non-Infringement

(a) Contractor represents and warrants that the Custom Products, Existing Products (excluding Existing Products licensed from third parties), and any enhancements thereto: (i) are wholly original material not published elsewhere (except for material that is in the public domain); (ii) do not violate any copyright, patent, trademark or trade secrets law; (iii) are not an infringement of any kind of any rights of any third party; and (iv) do not constitute defamation or invasion of the right of privacy or publicity.
(b) To the extent that the Custom Products or Existing Products incorporate any non-original material, the Contractor represents and warrants that it has obtained all necessary permissions and clearances, in writing, for the use of the non-original material under the Agreement, copies of which shall be provided to the City upon execution of the Agreement.

(c) To the extent that the Contractor is procuring Existing Products from a third party for the City’s benefit, the Contractor represents and warrants that it has obtained all necessary permissions and clearances, in writing, to provide the Existing Products, copies of which shall be provided to the City upon execution of the Agreement.

8.9 The Contractor warrants that all Source Code in Custom Products, and if applicable, Licensed Software, will be written according to the City’s programming standards, which will be available upon request by the Contractor, or Contractor-proposed standards that have been approved by the City. The Contractor further warrants that it will follow a software development lifecycle (SDLC) approved by the City.

8.10 THE WARRANTIES EXPRESSLY SET FORTH IN THE AGREEMENT ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

Article 9 Contractor Personnel

9.1 Generally

(a) “Contractor Personnel” means all individuals furnished by, through, or on behalf of, the Contractor including through its agents and subcontractors, to perform the Contractor’s obligations under the Agreement.

(b) The Contractor shall ensure that (i) all Contractor Personnel throughout the duration of each individual’s performance under the Agreement have all of the skills, knowledge, training, and experience necessary to perform the Services in a competent and professional manner and in accordance with the requirements of the Agreement, including the SOW, and (ii) an adequate number of these appropriately qualified Contractor Personnel will be available to timely perform the Contractor’s obligations under the Agreement.

(c) The Contractor is fully responsible to the City for the acts and omissions of all Contractor Personnel.

(d) The Contractor shall provide a quarterly report on the performance of, and any risks and/or issues associated with, each of the Contractor Personnel.

9.2 Approval

(a) Upon the City’s request, Contractor shall submit resumes and references of all proposed Contractor Personnel. The Department is entitled to interview all proposed Contractor Personnel at no charge to the City. Where the Contractor has provided resumes to the Department, the Contractor shall update information on the resume to the extent of a material change.
(b) The Contractor shall comply with all security requirements of the City, including the requirement to conduct an individual background check. At the City’s request, the Contractor shall provide the City with the results of a particular individual’s background check. The Contractor shall require that all Contractor Personnel comply with all security requirements of the City.

(c) The Department may reject any proposed Contractor Personnel for any reason, including but not limited to failure to meet the requirements of the relevant labor category, lack of technical competency, and/or performance-related or security concerns.

(d) Contractor Personnel shall execute non-disclosure/confidentiality agreements prior to providing services to the City.

9.3 Employment Eligibility

(a) The Contractor shall ensure and require that all Services performed under the Agreement are performed in the United States unless another location is specifically approved in writing by the City.

(b) The Contractor shall take all necessary and appropriate steps to determine that each of the Contractor Personnel is legally eligible to work in the United States and that this eligibility is maintained at all times that any of these personnel perform Services under the Agreement.

The requirements of this subsection 9.3(b) do not apply to individuals who are solely performing Services outside of the United States.

(c) Contractor Personnel shall be available to meet or conference with City resources during all business hours regardless of the location where Contractor Personnel are performing Services.

9.4 Removal and Replacement

(a) At any time during the Agreement, the Department may require the Contractor to remove Contractor Personnel for any reason, including but not limited to, failure to meet the requirements of the relevant labor category, lack of technical competency, performance-related or security concerns, and/or the violation of a law or City rule, policy or practice. The Department shall provide notice to the Contractor of the effective date of the removal and whether the Contractor Personnel requires replacement and the Contractor shall cause the individual to cease work on the effective date.

(b) Whenever there has been removal, turnover, or reassignment of Contractor Personnel permitted hereunder, within ten (10) business days of this removal, turnover or reassignment, the Contractor shall provide a replacement individual of comparable or better skills, knowledge, training and experience to perform for compensation that is equal to or less than the rate of the individual being replaced, which appointment is subject to approval of the Department.

(c) Without limiting any other right of the City, the City may, at any time, without notice, deny access to its premises, facilities, networks or computer equipment to any individual for any reason.

9.5 Key Personnel
(a) The Contractor acknowledges that the Contractor Personnel identified in a Proposal have unique skills, knowledge, training, and experience such that the Contractor’s representation that it would engage or employ these individuals on the project was a material consideration in the selection of Contractor for the project (“Key Personnel”). Except as otherwise agreed to by the Parties in writing, Contractor’s engagement or employment on the project of Key Personnel or their replacements made in accordance with this section 9.5 is a material obligation of the Contractor.

(b) Except as otherwise agreed to by the Parties in writing, it is the intent of the Parties that Key Personnel initially assigned to perform work under the Agreement continue through completion of the Services or a time as the Parties mutually agree that an individual’s responsibilities have been fulfilled under the Agreement. Key Personnel shall not be removed by the Contractor or reassigned by the Contractor to other duties while performing Services, except for the following reasons: termination; serious illness; family leave; personal hardship; or other similar material change in the employment circumstances of the individual that is beyond the Contractor’s control, as permitted by the Department.

(c) Within ten (10) business days of the departure of Key Personnel, the Contractor shall provide a replacement individual of comparable skills, knowledge, training and experience to perform the work for compensation that is equal to or less than the rate of the individual being replaced, which appointment is subject to approval by the Department. The Contractor shall ensure a smooth transition between the departing and newly-assigned individuals at no additional cost to the City, which transition must include the provision of knowledge transfer documentation, cooperation between the former and newly-assigned individuals, and an overlap in the assignment of the former and newly-assigned individual for a duration of at least ten (10) business days, unless the Department consents to a shorter period.

Article 10 Subcontracting

10.1 In addition to complying with the provisions of Section 3.02 of Attachment I, all subcontracts entered into by the Contractor for the performance of its obligations, in whole or in part, under the Agreement must contain provisions specifying that:

(a) The subcontractor shall comply with the confidentiality provisions set forth in Article 17 of the agreement between the City and the Contractor, and the subcontractor agrees that the City may enforce the confidentiality provisions directly against the subcontractor as if the City were a party to the subcontract;

(b) The subcontractor shall maintain commercial general liability insurance in the amount per occurrence no lower than the lesser of: i) $2,000,000 or ii) the total value of the subcontract, and otherwise in compliance with Article 7 of Attachment I; and

(c) The subcontractor shall comply with defense and indemnification obligations applicable to the Contractor under the agreement between the City and the Contractor, and subcontractor agrees that all of its obligations to provide defense and indemnification to the Contractor are extended to the City.

10.2 The Contractor shall secure the best value for the City in its selection of vendors of goods and those services which are paid for on a pass-through basis (e.g. support agreements or specialized
subcontractor resources provided on a cost-plus basis under section 14.10). At the City’s request, the Contractor shall provide documentation evidencing its efforts to secure best value, which may include:

(a) seeking quotes from three (3) vendors for the provision of goods or services which are paid for on a pass-through basis, unless otherwise agreed to by the Parties, or unless the City agrees that a sole source award is necessary and notice is provided to the City prior to the award;
(b) releasing a request for proposal(s); or
(c) requiring volume purchasing discounts.

10.3 When procuring goods manufactured by the Contractor or a Contractor Affiliate, the Contractor shall offer to the City prices, terms, warranties, and other benefits that are comparable to or better than those offered by the Contractor or any Contractor Affiliate to any other similarly-situated domestic state or local governmental customer. If during the term of the Agreement, the Contractor or any Contractor Affiliate enters into arrangements with any other similarly-situated domestic state or local governmental customer providing more favorable prices, terms, warranties, or other benefits, the Contractor shall notify the Department and the Contractor shall execute an amendment to the Agreement to provide the better terms to the Department.

10.4 Pursuant to Procurement Policy Board Rule 2-08(f)(2), the Contractor will be charged a fee for the administration of the VENDEX system, including the vendor name check process, if a vendor name check review is required to be conducted by the Department of Investigation. The Contractor shall also pay the applicable required fees for any of its subcontractors for which vendor name check reviews are required. The fee(s) will be deducted from payments made to the Contractor under the Agreement. For contracts with an estimated value of less than or equal to $1,000,000, the fee will be $175. For contracts with an estimated value of greater than $1,000,000, the fee will be $350.

Article 11 Ownership of Deliverables

Sections 11.1 through 11.6 of this Article 11 supersede Section 6.01 (Copyrights) of Attachment I.

11.1 Definitions

For purposes of this Article 11, the following terms shall have the following meanings:

(a) “Custom Products” means Products, preliminary, final or otherwise, that are created or developed by Contractor, its employees, agents, subcontractors or partners for the City under and particular to the Agreement. If a Product is software, the Custom Product includes both the Source Code and the Object Code.

(b) “Existing Products” means Products, Licensed Software, and other licensed products that exist prior to the commencement of the Services under the Agreement or are not developed at the City’s expense. The Contractor bears the burden of proving that a particular Product was in existence prior to the commencement of Services under the Agreement.
“Documentation” means the complete set of manuals (e.g., user, installation, instruction or diagnostic manuals) in either hard or electronic copy, that are necessary to enable the City to properly test, install, operate and enjoy full use of the Product.

“Licensed Software” means individually and collectively all of the software provided under the Agreement. “Licensed Software” includes error corrections, upgrades, updates, enhancements or new releases required under the license terms, and any deliverables due under maintenance and support requirements (e.g., patches, fixes, program temporary fixes, programs, code or data conversion, and custom programming).

“Object Code” means the machine executable code that can be directly executed by a computer’s central processing unit(s).

“Source Code” means the programming statements or instructions written or expressed in any language understandable by a human being skilled in the art, which are translated by a language compiler to produce executable machine Object Code.

11.2 City Ownership of Custom Products

(a) Custom Products are considered “work-made-for-hire” within the meaning and purview of Section 101 of the United States Copyright Act, 17 U.S.C §101, and upon creation the City is hereby deemed the copyright owner thereof and of all aspects, elements and components thereof in which copyright protection might exist. To the extent that the Custom Products do not qualify as “work-made-for-hire,” effective upon creation the Contractor hereby irrevocably transfers, assigns and conveys exclusive copyright and patent ownership in and to the Custom Products to the City, free and clear of any liens, claims, or other encumbrances. The Contractor retains no intellectual property right or interest in the Custom Products. The Custom Products may be used by the Contractor for no purpose other than in the performance of its responsibilities under the Agreement without the prior written permission of the City.

(b) The Contractor acknowledges that the City may, in its sole discretion, register copyright, trademark, patent and patent designs in the Custom Products with the United States Copyright Office, the United States Patent and Trademark Office, respectively, or any other government agency authorized to grant copyright, trademark and patent registrations. The Contractor shall fully cooperate in this effort, and shall provide any and all documentation necessary to accomplish this.

(c) The Contractor shall ensure that the City has at all times immediate access to the most current version of the Custom Products and work in process, such that the City, independent of the Contractor or a third party, may utilize the Custom Products in whatever manner it determines appropriate.

(d) The City may, in its sole discretion, grant to the Contractor a non-exclusive license to use the Custom Products in return for compensation (e.g. lump sum payment(s), royalties, cost reductions or credits) and subject to terms as are mutually agreed upon by the Parties and set forth in a license agreement or an amendment to the Agreement.

11.3 Ownership of Existing Products
(a) Title and ownership of Existing Products, including Licensed Software, that are owned by Contractor or a third-party, whether or not embedded in, delivered or operating in conjunction with hardware or Custom Products, remain with Contractor or the third-party, as applicable.

(b) Existing Products, including Licensed Software, that are licensed to the City are licensed in accordance with the standard license agreement of Contractor or a third-party, as applicable, except as modified by mutual agreement of the City and the Contractor or the third-party. Notwithstanding the foregoing, the Contractor hereby grants to the City a paid-up, royalty-free, worldwide, non-exclusive, perpetual, and irrevocable license to use, execute, reproduce, distribute to authorized users, make, modify, adapt, display, perform, create derivative works of, and copy for backup and disaster recovery purposes, Existing Products (including Licensed Software), with all license rights necessary to fully effectuate the purposes of the Agreement and the business purposes of the City.

(c) Title and ownership of tangible Existing Products such as hardware or other equipment shall pass to the City upon Acceptance.

11.4 Use of General Knowledge

Nothing contained herein precludes either Party from otherwise using any general knowledge, skills, ideas, concepts, know-how, techniques, and experience learned by that Party during the performance of its obligations under the Agreement.

11.5 License to Federal/New York State Government

If the services under the Agreement are supported by a federal grant of funds, the federal and New York State government reserves a paid-up, royalty-free, worldwide, non-exclusive, perpetual and irrevocable license to reproduce, publish, or otherwise use and to authorize others to use, for federal or State government purposes, the copyright, trademark and patent in any Custom Products developed under the Agreement.

11.6 Publication

If the Contractor publishes a work dealing with any aspect of performance under the Agreement, or with the results of the performance, the City shall have a paid-up, royalty-free, non-exclusive, perpetual and irrevocable license to reproduce, publish, or otherwise use this work.

11.7 Patents and Inventions

This Section supersedes Section 6.02 (Patents and Inventions) of Attachment I.

(a) For purposes of this Section, the following terms shall have the following meanings:

(i) “Invention” means any invention or discovery that is or may be patentable or otherwise protectable under Title 35 of the United States Code.

(ii) “Made,” when used in relation to an Invention, means the conception or first actual reduction to practice of the Invention.
(iii) “Subject Invention” means any Invention of the Contractor (or its employee or subcontractor) Made in the course of performing services under the Agreement, other than Custom Products.

(b) The Contractor shall promptly and fully report to the City any Invention Made in the course of performing its obligations under the Agreement. Except as provided in paragraph (c) below, the Contractor hereby grants to the City a paid-up, royalty-free, worldwide, non-exclusive, perpetual and irrevocable license to use each Subject Invention, including a license in each patent application filed in any country on the Subject Invention and any resulting patent in which the Contractor obtains title, or to the extent that the Contractor does not own the rights to the Subject Invention, the patent application and the resulting patent, the Contractor shall make best efforts to obtain by assignment sufficient rights in the Subject Invention, the patent application and the resulting patent to grant to the City the foregoing license.

(c) If the services under the Agreement are supported by a federal grant of funds, the Contractor shall promptly and fully report to the federal government for the federal government to make a determination as to whether patent protection on any Invention Made in the course of performing services under the Agreement shall be sought and how the rights in the Invention, including rights under any patent issued thereon, shall be disposed of and administered in order to protect the public interest.

**Article 12 Software License Terms**

12.1 License Grant

The Contractor hereby grants to the City a paid-up, royalty-free, worldwide, non-exclusive, perpetual, and irrevocable license to use, execute, reproduce, distribute to authorized users, make, modify, adapt, display, perform, create derivative works of, and copy for back-up and disaster recovery purposes, the Licensed Software, with all rights necessary to fully effectuate the purposes of the Agreement and the business purposes of the City.

12.2 License Documentation

The Contractor, at its expense, shall deliver one (1) hard copy and one (1) master electronic copy, of the Documentation in a mutually agreeable format. The Contractor hereby grants to the City a paid-up, royalty-free, worldwide, non-exclusive, perpetual, and irrevocable license to use, reproduce (including downloading electronic copies of the Documentation), make, modify, adapt, display, perform, create derivative works of, and copy for back-up purposes, the Documentation, and distribute the Documentation either electronically or otherwise to authorized users, with all rights necessary to fully effectuate the purposes of the Agreement and the business purposes of the City.

12.3 License Transfers

The City may transfer or combine the Licensed Software for use: (a) with different hardware or other equipment, regardless of capacity; (b) at an alternative or consolidated site; (c) to a different operating system platform; or (d) for use by any other City agency. The City is not required to obtain the approval of the Contractor for these license transfers.
12.4 City Contractor/Agent Use of theLicensed Software

Notwithstanding any inconsistent provision of the Agreement, the City may permit its contractors, subcontractors, or other agents to access and/or use the Licensed Software for the City’s internal purposes and for the purposes of providing services to the City, including but not limited to, maintaining the City’s business operations, archival back-up and disaster recovery services.

Article 13 Source Code Escrow

13.1 To the extent that the Agreement includes Licensed Software owned by the Contractor and licensed to the City (excluding “off-the-shelf” software), the Contractor represents that:

(a) it has entered into, and that it shall maintain in full force and effect, a Source Code escrow agreement (“Escrow Agreement”) with an escrow agent (“Escrow Agent”);

(b) the Escrow Agreement provides substantially the same terms and conditions as specified in section 13.2 below; and

(c) all Source Code and related documentation for the Licensed Software is under escrow deposit pursuant to said Escrow Agreement.

The Contractor shall provide to the City all information necessary for the City to comply with registration requirements, if any, of the Escrow Agent. The Contractor shall provide thirty (30) days prior written notice of a change of Contractor’s Escrow Agent.

13.2 The Escrow Agreement terms and conditions are as follows:

(a) Source Code must be held by the Escrow Agent in trust for the City, and/or the City named as a beneficiary;

(b) All updates of the Licensed Software must be escrowed as they are issued;

(c) The Escrow Agent must verify deposit of the Licensed Software and all updates thereof and so notify the City;

(d) The City may require periodic testing of all Source Code held in escrow; and

(e) If the Contractor, its assignee or successor (i) becomes insolvent or ceases to exist as a business entity, or (ii) fails to perform its obligations under the Agreement and fails to cure said failure within thirty (30) days following receipt of written notification of said failure, the City shall have the right to so certify to the Escrow Agent and to direct the Escrow Agent to provide the City with a copy of the Source Code and commentary for the installed release level of the Licensed Software used by the City. All Source Code materials granted under this paragraph (e) will be maintained subject to the confidentiality provisions of the Agreement and will be used solely for the business purposes of the City. Title to any Source Code released to the City remains the property of the Contractor.

13.3 The Contractor shall certify in writing that it has deposited, and thereafter will maintain, a current copy of all Source Code related to the Licensed Software, including current commentary, with the Escrow Agent and agrees to comply with the obligations set forth in the Escrow Agreement as required hereby.
13.4 Source Code related to the Licensed Software, as well as any corrections or enhancements to the Source Code, must be updated for each new release, patch, service pack or upgrade of the Licensed Software and placed in escrow as required by this Article 13.

13.5 The Contractor shall certify in writing annually that the Source Code escrow remains in effect with the Escrow Agent in compliance with the terms of this Article 13 and that the Source Code is up to date.

13.6 To the extent that the Agreement requires the Contractor to procure software for the City that is developed or licensed by a third-party, the Contractor shall undertake reasonable efforts to include the provisions set forth in this Article 13 in any resulting software license agreement.

Article 14 Payment

14.1 Estimated Contract Amount. The total payments to the Contractor under the Agreement will be based upon the actual work satisfactorily performed or provided pursuant to the Agreement and SOW.

14.2 Provisions Applicable

(a) Contractor shall price the SOW on the basis of a fixed-price, time and materials pricing, or other payment structure, as directed by the City. Contractor shall base all payments, regardless of pricing method, upon the applicable Hourly Rates.

(b) The City is not liable to pay for a Deliverable, or any component thereof, until it has been received, inspected and Accepted by the City. Mere acknowledgement by City Personnel of the delivery or receipt of the Deliverable is not deemed or construed as Acceptance of the Deliverable, or any component thereof delivered or received.

(c) The Contractor shall not invoice the City for any additional services it performs to remedy deficiencies in work performed by the Contractor under the Agreement or SOW.

(d) The Contractor shall not, unless the City expressly consents in writing, use an individual whom it assigns to work full-time under the Agreement or SOW to work under any other engagement, either for the City or another customer.

(e) Neither the payment of hourly fees on a monthly basis, nor the payment of progress payments before the final delivery date of a Deliverable, constitutes a waiver by the City of its right of Acceptance of the Deliverable(s).

14.3 Billing and Invoicing Procedures

(a) Each invoice must include the information and be in the format required by the City. The City’s current requirements are set forth in an Attachment BI (Billing and Invoices) and the City reserves the right to modify the content, format and submission instructions for invoices. Invoices shall be accompanied by any report that Attachment BI requires to accompany an invoice.
(b) Payments will be made to the Contractor in accordance with the Prompt Payment provisions of the New York City Procurement Policy Board Rules.

(c) Upon the direction of the Department, the Contractor shall require its resources, including subcontractors, to utilize an automated time-keeping system provided by the City for this purpose.

(d) Notwithstanding any amount invoiced by Contractor, the City shall pay ninety percent (90%) of the undisputed amounts of each invoice and the remainder constitutes Retainage. The City shall pay to the Contractor half of the Retainage, five percent (5%) of the total undisputed invoice amount, no sooner than Final Acceptance; the City shall pay to Contractor the other half of the Retainage upon Contractor’s resolution of eighty percent (80%) of the Severity Level 3 defects set forth in the Resolution Plan created under Section 7.5(b).

(e) Submission of an invoice and payment thereof by the City does not preclude the City from demanding from the Contractor a refund or price adjustment in any case where a Deliverable is found to deviate from the terms and conditions of the Agreement. Any Deliverable that does not meet these terms and conditions may be Rejected, or may be Accepted on an adjusted price basis in accordance with subsection 7.7(d), as may be determined by the City.

14.4 Competitive Pricing

(a) The Contractor shall offer the City competitive pricing for Hourly Rates. The Contractor shall ensure that the Hourly Rates are equivalent to or better than the hourly rates corresponding to resources with similar education and experience offered by the Contractor and all Contractor Affiliates to state and local government entities:

(i) within, and including, New York State; and

(ii) using the General Services Administration’s Schedule 70 Cooperative Purchasing.

(b) If, during the term of the Agreement, the Contractor or any Contractor Affiliate enters into arrangements with any customer described in subsection (a) providing more favorable hourly rates, the Contractor shall notify the Department and execute a change order amending the Agreement to reflect a lower Hourly Rate for future jobs and extensions of existing Task Orders. The Contractor shall certify in writing to the Department's Agency Chief Contracting Officer, or other designee, that it is in compliance with this provision within the first thirty (30) days of the term of the Agreement, and shall recertify no later than December 31 of each calendar year during the term of the Agreement. If requested by the Department, the Contractor shall provide relevant documentation to support its certification.

(c) The effective date of the amendment to reflect a lower Hourly Rate as required by section 14.4(b) will be the earlier of: (i) the effective date of the engagement with a customer
described in section 14.4(a) that provides more favorable hourly rates, or (ii) January 1 of the applicable yearly certification required under paragraph 14.4(b).

(d) In addition to the Contractor’s obligations under 14.4(a) and (b), the Contractor shall use commercially reasonable efforts to compare the Hourly Rates to the hourly rates offered to domestic state and local governmental customers and shall extend comparable pricing to the City.

14.5 Time and Materials Work

(a) Services provided on a time and materials basis must be billed in accordance with the rates set forth in Schedule A of Attachment PRC, entitled “Hourly Rate Schedules.” The Hourly Rates are the maximum allowable rates applicable to all resources engaged by the Contractor to perform Services pursuant to the Agreement. The City and the Contractor may mutually agree that the Hourly Rate(s) applicable to one or more resource(s) may be reduced with respect to the provision of particular Services or a particular Task Order.

(b) Unless otherwise approved in writing by the Department’s project manager, the Contractor shall not invoice the City for more than forty (40) hours per week of work performed by any individual under the Agreement.

(c) The City reserves the right to direct the Contractor to reduce the level of staffing provided by the Contractor.

(d) Notwithstanding the provisions of this Section 14.5, where the City has authorized the Contractor to perform Services at a location outside of the United States, the Hourly Rates must be based upon the Hourly Rates with an additional discount applied (“Discounted Hourly Rate”). The Discounted Hourly Rate will be mutually agreed upon by the Parties on a case-by-case basis.

14.6 Fixed-Price Work

(a) If some or all of the work for a project is to be provided on a no-cost or fixed-price basis, that will be indicated in the Task Order. In this case, the Contractor shall complete on schedule all of the work that is indicated therein to be performed on a no-cost or fixed-price basis, even if the Contractor resources required to complete the work are more than the Contractor had estimated in agreeing to the Task Order and/or the cost to the Contractor exceeds the fixed price.

(b) Unless otherwise provided in a Task Order, the payment Milestones of no-cost or fixed-price work indicated in a Task Order shall be conditioned upon the City’s Acceptance of designated Deliverables.

14.7 Auxiliary Fees

All fees to be paid to the Contractor (including fees based on fixed price, time and materials and other payment methods) include all auxiliary and incidental support costs such as printing,
copying, secretarial, typing, program entry, internal timesheets, invoicing, etc., and further include all expenses for travel, meals and lodging. Any fees that the Contractor is required to pay in order to deliver the Services and Products under the Agreement, such as the Industrial Funding Fee (IFF) for GSA Schedule Items, are also deemed to be included in all fees to be paid by the City to the Contractor.

14.8 Product Procurement

(a) The City shall pay the mark-up percentage, specified in the Contractor’s Price Proposal, on the procurement of Third-party Products over the actually-paid, discounted cost of the Third-party Products ("Third-party Products Mark-up"). No mark-up of any kind applies to the purchase of maintenance or support services. The Contractor shall purchase Third-party Products at the lesser of: Contractor’s discounted prices; New York State Office of General Services (OGS) commercial list price; or General Services Administration (GSA) Schedule commercial list price.

(b) Third-party Products Mark-up includes any administrative fees that the Contractor must pay for Products purchased under the GSA or other schedule.

(c) If Third-party Products include any goods or services available for purchase under a contract between a vendor and the OGS or the GSA, Contractor’s net pricing for the City (including any Third-party Products Mark-up, where applicable) may not exceed the lowest purchase price available for the goods or services set forth in either the OGS or GSA contract, as applicable.

(d) The Contractor shall pass-through to the City Contractor’s corporate discounts and rebates on Products.

14.9 Labor Laws

(a) The Contractor shall ensure that all Services are performed in strict compliance with all applicable labor laws, including but not limited to, Section 220 and 230 of the New York State Labor Law, and other prevailing wage laws and regulations ("Prevailing Wage Laws").

(b) The Contractor shall require strict compliance with all applicable labor laws, including but not limited to Prevailing Wage Laws, in the performance of all of its subcontracts, and shall require its subcontractors and consultants to provide all documentation to the City as may be required by law. The filing of payrolls in a manner consistent with applicable provisions of the Prevailing Wage Law is a condition precedent to payment of any sums due under this Agreement.

(c) The Hourly Rates shall include any and all costs incurred by the Contractor or its subcontractor(s) attributable to the engagement of prevailing wage labor, including but not limited to overhead, profit and administrative charges. At the discretion of the City, prevailing wage labor will be billed to the City on a fixed price or time and materials basis.
(d) In the event Contractor or any of its subcontractors is found liable for a violation of the Prevailing Wage Law, Vendor shall be liable to the City for the cost of enforcement.

14.10 Specialized Subcontractor Personnel

(a) “Cost-plus Hourly Rate” means the actual cost to the Contractor plus its administrative costs, which administrative costs cannot exceed twenty dollars ($20) per hour.

(b) Subject to the City’s review and approval, the Contractor may substitute the Cost-plus Hourly Rate for the Hourly Rate (on a time and materials basis or as a basis for a fixed price) for specialized subcontractor personnel under the following circumstances:

(i) the specialized subcontractor personnel have been requested specifically in the SOW;

(ii) the total value of all work for which a Cost-plus Hourly Rate is being proposed does not exceed ten percent (10%) of the total not-to-exceed value of the Agreement; and

(iii) in addition to any other invoicing requirements of the Agreement, the Contractor shall provide third party invoices to substantiate the actual cost of the specialized subcontractor personnel.

Article 15 Ownership and Return of Data

15.1 The City retains sole ownership and intellectual property rights in and to all data, databases, data compilations, reports, charts, graphs, diagrams, or other information created, generated or maintained by the Contractor on behalf of the City pursuant to the Agreement or provided or made accessible by the City to the Contractor pursuant to the Agreement (“City Data”). The Contractor does not have the right to retain any City Data.

15.2 Within thirty (30) days of the City’s request at any time during the Agreement term or after expiration or early termination of the Agreement, the Contractor shall, at no cost to the City, perform the following actions as instructed by the City:

(a) transmit the City Data to the City or its designee in a format that is easily usable by the City or its designee and does not contain any proprietary software or other materials of the Contractor or third parties; or

(b) destroy the City Data and any copies, extracts, descriptions, and summaries thereof contained in the Contractor’s records or systems, and provide the City with a written certification of the destruction.

15.3 If the Contractor is required to create, generate, or maintain City Data pursuant to the Agreement and the City Data is held by the Contractor outside of the City’s information technology infrastructure, the Contractor shall provide the City or its designee with regular, automated delivery of the City Data in the manner, format and at the frequency prescribed by the City.
Article 16 Infringement Indemnification

This Article supersedes Section 8.04 (Infringement Indemnification) of Attachment I.

16.1 The Contractor shall defend, indemnify and hold the City harmless from any and all claims (even if the allegations of the lawsuit are without merit) or judgments for damages and from costs and expenses (including reasonable attorneys’ fees) to which the City may be subject or which it may suffer or incur allegedly arising out of or in connection with any claim that the Contractor and/or its subcontractors in the performance of the Agreement has infringed or violated, or a Product or use or possession thereof has infringed or violated, any copyright, patent, trademark, trade secrets, or any other proprietary or personal right of any third-party. The Contractor shall defend, indemnify, and hold the City harmless regardless of whether or not the alleged infringement arises out of compliance with the Agreement’s scope of services/scope of work. Insofar as the facts or law relating to any claim would preclude the City from being completely indemnified by the Contractor, the City shall be partially indemnified by the Contractor to the fullest extent permitted by law. Furthermore, the Contractor shall defend and settle at its sole expense all suits or proceedings brought against the Contractor arising out of the foregoing. In cases involving a Product used by the City, no settlement may be entered into that prevents the City from continuing to use the Product without the City’s prior written consent. In all events, the City may participate, through its own counsel and at its own expense, in the defense of any suit or proceeding for which the Contractor has the obligation to defend.

16.2 The Contractor is not required to indemnify the City under section 16.1 to the extent that a claim or judgment is based on:

(a) modifications made to the infringing item in question by anyone other than the Contractor and its subcontractors, except to the extent that the modification is authorized by or performed in accordance with specifications provided by the Contractor;

(b) the combination, operation or use of the infringing item with other items the Contractor did not supply, except to the extent the combination, operation or use is authorized in writing by the Contractor or known to the Contractor at the time of System implementation; or

(c) use of the infringing item after the Contractor notifies the City to discontinue use due to a claim or judgment, provided the Contractor has provided the City with a reasonable work-around.

16.3 In the event that an injunction or order is obtained against the City’s use of the Product, or if in the Contractor’s reasonable opinion the Product is likely to become the subject of a claim of infringement or violation of a copyright, patent, trademark, trade secrets, or any other proprietary or personal right of any third-party, or if the City’s ability to enjoy use of the Product has become materially disrupted by a claim of a third-party, at the Contractor’s sole option and expense, the Contractor shall:

(a) procure for the City the right to continue using the Product; or

(b) replace or modify the Product so that it becomes non-infringing, but only if:
(i) the replacement or modification does not adversely affect the Performance Specifications for the Product or its use by the City; and

(ii) the City has approved, in writing, the replaced or modified Product.

16.4 If the options set forth in section 16.3 are not available, the Contractor shall accept return of the Product from the City and shall refund the City the amount paid for the Product.

Article 17 Confidentiality

17.1 For purposes of this Article, the following terms have the following meanings:

(a) “City Confidential Information” means, except as provided in paragraph (c) below, all tangible and intangible information and materials belonging to the City or in the City’s possession or control that are of a confidential or proprietary nature, whether or not marked or identified as confidential or proprietary, and are disclosed or made accessible to the Contractor, including but not limited to:

(i) all non-public information concerning the programs, processes, statistics, research, development, strategic plans, or the like with respect to the operations and activities of the City;

(ii) all information concerning the City’s computer systems and technology, including information concerning current and future hardware, software, configurations, operations, networks, computing facilities and locations, processes, research, projects, designs, and specifications;

(iii) all computer programs (including code, software output, screen displays, file hierarchies, algorithms, graphics, and user interfaces), data, databases, and data compilations that may be used with computer programs, and related designs, documentation, technical data, research, formulas, techniques, processes and technology;

(iv) all non-public information concerning current and/or former City employees, contractors and/or vendors, and members of the public;

(v) all information that the City receives from third parties if the City is subject to a duty to keep the information confidential;

(vi) all original and copied notes, memoranda, or other records and documentation of Contractor to the extent relating to, derived from, and/or incorporating any City Confidential Information;

(vii) any other confidential or proprietary information and/or materials relating to the City’s business or operations (including trade secrets, processes, and/or financial information); and

(viii) all information marked or identified as “confidential” or “proprietary” in written or electronic form when disclosed and/or made accessible to the Contractor or its designee.
“Contractor Confidential Information” means, except as provided in paragraph (c) below, all tangible and intangible information and materials belonging to the Contractor or in the Contractor’s possession or control that is of a confidential, proprietary, or trade secret nature and is marked or identified as “confidential,” “proprietary,” or “trade secret” in written or electronic form when disclosed or made accessible to the City or its designee.

“Confidential Information” means City Confidential Information and/or Contractor Confidential Information, as the context requires. “Confidential Information” of either party does not include information that:

(i) is known to the Receiving Party prior to its receipt hereunder without any obligation of confidentiality, as can be shown by documentation of the Receiving Party;

(ii) is generally available to the public, or which thereafter becomes generally available to the public, through no wrongful act of the Receiving Party or any entity acting on its behalf;

(iii) is rightfully obtained by the Receiving Party from any third party without restriction and without violating any duty of confidentiality;

(iv) is independently developed by or on behalf of the Receiving Party without use of or reference to any Confidential Information of the Disclosing Party and without breach of this Agreement, as can be shown by documentation of the Receiving Party; or

(v) is approved in writing by the Disclosing Party for use and/or disclosure.

“Disclosing Party” means the party disclosing or providing access to its own Confidential Information to the Receiving Party.

“Receiving Party” means the party receiving disclosure of or access to Confidential Information of the Disclosing Party.

17.2 The Contractor shall maintain, use, and disclose all City Confidential Information in a manner consistent with the following:

(a) The Contractor shall maintain all City Confidential Information in strict confidence and cause its employees, agents, and subcontractors to maintain City Confidential Information in strict confidence. These efforts shall include affording City Confidential Information at least the same degree of care that the Contractor uses to preserve the confidentiality of its own information of similar character, but in any event, at least a reasonable degree of care.

(b) The Contractor shall not, without obtaining the prior written consent of the City, use or disclose, or permit the use or disclosure of, City Confidential Information for any purpose other than for performance of its duties and obligations under this Agreement, or for furthering the purposes and intent of this Agreement.

(c) The Contractor shall restrict disclosure of City Confidential Information to its employees, and to agents, subcontractors, professional advisors, and their employees, who have a bona fide need to know the City Confidential Information in furtherance of the purposes of this Agreement. The Contractor shall require that its subcontractors execute
agreements containing nondisclosure obligations that are as least as stringent as those of Contractor’s obligations under this Agreement. The Contractor shall instruct its employees, agents, professional advisors, and their employees, to maintain the confidentiality of City Confidential Information in accordance with the requirements of this Agreement. Upon request of the City, the Contractor shall require its employees, agents, and/or professional advisors to be bound by a written agreement requiring confidential treatment of City Confidential Information that is consistent with and no less strict than the requirements of this Agreement.

(d) The Contractor shall not store, process, transmit, or maintain any City Confidential Information that is in electronic form on or through:

(i) any laptop or other portable computing or electronic device (including cellular telephones, personal information managers, and other hand-held computing devices), or any data communications medium, unless access to City Confidential Information is protected by secure encryption;

(ii) any computing device not located at a Contractor facility, or not owned by (or authorized for use in connection with the business of) Contractor; or

(iii) any portable storage medium, except where use of the storage medium is part of Contractor’s established and secure backup and recovery processes.

(e) Except as specifically agreed in writing by the Commissioner of the Department, the Contractor shall not disclose any City Confidential Information to any entity outside the United States, or store or transmit any City Confidential Information outside the United States, other than City Confidential Information that is in electronic form and is transmitted or stored on a momentary basis as may be inherent in electronic transmission between locations within the United States.

17.3 The City shall maintain, use, and disclose all Contractor Confidential Information in a manner consistent with the following:

(a) The City shall use commercially reasonable efforts to maintain all Contractor Confidential Information in strict confidence and cause its employees, agents, and contractors to maintain Contractor Confidential Information in strict confidence. These efforts shall include affording Contractor Confidential Information at least the same degree of care that the City uses to preserve the confidentiality of its own information of similar character, but in any event, at least a reasonable degree of care.

(b) The City shall not, without obtaining the prior written consent of the Contractor, use or disclose, or permit the use or disclosure of, Contractor Confidential Information for any purpose other than for performance of its duties and obligations under this Agreement, or for furthering the purposes and intent of this Agreement.

(c) The City shall restrict disclosure of Contractor Confidential Information to its employees, and to its agents, contractors, and their employees, that have a bona fide need to know the Contractor Confidential Information in furtherance of the purposes of this Agreement.
17.4 Notwithstanding any inconsistent provision of this Agreement, the Receiving Party may disclose Confidential Information of the Disclosing Party to the extent necessary to comply with a request for the Confidential Information pursuant to a court order, subpoena, or other validly issued order or notice of a court or administrative body of competent jurisdiction, or other request pursuant to applicable law, rule or regulation. The Receiving Party shall notify the Disclosing Party of the receipt of the court order, subpoena, other validly issued order or notice, or other request in order to enable the Disclosing Party to seek protection of its Confidential Information from disclosure. Nothing herein shall prohibit the City from disclosing Contractor Confidential Information where required to do so by the New York State Freedom of Information Law.

17.5 When continued use of any Confidential Information is no longer necessary for performance of this Agreement and the Confidential Information is not the subject of a valid license, the Disclosing Party may request that the Receiving Party return to the Disclosing Party Confidential Information that is capable of being returned and/or destroy Confidential Information (including any copies, extracts, descriptions, and summaries thereof); provided however, that if City Confidential Information is integrated into documents or materials containing proprietary information of the Contractor or any third party, the City may request destruction, rather than return, of the portions of the documents or materials containing City Confidential Information. The Receiving Party shall promptly comply with any request to return and/or destroy Confidential Information and shall provide the Disclosing Party with written certification of the same within ten (10) business days. If a Receiving Party is legally required to retain any Confidential Information of the Disclosing Party, the Receiving Party shall notify the Disclosing Party in writing and set forth the Confidential Information it intends to retain and the reasons why it is legally required to retain the Confidential Information. The parties shall make good faith efforts to resolve any issues arising out of the Receiving Party’s intention to retain the Confidential Information.

17.6 Notwithstanding any inconsistent provision of this Agreement, neither party is required to maintain as confidential or is prevented from using in their respective businesses any general knowledge, skills, ideas, concepts, know-how, techniques, and experience possessed by the party prior to, or developed or learned by the party during, the performance of its obligations under this Agreement.

17.7 The parties’ obligations under this Article 17 are in effect during the term of this Agreement, and unless a longer period of time is required by applicable law, continue for six (6) years from the expiration or earlier termination of this Agreement; provided, however, that the expiration of these obligations do not invalidate or impair any continuing obligations of confidentiality under any license as to the Product provided under the license.

17.8 The Contractor acknowledges that any disclosure or misappropriation of City Confidential Information in violation of this Agreement could cause irreparable harm for which there may be no adequate remedy at law. The Contractor therefore agrees that if the City claims it is aggrieved by the Contractor’s violation of this Article, the City may apply to any court of competent jurisdiction for injunctive or other equitable relief restraining any breach or threatened breach of this Article and for any other relief at law or otherwise as the City deems appropriate. This right is in addition to any other right or remedy available in law or equity.
17.9 The provisions of this Article 17 will be construed as additional to and not in substitution of the provisions of Section 5.08 of Attachment I, and any conflicts between the provisions of this Article and the provisions of Section 5.08 shall be resolved in favor of the provisions of this Article.

Article 18 Security and Architecture Requirements

18.1 The Contractor shall comply with all Citywide and agency-specific policies and procedures relating to local and remote network access and connectivity.

18.2 The Contractor shall comply with all requirements of Attachment SCY (Security Requirements), which is attached hereto and made a part of the Agreement.

18.3 The Contractor shall ensure the successful completion of any security accreditation tasks and processes relevant to the Services and/or Deliverables it provides.

18.4 The Contractor shall ensure that all coding follows a City-approved, secure coding framework.

18.5 If the Contractor proposes that any Services be performed at a facility outside of the United States, then the Contractor shall provide external security audit information for review and approval by the City’s Chief Information Security Officer.

18.6 The Contractor shall adhere to the reference technical architecture standards prescribed by the City, as these standards may be modified from time to time. These standards will be provided to the Contractor upon request.

Article 19 RESERVED

Article 20 RESERVED

Article 21 Service Level Requirements

21.1 Definitions

(a) “Repair” means completion of all efforts, such as adjusting, replacing, correcting, or fixing, necessary to restore a Service Element to Good Working Order.

(b) “Respond” or “Response” means the commencement of active remedial measures onsite (unless otherwise agreed to in the SOW) by a skilled technician or other qualified professional. Responding does not consist merely of actions such as acknowledging receipt of a reported Service Event or recording the existence of a Service Event.

(c) “Service Element” means any part, several parts, or the entirety of a Deliverable or System, and related features and services, required to be maintained pursuant to this Agreement.

(d) “Service Event” means a condition when a Service Element fails, degrades, or is not in Good Working Order, or causes or results in other Service Element(s) failing, degrading, or not performing in Good Working Order. A Service Event is not limited to a total loss or discontinuance of service. For the purpose of measuring Response and Repair time, a Service Event begins when Contractor first becomes aware or should have become aware, or is informed, of the Service Event, whichever first occurs.
21.2 The Contractor’s obligation to comply with Service Level Requirements for Service Elements begins upon Final Acceptance and continues until the end of the Warranty Period or any maintenance and support period, whichever is later.

21.3 The City will classify Service Events by Severity Level in accordance with the SOW, and the Contractor shall Respond to and Repair Severity Level 1, 2, 3 and 4 Service Events in accordance with the requirements set forth in this Article (“Service Level Requirements” or “SLR”). In the event that the Contractor does not agree with the City’s classification, the Contractor shall immediately comply with the Service Level classification’s required response, and the Contractor may subsequently dispute the classification under the City’s dispute resolution procedures as provided in Section 12.03 of Attachment I.

21.4 While the System is operating in its intended live production environment, the City’s designee shall promptly provide notice to the Contractor of Service Events and the Contractor shall respond pursuant to the SOW. In the case of Severity Level 1 and 2 Service Events discovered by the Contractor, the Contractor shall immediately provide notice of the existence of the Service Event to the City’s designee. Notice required by this section 21.4 and the Contractor response must be in person or by electronic mail or telephone. The Contractor shall summarize oral communication by electronic mail as soon as practicable following the communication.

21.5 The Contractor’s failure to meet the Service Level Requirements set forth in this Article 21 will result in the Contractor’s liability to provide the City with a Service Credit. Service Credits will be set forth in the SOW.

21.6 The City may either withhold Service Credits from amounts payable to the Contractor under invoices submitted by the Contractor, or the City may submit an invoice to Contractor for Service Credits owed by the Contractor, in which event Contractor shall be required to remit payment to the City within thirty (30) days of receipt of the invoice. Payment of Service Credits by the Contractor or credit against monies owed by the City to the Contractor is deemed to be separate from payment of any fees for Deliverables.

21.7 The Contractor acknowledges and agrees that Service Credits constitute a price adjustment for the Contractor’s failure to meet the Service Level Requirements. The City’s failure to enforce Service Credits hereunder will not operate as a waiver or release of any claim the City may have against the Contractor for Service Credits.

21.8 RESERVED

21.9 The Contractor shall provide a point of contact for all Service Events and service requests. The point of contact must be available via phone, email and web on a 24x7x365 basis.

21.10 The Contractor shall maintain records of and report to the City compliance with SLRs on a monthly basis in the form and manner as is prescribed by the City, including the use of electronic tools for recordkeeping and reporting. The Contractor’s records and reports must include the identification and root causes of every Service Event that occurred, proposed solutions, and improvements to Service Level Requirements. If the Parties desire to improve the Service Level Requirements, the Contractor shall also provide assistance to the City in implementing and monitoring the effectiveness of any improvement to Service Level Requirements.
Article 22 RESERVED

Article 23 Notices

This Article supersedes Section 14.04 (Notice) of Attachment I.

23.1 Unless otherwise stated in the Agreement, any notices required or permitted to be given or delivered under the Agreement must be in hard-copy writing. Notice of any circumstance with respect to a material breach or event of default is sufficiently given if delivered personally or by certified mail, return receipt requested. In all other circumstances, notice may also be delivered by facsimile (with e-mail acknowledgement of receipt) or e-mail (with e-mail acknowledgement of receipt) or by prepaid same-day or overnight express service to the parties as provided in the Master Services Agreement.

23.2 Any party may from time to time designate another address or other addressees by notice to the other party in compliance with this Section.

23.3 Any notice shall be deemed given when received.

23.4 Nothing in this Article 23 is deemed to serve as a waiver of any requirements for the service of notice or process in the institution of an action or proceeding as provided by Law (as this term is defined in Section 1.01 of Attachment I), including the New York Civil Practice Law and Rules.

Article 24 Taxpayer's Affirmation

The Contractor affirms that it is not in arrears to the City of New York upon debt or contract, or taxes, and is not a defaulter as surety or otherwise upon any obligation to the City of New York, and has not been declared not responsible, or disqualified, by any agency of the City of New York, nor is there any proceeding pending relating to the responsibility or qualification of the Contractor to receive public contracts.

Article 25 City Delay

25.1 Definitions

For purposes of this Article 25, the following terms have the following meanings:

(a) “Extended Delay” means a delay lasting more than thirty (30) days, which is caused solely by the City in fulfilling an obligation under the Agreement and which directly results in the Contractor’s inability to meet a Critical Milestone.

(b) “Extra Work” means the provision by the Contractor of Deliverables other than Deliverables required by the Agreement as of the first day of delay resulting in an Extended Delay, which Deliverables are authorized by the City pursuant to a change order or amendment.

(c) “Idle Time” means the period of time during which Contractor Personnel continue to be mobilized but are unable to perform any work required on the project due to an Extended
Delay. “Idle Time” does not include any time during which Contractor Personnel perform Extra Work assigned by the City during an Extended Delay.

25.2 Extended Delays

(a) In the event of an Extended Delay, the Contractor may be entitled to:

(i) a reasonable extension of time under the Schedule to offset the Extended Delay;

(ii) a reasonable extension of time for remobilization of on-site Contractor Personnel where the Contractor demonstrates that the Extended Delay caused it to demobilize these Contractor Personnel; and

(iii) recover from the City the following fair and reasonable costs incurred by the Contractor solely due to the Extended Delay (“Actual Costs”):

A. the actual labor cost of Idle Time of Contractor Personnel following the start of the Extended Delay until the earlier of (I) the end of the Extended Delay, or (II) the forty-fifth (45th) day after written notice sent by the City has been received by the Contractor of the Extended Delay; and

B. the actual cost of extending warranties for Products, to the extent the Extended Delay requires extension of the duration of manufacturers’ warranties so that the warranties commence upon the City’s commencement of operation of the System(s) in the intended live production environment.

Notwithstanding the foregoing, the City’s liability to the Contractor for Actual Costs will in no event exceed ten percent (10%) of the total value of the Agreement and this amount of City liability is deemed to be included in the City’s total liability pursuant to Article 20 of the Agreement.

(b) To be eligible to recover the Actual Costs, the Contractor must:

(i) demonstrate to the City that the Actual Costs were fair and reasonable and that payment was made by the Contractor;

(ii) mitigate the Actual Costs and cooperate with City efforts to reduce both the duration of the Extended Delay and associated Actual Costs;

(iii) to the extent possible, provide notice to the City of the Actual Costs prior to authorizing payment of them; and

(iv) submit a claim for the Actual Costs to the Commissioner of the Department by the earlier of:
A. thirty (30) days after the end of the Extended Delay; or

B. termination of the Agreement.

(c) The Commissioner of the Department will review the Contractor’s claim for Actual Costs and/or an extension of time and grant, reject or partially grant the claim and/or extension of time.

(d) If the Contractor disagrees with the Commissioner’s determination of its claim for Actual Costs and/or an extension of time, the Contractor may dispute the determination pursuant to the dispute resolution procedures in section 12.03 of Attachment I.

(e) Failure of the Contractor to comply with the requirements of this section 25.2 constitutes a waiver by the Contractor of its claim for Actual Costs.

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ATTACHMENT J - REQUIREMENTS COMPLIANCE MATRIX

All requirements in this RFP, or referenced in the RFP attachments, for the RFP Class proposed, must be met by the Proposer. The Requirements Compliance Matrix (RCM) provided with the RFP represents a DRAFT listing of the requirements, and serves as a template. The Proposer should utilize the RCM and filter the requirements based on the proposed RFP Class. As part of the proposal response, the Proposer must complete the RCM accordingly, by indicating their full compliance, non-compliance, or partial compliance to each applicable requirement, or possibly not applicable when appropriate. Additionally, the Proposer must provide supporting comments for each non-compliance and partial compliance matter, and must reference all sections of their technical proposal narrative that are appropriate. The RCM will be used by the City as a part of the evaluation and scoring for the Proposer’s proposal, in accordance with Section V of this RFP.

**Note:** Attachment J (RCM) is a separate file attachment to this RFP, and must be downloaded from the DoITT web site indicated by the URL below.

**URL:** [http://www1.nyc.gov/site/doitt/business/next-gen-911-emergency-services.page](http://www1.nyc.gov/site/doitt/business/next-gen-911-emergency-services.page)

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ATTACHMENT K - HIRENYC AND REPORTING REQUIREMENT

Introduction

This Rider shall apply to all contracts for goods, services, and construction with a value of one million dollars ($1,000,000.00) or more, provided, however, that certain requirements of the Rider shall only apply as indicated below. This Rider addresses the HireNYC process, including reporting obligations under the HireNYC process, and certain other reporting requirements imposed by law. In general, the HireNYC process under this Rider requires the Contractor to enroll with the HireNYC portal for the City of New York (“the City”) found within the Department of Small Business Services’ (“SBS”) website, to disclose all entry to mid-level job opportunities described in this Rider arising from this contract and located in New York City, and to agree to interview qualified candidates from HireNYC for those opportunities.

HireNYC Requirements

A. Enrollment

The Contractor shall enroll with the HireNYC system, found at www.nyc.gov/sbs, within thirty (30) days after the registration of this Contract pursuant to Section 328 of the New York City Charter. The Contractor shall provide information about the business, designate a primary contact and say whether it intends to hire for any entry to mid-level job opportunities arising from this contract and located in New York City, and, if so, the approximate start date of the first hire.

B. Job Posting Requirements

Once enrolled in HireNYC, the Contractor agrees to update the HireNYC portal with all entry to mid-level job opportunities arising from this contract and located in New York City, if any, which shall be defined as jobs requiring no more than an associate degree, as provided by the New York State Department of Labor (see Column F of https://labor.ny.gov/stats/2012-2022-NYS-Employment-Prospects.xls). The information to be updated includes the types of entry and mid-level positions made available from the work arising from the contract and located in New York City, the number of positions, the anticipated schedule of initiating the hiring process for these positions, and the contact information for the Contractor’s representative charged with overseeing hiring. The Contractor must update the HireNYC portal with any hiring needs arising from the contract and located in New York City, and the requirements of the jobs to be filled, no less than three weeks prior to the intended first day of employment for each new position, except with the permission of SBS, not to be unreasonably withheld, and must also update the HireNYC portal as set forth below.

After enrollment through HireNYC and submission of relevant information, SBS will work with the Contractor to develop a recruitment plan which will outline the candidate screening process, and will provide clear instructions as to when, where, and how interviews will take place.

HireNYC will screen applicants based on employer requirements and refer applicants whom it believes are qualified to the Contractor for interviews. The Contractor must interview referred applicants whom it believes are qualified.
After completing an interview of a candidate referred by HireNYC, the Contractor must provide feedback via the portal within twenty (20) business days to indicate which candidates were interviewed and hired, if any. In addition, the Contractor shall provide the start date of new hires, and additional information reasonably related to such hires, within twenty (20) business days after the start date. In the event the Contractor does not have any job openings covered by this Rider in any given year, the Contractor shall be required to provide an annual update to HireNYC to that effect. For this purpose, the reporting year shall run from the date of the registration of the contract and each anniversary date.

These requirements do not limit the Contractor’s ability to assess the qualifications of prospective workers, and to make final hiring and retention decisions. No provision of this Rider shall be interpreted so as to require the Contractor to employ any particular worker.

In addition, the provisions of this Rider shall not apply to positions that the Contractor intends to fill with employees employed pursuant to the job retention provision of Section 22-505 of the Administrative Code of the City of New York. The Contractor shall not be required to report such openings with HireNYC. However, the Contractor shall enroll with the HireNYC system pursuant to Section A, above, and, if such positions subsequently become open, then the remaining provisions of this Rider will apply.

C. Breach and Liquidated Damages

If the Contractor fails to comply with the terms of the contract and this Rider (1) by not enrolling its business with HireNYC; (2) by not informing HireNYC, as required, of open positions; or (3) by failing to interview a qualified candidate, the contracting agency may assess liquidated damages in the amount of two-thousand five hundred dollars ($2,500.00) per breach. For all other events of noncompliance with the terms of this Rider, the agency may assess liquidated damages in the amount of five hundred dollars ($500) per breach.

Furthermore, in the event the Contractor breaches the requirements of this Rider during the term of the contract, the City may hold the Contractor in default of this contract.

D. Audit Compliance

In addition to the auditing requirements set forth in other parts of the contract, the Contractor shall permit SBS and the City to inspect any and all records concerning or relating to job openings or the hiring of individuals for work arising from the contract and located in New York City. The Contractor shall permit an inspection within seven (7) business days of the request.

E. Other Reporting Requirements

The Contractor shall report to the City, on a monthly basis, all information reasonably requested by the City that is necessary for the City to comply with any reporting requirements imposed by law or rule, including any requirement that the City maintain a publicly accessible database. In addition, the Contractor agrees to comply with all reporting requirements imposed by law or rule, or as otherwise requested by the City.
F. Construction Requirements

Construction contractors shall comply with the HireNYC requirements set forth above for all non-trades jobs (e.g., for an administrative position arising out of the work of the contract and located in New York City) as set forth above.

In addition, construction contractors shall reasonably cooperate with SBS and the City on specific outreach events, including Hire on the Spot events, for the hiring of trades workers for the work of this contract.

Further, this contract shall be subject to a project labor agreement if so required elsewhere in this contract.

G. Federal Hiring Requirements

The Contractor shall comply with all federal hiring requirements as may be set forth elsewhere in this contract, including, as applicable:

- Section 3 of the HUD Act of 1968, which requires, to the greatest extent feasible, economic opportunities for 30 percent of new hires be given to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

- Executive Order 11246, which prohibits discrimination in employment due to race, color, religion, sex or national origin, and requires the implementation of goals for minority and female participation for work involving any Construction trade.
ATTACHMENT L - PAID SICK LEAVE LAW CONTRACT RIDER

Introduction and General Provisions

The Earned Sick Time Act, also known as the Paid Sick Leave Law (“PSLL”), requires covered employees who annually perform more than 80 hours of work in New York City to be provided with paid sick time. Contractors of the City of New York or of other governmental entities may be required to provide sick time pursuant to the PSLL.

The PSLL became effective on April 1, 2014, and is codified at Title 20, Chapter 8, of the New York City Administrative Code. It is administered by the City’s Department of Consumer Affairs (“DCA”); DCA’s rules promulgated under the PSLL are codified at Chapter 7 of Title 6 of the Rules of the City of New York (“Rules”).

Contractor agrees to comply in all respects with the PSLL and the Rules, and as amended, if applicable, in the performance of this agreement. Contractor further acknowledges that such compliance is a material term of this agreement and that failure to comply with the PSLL in performance of this agreement may result in its termination.

Contractor must notify the Agency Chief Contracting Officer of the City agency or other entity with whom it is contracting in writing within ten (10) days of receipt of a complaint (whether oral or written) regarding the PSLL involving the performance of this agreement. Additionally, Contractor must cooperate with DCA’s education efforts and must comply with DCA’s subpoenas and other document demands as set forth in the PSLL and Rules.

The PSLL is summarized below for the convenience of Contractor. Contractor is advised to review the PSLL and Rules in their entirety. On the website www.nyc.gov/PaidSickLeave there are links to the PSLL and the associated Rules as well as additional resources for employers, such as Frequently Asked Questions, timekeeping tools and model forms, and an event calendar of upcoming presentations and webinars at which Contractor can get more information about how to comply with the PSLL. Contractor acknowledges that it is responsible for compliance with the PSLL notwithstanding any inconsistent language contained herein.

Pursuant to the PSLL and the Rules:

Applicability, Accrual, and Use

An employee who works within the City of New York for more than eighty hours in any consecutive 12-month period designated by the employer as its “calendar year” pursuant to the PSLL (“Year”) must be provided sick time. Employers must provide a minimum of one hour of sick time for every 30 hours worked by an employee and compensation for such sick time must be provided at the greater of the employee’s regular hourly rate or the minimum wage. Employers are not required to provide more than forty hours of sick time to an employee in any Year.

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1 Pursuant to the PSLL, if fewer than five employees work for the same employer, as determined pursuant to New York City Administrative Code §20-912(g), such employer has the option of providing such employees uncompensated sick time.
An employee has the right to determine how much sick time he or she will use, provided that employers may set a reasonable minimum increment for the use of sick time not to exceed four hours per day. In addition, an employee may carry over up to forty hours of unused sick time to the following Year, provided that no employer is required to allow the use of more than forty hours of sick time in a Year or carry over unused paid sick time if the employee is paid for such unused sick time and the employer provides the employee with at least the legally required amount of paid sick time for such employee for the immediately subsequent Year on the first day of such Year.

An employee entitled to sick time pursuant to the PSLL may use sick time for any of the following:

- such employee’s mental illness, physical illness, injury, or health condition or the care of such illness, injury, or condition or such employee’s need for medical diagnosis or preventive medical care;
- such employee’s care of a family member (an employee’s child, spouse, domestic partner, parent, sibling, grandchild or grandparent, or the child or parent of an employee’s spouse or domestic partner) who has a mental illness, physical illness, injury or health condition or who has a need for medical diagnosis or preventive medical care; closure of such employee’s place of business by order of a public official due to a public health emergency; or such employee’s need to care for a child whose school or childcare provider has been closed due to a public health emergency.

An employer must not require an employee, as a condition of taking sick time, to search for a replacement. However, an employer may require an employee to provide: reasonable notice of the need to use sick time; reasonable documentation that the use of sick time was needed for a reason above if for an absence of more than three consecutive work days; and/or written confirmation that an employee used sick time pursuant to the PSLL. However, an employer may not require documentation specifying the nature of a medical condition or otherwise require disclosure of the details of a medical condition as a condition of providing sick time and health information obtained solely due to an employee’s use of sick time pursuant to the PSLL must be treated by the employer as confidential.

If an employer chooses to impose any permissible discretionary requirement as a condition of using sick time, it must provide to all employees a written policy containing those requirements, using a delivery method that reasonably ensures that employees receive the policy. If such employer has not provided its written policy, it may not deny sick time to an employee because of non-compliance with such a policy.

Sick time to which an employee is entitled must be paid no later than the payday for the next regular payroll period beginning after the sick time was used.

**Exemptions and Exceptions**

Notwithstanding the above, the PSLL does not apply to any of the following:

- an independent contractor who does not meet the definition of employee under section 190(2) of the New York State Labor Law;
- an employee covered by a valid collective bargaining agreement in effect on April 1, 2014 until the termination of such agreement;
- an employee in the construction or grocery industry covered by a valid collective bargaining agreement if the provisions of the PSLL are expressly waived in such collective bargaining agreement;
an employee covered by another valid collective bargaining agreement if such provisions are expressly waived in such agreement and such agreement provides a benefit comparable to that provided by the PSLL for such employee;

- an audiologist, occupational therapist, physical therapist, or speech language pathologist who is licensed by the New York State Department of Education and who calls in for work assignments at will, determines his or her own schedule, has the ability to reject or accept any assignment referred to him or her, and is paid an average hourly wage that is at least four times the federal minimum wage;

- an employee in a work study program under Section 2753 of Chapter 42 of the United States Code;

- an employee whose work is compensated by a qualified scholarship program as that term is defined in the Internal Revenue Code, Section 117 of Chapter 20 of the United States Code; or

- a participant in a Work Experience Program (WEP) under section 336-c of the New York State Social Services Law.

Retaliation Prohibited

An employer may not threaten or engage in retaliation against an employee for exercising or attempting in good faith to exercise any right provided by the PSLL. In addition, an employer may not interfere with any investigation, proceeding, or hearing pursuant to the PSLL.

Notice of Rights

An employer must provide its employees with written notice of their rights pursuant to the PSLL. Such notice must be in English and the primary language spoken by an employee, provided that DCA has made available a translation into such language. Downloadable notices are available on DCA’s website at http://www.nyc.gov/html/dca/html/law/PaidSickLeave.shtml.

Any person or entity that willfully violates these notice requirements is subject to a civil penalty in an amount not to exceed fifty dollars for each employee who was not given appropriate notice.

Records

An employer must retain records documenting its compliance with the PSLL for a period of at least three years, and must allow DCA to access such records in furtherance of an investigation related to an alleged violation of the PSLL.

Enforcement and Penalties

Upon receiving a complaint alleging a violation of the PSLL, DCA has the right to investigate such complaint and attempt to resolve it through mediation. Within 30 days of written notification of a complaint by DCA, or sooner in certain circumstances, the employer must provide DCA with a written response and such other information as DCA may request. If DCA believes that a violation of the PSLL has occurred, it has the right to issue a notice of violation to the employer.

DCA has the power to grant an employee or former employee all appropriate relief as set forth in New York City Administrative Code 20-924(d). Such relief may include, among other remedies, treble damages for the wages that should have been paid, damages for unlawful retaliation, and damages and reinstatement for unlawful discharge. In addition, DCA may impose on an employer found to have
violated the PSLL civil penalties not to exceed $500 for a first violation, $750 for a second violation within two years of the first violation, and $1,000 for each succeeding violation within two years of the previous violation.

**More Generous Policies and Other Legal Requirements**

Nothing in the PSLL is intended to discourage, prohibit, diminish, or impair the adoption or retention of a more generous sick time policy, or the obligation of an employer to comply with any contract, collective bargaining agreement, employment benefit plan or other agreement providing more generous sick time. The PSLL provides minimum requirements pertaining to sick time and does not preempt, limit or otherwise affect the applicability of any other law, regulation, rule, requirement, policy or standard that provides for greater accrual or use by employees of sick leave or time, whether paid or unpaid, or that extends other protections to employees. The PSLL may not be construed as creating or imposing any requirement in conflict with any federal or state law, rule or regulation.

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ATTACHMENT M – SCHEDULE B - M/WBE UTILIZATION PLAN/WAIVER APPLICATION

Schedule B: Minority-Owned and Women-Owned Business Enterprises (M/WBE) Utilization Plan/Waiver Application

**Note:** Attachment M is a separate file attachment to this RFP, and must be downloaded from the DoITT web site at: [http://www1.nyc.gov/site/doitt/business/next-gen-911-emergency-services.page](http://www1.nyc.gov/site/doitt/business/next-gen-911-emergency-services.page)