# Request For Proposal

## January 2015



## REQUEST FOR PROPOSAL

## 9-1-1 Call Taking System

**Any questions pertaining to this proposal shall be directed to Gary A. Wine, Director of Information Technology at 304-267-5113 or may be submitted via email: 911phones@berkeleywv.org**

# Request For Proposal

## January 2015

   The County Council of Berkeley County, West Virginia (herein referred to as the "County Council" or "Council") is requesting Qualified Price Proposals from interested parties to install a 9-1-1 Telephone call taking System.

   The County Council (or its designated representatives) will be evaluating submissions to this request and will ultimately select a firm judged to be both responsible and responsive to the request in every way, including having offered the most beneficial, appropriate price proposals. The County Council reserves the right to interview some or all prospective firms to discuss qualifications & Experience/Technical Proposals as well as Price Proposals. The format for submittals, information regarding the scope of work, and selection criteria used by the County Council is available from the County Council Office, 400 W. Stephen Street, Suite 201, Martinsburg, WV 25410. Inquiries should be directed to Gary A. Wine, Director of Information Technology at **911phones@berkeleywv.org** or (304) 267-5113.

   Proposals should be labeled **"RFP Telephone System".** Proposals must be submitted and time-stamped into the County Council Office, Room 201, 400 W. Stephen Street, Martinsburg, WV, 25401 **no later than 4:00 p.m. on February 18, 2015.** Failure to provide the required information as requested in the RFP for Berkeley County's review may result in disqualification of that firm/company.

   Proposals will be opened and entered into public record at 10:10 AM on **Thursday, February 19, 2015** in the County Council Meeting Room, 400 W. Stephen Street, Room 205, Martinsburg, WV, 25401.

   Berkeley County reserves the right to accept or reject any or all proposals, to waive technicalities, and to take whatever action is in the best interest of the Berkeley County Council.

## I.     INTRODUCTION:

Proposals are being requested for the purchase and installation of a Customer Premise Equipment (CPE) 9-1-1 call taking system.  The center currently utilizes the Vesta system provided by Airbus DS Communications.

## II.     BACKGROUND:

Berkeley County will be upgrading from a **7** station environment to a **24** position configuration to include dispatch, call taking & administrative users.

## III.    SCOPE OF REQUIRED SERVICES:

### HARDWARE/SOFTWARE:

Successful vendor will be responsible for the deployment and training of all hardware and software in this proposal. If at any point your software/service options do not align exactly with the specifications, please provide a written explanation as to the differences for each item.

A.    **Equipment**
   a.  See Technical Specifications Document

**\*\*\*\*  It is then intent of Berkeley County to obtain a list of hardware needed from success vendor and make the procurements outside this RFP.  If there is equipment that is Vendor specific please provide that information with the RFP submission.**

B.    **Training:**

The vendor's training program shall be designed and conducted to provide complete familiarization with the proposed system(s), including functional training for user and Supervisory personnel and system administration training for select Agency management, administrative, and/or technical personnel. The Agency shall provide a suitable environment for training.

This section shall include a requirement to provide training information, training plans, and sample course descriptions and recommendations from the vendor regarding the most cost effective approach (i.e., Train-the-Trainer, User Training, etc.) to achieve full and productive utilization and self-sufficient administration of the planned systems. Additionally, any request for training materials, software demos or videos required to train new employees after system implementation shall be communicated

At a minimum, the descriptions for each proposed training course should include:

   a.  Description of the Classes
   b.  Quantity and type of classes proposed
   c.  Recommended number of participants per class
   d.  Class prerequisites
   e.  Location/Methodology of training
   f.  Personnel expected to attend

g. Class duration (hours)

## IV. **TERM OF CONTRACT:**

    **A.**    Vendor **must** submit a complete timeline for the project.

    **B.**    WARRANTY/MAINTENANCE SUPPORT

Agency requires, starting at go-live, an ongoing maintenance and support plan that provides coverage 24 hours per day, 7 days per week for the proposed software applications and interfaces.

This section shall include support information, including procedures for reporting problems, as well as covered and non-covered maintenance, and software upgrade information. Include information on remote problem diagnosis, resolution, and response times.

In this section, vendors are expected to:

1. Describe the vendor's warranty support that is proposed with each system software product and related interface.

2. Describe the support hours that are available and proposed for each application software product and related interface.

3. Describe the support/facilities that are available to the Agency via the vendor's toll free (800) number.

4. Describe the support/facilities that are available to the Agency via the vendor's web-based online reporting/tracking facilities.

5. Explain the software upgrade/update provisions that are available as part of the vendor's proposed maintenance support program and the incremental costs (if any) that may be associated with upgrades/updates to the proposed application software products.

6. Describe the Vendor's proposed service response and resolution times, the priorities used by the Vendor to classify support requests and the response and resolution time for each priority that the Vendor will commit to contractually in any resulting maintenance and support agreement with the Agency.

7. Describe the vendor's proposed responsibilities for the ongoing maintenance of the proposed system.

8. Vendors shall include a copy of their proposed Maintenance Support Agreement with their Response to the RFP.

Vendors shall detail what, if any, procedures are available to the Agency for escalation of a maintenance and support request

**V.      USE OF EXISTING SOFTWARE:**

Berkeley County will cooperate to the fullest extent by making available to the Firm/Company all processes and software pertinent to this project for review.

**VI.      PAYMENT SCHEDULE:**

All Vendors MUST provide their expectations with regard to payment schedule for the project. **ALL** Pricing must be submitted on the attached PRICE SHEET (the last page of this document)

**VII.      SELECTION PROCESS:**

A.      This solicitation is issued pursuant to the implementation of Berkeley County's Purchasing Policy.  Berkeley County shall not be liable for any costs not included in the proposal, not contracted for subsequently, or in regard to preparation of your proposal.

B.      It is the County Council's intent to open and review each firm's Qualifications & Experience/ Technical Proposal to determine a firm's qualifications, experience and technical approach to the services.  If it is determined that a firm's Qualifications & Experience/Technical Proposal is acceptable, then price will be considered.

C.      Since it is the County Council's desire to select the most qualified firm, we reserve the right to schedule oral presentations from those firms it deems most qualified, to take place within ten (10) business days following notification.

D.      Selection criteria to be used are:

1.      Responsiveness to the scope of work and these instructions;

2.      Past performance of the firm including timely completion of services, compliance with scope of work performed within budgetary constraints, and user satisfaction;

3.      Specialized experience and technical competence in performing relevant services in the past ten (10) years, including qualifications of staff members who will be involved in these services;

4.      Oral presentations, if required;

5.      Composition of the principals and staff assigned to provide these services, particularly the proposed manager and immediate staff, and their qualifications and experience with services such as that being proposed;

6.      Adequacy of the personnel of the firm to accomplish the proposed scope of work in the required time;

7.      Firm's capacity to perform the work, giving consideration to current workloads;

8.     Firm's familiarity with problems applicable to this type of services;

9.     References from previous clients, including size and scope of the services, name and telephone number of contact person.

10.    Price Proposal.

## VIII.   PROPOSALS AND AWARD SCHEDULE:

A.     Proposals received prior to the deadline will be treated as confidential, until receipt of all proposals and opening of the same. Proposals received after the deadline will not be considered in the evaluation process and will be returned unopened.

B.     Proposals must give the full name and address of the proposer and the person signing the proposal shall indicate his or her title and/or authority to bind the firm in a contract.

C.     Proposals may not be altered or amended after they are opened.

D.     The approval or disapproval of the Company's Proposal will be determined by its response to this request and on past performance.  No assumptions should be made on the part of the Firm/Company as to this Committee's prior knowledge of their abilities.

E.     Berkeley County reserves the right to request clarification of information submitted and to request additional information of one or more applicants.

## IX.   TERMS AND CONDITIONS:

A.     The County Council reserves the right to reject any or all proposals or to award the contract to the next recommended Company if the successful Company fails to execute an agreement within ten (10) calendar days after being notified of the award of this proposal.

B.     Berkeley County reserves the right to request clarification of information submitted and to request additional information of one or more applicants.

C.     Any proposal may be withdrawn up until the date and time set within this RFP for the opening of the proposals.  Any proposal not so withdrawn will constitute an irrevocable offer, for a period of ninety (90) calendar days, to sell to Berkeley County the services set forth above, in the manner and at the costs set forth.

D.     The selected Company shall be required to enter into a contract agreement with the County Council. Any agreement or contract resulting from the acceptance of the proposal shall be made on forms approved by the Berkeley County In-House Legal Director and shall contain, at a minimum, applicable provisions of this request for proposal.  The County Council reserves the right to reject any agreement that does not conform to this request for proposal and any Berkeley County requirements for agreements or contracts.

E.     Selected Firm/Company shall not assign any interest in the contract and shall not transfer any interest in the same without prior written consent of the Berkeley County Council.

F.  No reports, information or data given to or prepared by the Firm/Company under this agreement shall be made available to any individual or organization by the Firm/Company without the prior written approval of the Berkeley County Council.

G.  Firms/Companies 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 why such materials, upon request, should not be disclosed by the County Council under the West Virginia Freedom of Information Act.

H.  Berkeley County shall not be liable for any costs incurred by the Firm/Company in regard to preparation of its proposal.

I.  Berkeley County reserves the right to request interviews.

J.  The County Council reserves the right to reject any and/or all proposals, to waive technicalities, and to take whatever action is in the best interest of the County.

K.  Berkeley County reserves the right to not hold discussions after award of the contract.

L.  By submitting a proposal, the Firm/Company agrees that it is satisfied, as a result of its own investigations of the conditions set forth in this request, and that it fully understands the obligations set forth therein.

M.  The Firm/Company shall abide by and comply with the true intent of the RFP and its Scope of Work and shall not take advantage of any unintentional error, ambiguity or omission, but shall fully complete every part as contemplated by the true intent and meaning of the scope of services described herein. Clarifications may be requested and dealt with at the Pre-Proposal Conference.

N.  The Firm/Company hereby represents and warrants:

1.  That it is now, or will be by the time its Proposal is opened, qualified to do business in the State of West Virginia and that it will take such action as, from time to time hereafter, may be necessary to remain so qualified;

2.  That it is not in arrears with respect to the payment of any monies due and owing the State, or any department or agency thereof, including, but not limited to, the payment of taxes and employee benefits, and that it shall not fall into arrears during the term of the contract; that it shall comply with all federal, State, and local laws, ordinances, and legally enforceable rules and regulations applicable to its activities and obligations under the contract;

3.  That it shall procure, at its expense, all licenses, permits, insurance, and governmental approvals, if any, necessary to the performance of its obligations under the contract;

4.  That the facts and matters set forth hereafter in the contract and made a part hereof are true and correct.

O.    In addition to any other remedy available to Berkeley County, breach of any of the services contracted herein shall, at the election of the County Council, be grounds for termination. Failure of the County Council to terminate the contract shall not be considered or construed as either a waiver of such breach or as a waiver of any rights or remedies granted or available to Berkeley County.

P.    HOLD HARMLESS/INDEMNIFICATION:  If a contract is awarded, the successful Firm/Company will be required to indemnify and hold Berkeley County, its agents and/or employees harmless from and against all liability and expenses, including attorney's fees, howsoever arising or incurred, alleging damage to property or injury to, or death of, any person arising out of or attributable to the Firm's/Company's performance of the contract awarded. Any property or work to be provided by the Firm/Company under this contract will remain at the Firm's/Company's risk until written acceptance by the County Council; and the Firm/Company will replace, at Firm's/Company's expense, all property or work damaged or destroyed by any cause whatsoever.

Q.    Termination for Convenience: Berkeley County may terminate this or any contract, in whole or in part, whenever the County Council determines that such termination is in the best interest of the County, without showing cause, upon giving 30 days written notice to the Firm/Company.  Berkeley County shall pay all reasonable costs incurred by the Firm/Company up to the date of termination.  However, in no event shall the Firm/Company be paid any amount that exceeds the price proposed for the work performed.  The Firm/Company will not be reimbursed for any profits which may have been anticipated but which have not been earned up to the date of termination.

Termination for Default: When the Firm/Company has not performed or has unsatisfactorily performed the contract, Berkeley County may terminate the contract for default. Upon termination for default, payment may be withheld at the discretion of the County Council.  Failure on the part of a Firm/Company to fulfill the contractual obligations shall be considered just cause for termination of the contract. The Firm/Company will be paid for services satisfactorily rendered prior to termination less any excess costs incurred by Berkeley County in re-procuring and completing the work.

R.    The contractual obligation of Berkeley County under this contract is contingent upon the availability of appropriated funds from which payment for this contract can be made.

S.    INTERPRETATION:  The contract resulting from this proposal shall be construed under the laws of the State of West Virginia.

## X.  INTERPRETATIONS, DISCREPANCIES, OMISSIONS:

Should any Firm/Company find discrepancies in, or omissions from, the documents or be in doubt of their meaning, they should at once request in writing an interpretation from the County Council. All necessary interpretations will be issued to all Firms/Companies in the form of addenda to the specifications, and such addenda shall become part of the contract documents.  Failure of any Firm/Company to receive any such addendum or interpretation shall not relieve such Firm/Consultant from any obligation under their proposal as submitted.  Berkeley County will assume no responsibility for oral instructions or suggestions.  ORAL ANSWERS SHALL NOT BE BINDING ON BERKELEY COUNTY. No requests received after **4:00 p.m.,  February 12, 2015** will be considered.  Every interpretation made by Berkeley County will be made in the form of an addendum that, if issued, will be sent by Berkeley County to all interested parties.
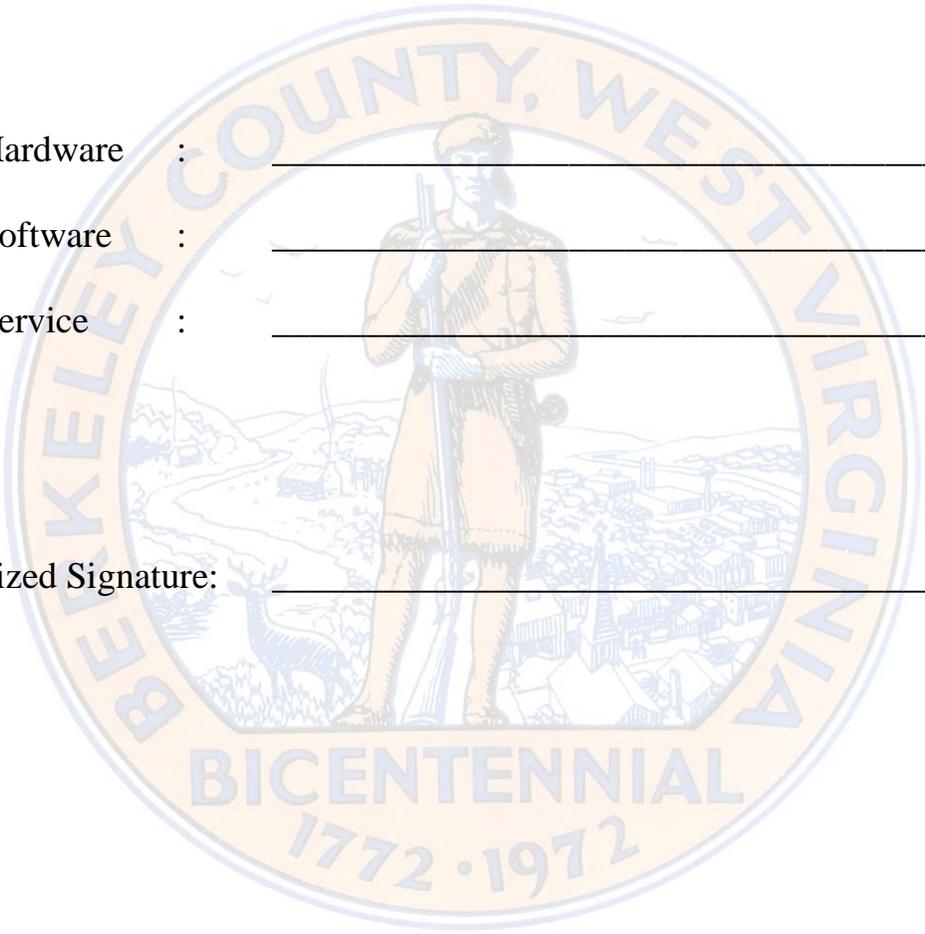
# Price Sheet

Date: _____

Total Hardware : _____

Total Software : _____

Total Service : _____

Authorized Signature: _____

# Technical Specifications -- 9-1-1 Call Taking System

## 1. General Requirements

a. The County is a rapidly growing part of the Metro DC area and thus we are constantly looking for ways to provide our constituency with state-of the-art public safety technology as well as the offer best return on the citizen's tax dollar. It is the County's intention to upgrade our existing vendor's Computer Aided Dispatch (CAD) system as the most positive cost/benefit option available. It is our intent to integrate the proposed NG9-1-1 call taking system into the resident Tri Tech Inform CAD system at the application level to include a tightly unified workflow process with such features as 9-1-1 and Administrative telephone call control (at a minimum, Answer, Release, Mute, Selective Transfer and other common 9-1-1 call control features) Integrated from a variety of sources such as keyboard, mouse, external keypad and most importantly from the native GIS Mapping application **.**

b. Vendors must propose a Call Taking System (CTS) solution that can ensure reliability, availability, and access 24 hours a day, 365 days a year.

c. Vendors must detail the required hardware and software configuration to support the proposed system.

d. Vendors must provide any hardware or software specifications to support the proposed system on Agency supplied hardware. The Agency's intention is to deploy the selected vendor solution on county supplied server environment, utilize county supplied networks components (routers, switches, firewalls) and all other network edge connectivity devices. Vendor must also agree to utilize county supplied workstations, monitors, keyboards, KVM's and all other required hardware to operate a fully functional and vendor supported call taking system as specified herein.

## 2. Global System Requirements
Global System requirements are those that apply to or affect all areas of the desired system. The proposed solution must meet the following mandatory requirements:

a. Provide a CTS capable of displaying Automatic Number Identification (ANI) and Automatic Location Identification (ALI), as provided by the Local Exchange Carrier (LEC) and wireless telephone carriers. Vendor responsibilities include all equipment, installation, maintenance, and training needed to provide a fully operational CTS.

b. No Single Point of Failure must render the CTS non-functional. Explain how the proposed CTS meets this requirement and how redundancy is built into the system.

c. The equipment must be rack-mountable.

d. The selected CTS must meet or exceed the National Emergency Number Association (NENA) standards for NG9-1-1 PSAP equipment, as revised. Vendors must confirm system compliance with these specifications or note any exceptions.

e. ALI requests must be made immediately after the ANI has been decoded.

f. The system must include security devices performing the role of a firewall for the ESINET.

g. The CTS and Management Information System (MIS) must support the ability to use the GPS clock network to comply with the NENA standards for time synchronization.

## 3. NG9-1-1 Controller Requirements

a. The NG9-1-1 controller must be equipped to perform voice transfers directly within the unit, or alternatively at a tandem central office.

b. The system must allow for voice transfers to be speed-dialed and manually dialed.

c. Once transfer connection has been established, the CTS must allow any party to disconnect or allow a three-party voice conference.

d. The NG9-1-1 controller must support dedicated redundant data links to designated ALI database providers.

e. The NG9-1-1 controller must be capable of collecting the ANI digits and processing the ALI lookup regardless of the condition of the call (i.e., on-line or hung up).

f. The ANI and ALI of an abandoned caller must be available for viewing by the call taker.

## 4. System Security

a. For security reasons, access to the CTS must be dependent upon a proper password.

b. The CTS must support multiple levels of access in order to allow for system access and programming capability by service personnel and PSAP administrators based on their level of expertise or authorization.

c. The proposed system must support remote access for outside support services via encrypted Virtual Private Network (VPN) protocol for authorized users.

d. The proposed system must include the ability to ensure that the solution is protected from unwanted malware, spam, and viruses.

e. The proposed system must include a solution to provide configured content web filtering to provide access to specific business use Internet resources.

f. The proposed system must provide a means to indicate to PSAP personnel that system availability is at risk.

## 5. System Architecture

a. All major components proposed must be fully redundant, allowing for full

geographical split location of the system.

b. The system must be designed to allow distribution of major components between multiple locations without requiring the purchase of multiple systems.

c. No single major component failure must disable more than 50% of the system capacity.

d. The CTS must be deployable as a single-site configuration or as a centralized configuration supporting geo-diverse deployment with full redundancy at each location.

e. The CTS must be expandable (without adding controllers or an additional rack or backroom) to accommodate a 50% growth from current capacity.

f. The CTS must provide a virtualized environment allowing the deployment and operation of multiple applications on the same virtualized servers.

g. The CTS must provide proven i3 connectivity.

**6. Next Generation 9-1-1**

a. The CTS must provide an upgrade path to emerging and new NG9-1-1 i3 capabilities without requiring any replacement of the CTS hardware.

b. Describe your company's vision for migration of the proposed product to function in the NG9-1-1 environment. Address not only text messages, but also future receipt of photo and video files.

c. Discuss the issue of storage for multimedia data received via NG9-1-1. Include the migration to GPS X/Y point-based routing of calls, rather than the current address and address range standards.

d. The solution must not require a forklift upgrade to deliver NG9-1-1 functionality at any point along the migration path to true NG9-1-1 ("Network-of-Networks" as envisioned by the United States Department of Transportation [USDOT], NENA, and others).

e. Immediate compliance with all new standards as soon as they are released is not expected but the Vendor must describe how the lag time between ratification of a new standard and compliance must be minimized.

**7. Geographically Diverse Redundant Configuration**

a. The solution must support installation in a geo-diverse redundant configuration.

b. The geo-diverse redundant solution must be composed of standalone controllers.

c. Each individual controller must be fully redundant and fault tolerant.

# Technical Specifications  --  9-1-1 Call Taking System

**8. Standards**

    a. The system provided must meet the applicable NENA and APCO standards.

**9. Line and Trunk Interfaces**

    a. The CTS must support interfaces to CAMA lines, Analog FXO, and FXS lines.

    b. The CTS must be capable of converting legacy telephony interfaces to Voice over IP (VoIP) packets, such that all further CPE call processing is performed via VoIP.

    c. Gateways must be used to convert CAMA, POTS, and ISDN/PRI circuits to VoIP.

    d. The CTSs must support interfaces to digital T1 trunks using CAS or ISDN signaling.

**10. Automatic Number Information (ANI)/ Automatic Location Identification (ALI)**

    a. The Calltaker Workstation must provide visual display of the emergency caller's telephone number and any i3-compliant standards.

    b. The Calltaker Workstation must provide visual display of the calling party's street address information based on legacy ANI and ALI and any i3 compliant standards.

    c. The Calltaker Workstation must also be capable of extracting geographical coordinate information from the ALI file received and transmitting this information to geographical mapping software with i3 standards.

    d. The Calltaker Workstation must automatically update location information at regular intervals.  This feature must be configurable by each PSAP as to the number and frequency of intervals on a per wireless provider basis.

    e. The Calltaker Workstation must guarantee that ALI data is appropriately and consistently displayed when interfacing with different ALI providers that send their information in various formats (e.g. wireline versus wireless).

    f. The CTS must provide the ability to configure multiple ALI links associated with specific trunk groups.

    g. Each ALI group must be configurable for a specific ALI protocol and assignable to individual trunk groups.

    h. The CTS must support ALI parsing to extract Class of Service, ESN, and Calling Party Number (CPN).

    i. The CTS must provide the ability to create an incorrect location information report and send it to a printer and email to a pre-configured email address.

    j. The CPE must provide the ability to manually request ALI data as often as desired, with

minimal delay.

k.  The solution must be able to store ALI data received from third-party ALI databases (e.g., Telco ALI database).

l.  The solution must send stored (cached) ALI information in response to subsequent queries for the same information providing faster ALI display on call taking workstations in the event the call is transferred to another system workstation or placed into conference.

m.  The ANI/ALI equipment must interface to the ALI database provided by the ESInet provider.

n.  Each controller must have at least two output interfaces for transmission and receipt of wireless and VoIP call data to the ALI database.

o.  The proposed solution must have auto ALI rebid capability and must also be configured to allow manual ALI queries.

p.  The ANI/ALI equipment must be compatible with eight- and ten-digit remote database query methods.

q.  The solution must also support advanced NENA Extensible Markup Language (XML) tags for standardized data exchange.

r.  The Vendor must provide for NENA i3 compliant serial interfaces for the delivery of callback and location information to CAD, mapping applications and voice recorders.

s.  The solution must be capable of delivering location information to CAD and mapping applications natively via IP without requiring a hardware or software upgrade.

t.  The solution must also support delivery of legacy serial ANI/ALI information.

u.  The proposed solution, including software, hardware, and interconnections, must be compatible with the ESInet provider network infrastructure.

v.  The solution must be able to connect to the ALI Database via IP or serial RS-232.

w.  The solution must provide a method for formatting the ALI for calls with 20-digit ANI CAS and 10-digit NCAS so the Calling Party Name (CPN) appears in the same location as it does for landline calls.  This formatting or "normalizing" must provide the CPN to the ANI callback list for CAS and NCAS calls received.

x.  ALI pre-answer is a very desirable feature to facilitate enhanced queue management in combination with trunk groups (and future data filters) designed for specific call types. (e.g., landline trunks versus wireless trunks)

y.  Each ALI link must be configurable for a specific ALI protocol and assignable to individual trunk groups.

**11. Calltaker Workstation (CWS) Functions**

a. The CWS must allow call takers to have on-screen access to all telephone features and must include a physical telephone instrument. All standard telephone functions must be available via the Calltaker Workstation. At a minimum, these must include pick up an incoming call; hold; release; transfer/conference; dial/last number redial; initiate an outbound call; and retrieve a held call.

b. All types of lines, including 9-1-1, ten-digit emergency, and administrative lines must be capable of termination and appearance on the call taker's screen.

c. The CTS must have the ability to display the ANI/ALI data on a number of types of screens.

d. The CTS must be capable of displaying twenty-digit ANI, two ten-digit ANI, telephone company identification, and Phase I and Phase II Wireless ANI and ALI.

e. The NG-1-1 controller must store the ANI/ALI information while the call is on hold, avoiding repetition of the ALI request.

f. The call queue indicators must show the following types of information calls in queue: the time the oldest call has been in queue; the trunk number or line number of the incoming call; and line status (e.g., ringing, off-hook, etc.)

g. The CWS must provide the ability to include a shared call appearance resource for any line or trunk of the CTS that must show the status of the line, pre-answer ALI of the caller, ability to pick up the line, join the call, or determine which call taker is on the line.

h. The CWS must allow the operator to place multiple 9-1-1 calls on hold. To assist in retrieving the proper call, operators must be presented with a list of calls on hold, showing the ANI, ALI, and the time/date at which each call was placed on hold. Operators must also have the capability of retrieving 9-1-1 calls that have been placed on hold at another answering position.

i. The call taker must be capable of releasing an existing NG-1-1 call at any time, regardless of whether the calling party has hung up.

j. The CWS must provide the ability to transfer information, such as addresses or coordinates, to mapping system software with graphical display capability (e.g., ANI, ALI, Mapped ALI, CAD Mapping).

k. The CWS software must support a manual rebid of the ALI information as needed.

l. Call takers must be advised of the nature of incoming calls through the use of distinctive ring tones or zip tones (used currently, tones that could be heard in the head set as calls are being routed to them) for various types of incoming calls (NG-1-1, administrative, etc.).

m. The volume of the ring must be capable of being lowered to a preset minimum, or increased at the call taker's discretion.

n.  The CWS must be able to mute the transmit side of the handset.

o.  The CWS must provide a window showing details of all agents currently logged into the CTS, including information such as their name, position, current role, call status, and the name of the line if they are on a call.

p.  The CWS must provide an output for recording position audio.

q.  Describe the general screen layout and workstation functionality

r.  If the proposed CTS must ride on the same network with the CAD system, explain whether account logon must be integrated with Active Directory, or if separate account and password administration must be required.

s.  The workstation must provide the ability to display to a workstation the Calling Party Number and Location Information (ALI) of an incoming 9-1-1 call before the call has been answered.

t.  This manual ALI query can be performed while the agent is idle or on a call.

u.  Any manual ALI request must be reported to the MIS system.

v.  The manual ALI request capability can be enabled on a per role basis.

w.  The Caller ID of calls received over administrative lines must be capable of being displayed on the corresponding answering position's workstation.

x.  Due to space limitations, the ANI of the Caller ID feature must be displayed in the same screen as that of an NG9-1-1 call.

## 12. User Interface Configurability

a.  The call taking workstation must permit customization of the user interface on a per user basis, including window and button layout, window sizes, control element sizes and properties, font size, and types.

## 13. Call Control

a.  The workstation must provide the ability to perform a conference, blind, or supervised transfer with one click to any contact in the contact list.

b.  The workstation must provide the ability to put a call on local hold, where only the agent who put the call on hold can retrieve the call, or on system hold, where any agent in the same agency can retrieve the call.

c.  The workstation must provide information for a call on hold such as how long the call has been on hold and which agent has put the call on hold.

d.  The workstation must also alert the agent when a call has been on hold longer than a pre-configured amount of time.

e.  The workstation must provide the ability for an agent to join a call on any of the shared line appearances configured on the workstation.

f.  When joining, the initial call taker must receive information that another agent has joined as well as identification of the agent.

g.  The workstation must provide the ability to perform a no-hold conference where the existing parties on the call are not put on hold when conferencing in a new party.

h.  The workstation must provide the ability to perform a hold conference where the existing parties on the call are put on hold when conferencing in a new party.

i.  The workstation must support a conference with up to 6 parties on the call, including the call taker.

j.  The workstation must support the ability to drop, hold, and un-hold parties of a conference call.

k.  The workstation must support the ability to drop the last party added to the conference call.

l.  The workstation must support the ability for a call taker to selectively mute the conference audio towards individual parties of a conference whereby the muted party cannot hear the conference audio and the muted party can be heard by other parties in the conference.

m.  The workstation must provide the ability for an agent to request supervisor help whereby the request must be routed to a designed group of supervisors and each supervisor must receive an audible and visual indicator of the help request. At this point, any one of the supervisors can accept the help request and automatically be conferenced with the agent requesting help.

n.  A supervisor must be able to initiate an observation session on any agent whereby the supervisor is silently connected to the agent's audio path.

o.  The supervisor can listen in on the call and at any time be able to barge in to the call and establish a two-way audio path with all participants in that call.

p.  The observe function can be silent providing no indication that an agent is being monitored or can be configured to provide a notification tone to notify the agent of the observation in progress.

q.  Cal taker workstation functions must have a local workstation instance of the application available.  Proposals that offer a browser- based call control methodology will be given secondary consideration.

**14. Agent View**

    a. The workstation must provide a window showing details of all agents logged currently into to the agency, including name, position, current role, call status, and name of the line if they are on a call.

**15. Dialing**

    a. The workstation must provide a user interface where contacts can be displayed in an array of buttons for dialing.

    b. Multiple layers of these buttons can be organized such that a call taker must be able to navigate to the appropriate contact button for dialing.

    c. The workstation must provide a search capability of all contacts whereby the search results are narrowed and displayed as the agent enters characters in the search field.

    d. The search capability must provide a simple search of the contact name or an advanced search where the agent can enter additional search criteria for other fields in the contact record.

    e. The CTS must provide a list of recent incoming and outgoing calls for up to the last 100 calls. The list must show detailed information about the call including the date and time, CPN, incoming circuit, ALI and ESN.

    f. The workstation must provide a one-button callback from the recent call list.

**16. Speed Dialing**

    a. A speed-dial feature must be provided and must be user-programmable.

    b. Speed dialing must be capable of performing primary and secondary dialing for dialing transfers, conferences, and other functions, such as long distance access, card numbers, and PIN access.

**17. Abandoned Call Handling**

    a. The workstation must provide the ability to notify the agent of any abandoned calls.

    b. The notification must be in the form of a visual indicator showing the number of abandoned calls as well as an audible indicator specific to abandoned calls.

    c. The workstation must provide the ability to either automatically distribute the callback of the abandoned calls to individual agent positions or to allow agents to selectively perform callback of an abandoned call from the agency's abandoned call list.

**18. Instant Recall Recording (IRR)**

# Technical Specifications  --  9-1-1 Call Taking System

a.  The CTS must have the ability to record all calls received at the CWS.

b.  These recordings must be available for playback during or after a call.

c.  These calls must be stored locally and be deleted automatically after a predetermined amount of time.

d.  This needs to be configurable over the entire system without having to touch each station.

e.  The CWS must have the ability to control the volume of the IRR.

f.  Give a general description of how the call-taker would use the feature, if a caller gave hard-to-understand information and then disconnected.

g.  It is desirable that at least 30 minutes of audio be stored at each work station.

h.  How many minutes of audio can be stored before the file is overwritten by current conversations?

i.  Are any routine maintenance procedures required for the data, such as purging old files?

j.  Is the audio stored at the workstation PC or on a server?

k.  Describe how the audio for an individual call can be exported to a .wav file or other common, non-proprietary audio file.

## 19. Telecommunication Device for the Deaf (TDD)/Teletype (TTY)

a.  Operators must be capable of manually connecting to emergency calls originating from ASCII- type TDD/TTY equipment, as well as originating both baudot and American Standard Code for Information Interchange (ASCII) calls from their answering position.

b.  The operator must have the ability to create a conference between the TDD/TTY caller and up to four (4) non-TDD/TTY parties either in 9-1-1 call-taking mode or administrative call-taking mode.

c.  The Calltaker Workstation must allow users to store and access (send) a minimum of twenty (20) pre-programmed TDD/TTY messages, as well as to print the previous TDD/TTY conversations

d.  The TDD/TTY function must allow an operator to transfer a TDD/TTY call to another operator position.

e.  The TDD/TTY function must allow the operator to alter its operation to comply with Americans with Disabilities Act (ADA) requirements for Hearing Carry Over (HCO) and Voice Carry Over (VCO) calls.

f.  The two-way TDD/TTY conversation and text information must also be stored on the

Application/Telephony Server.

g. A TDD/TTY detection and conversation capability must be available for every workstation.

h. The workstation must support both Baudot and ASCII encoding and decoding.

i. The workstation must be able to detect the encoding to be used for the TDD/TTY conversation.

j. The workstation must provide the ability to program an automated TDD answering string.

k. The NG-1-1 controller must allow call takers to communicate with TDD callers directly from their answering position, without requiring the use of any external device.

l. The CTS must provide management with the capability of configuring and scripting the predefined messages based on incident type, such as, but not limited to, POLICE, FIRE and EMS.

m. The CTS must provide the ability to record the text of a TDD conversation in the MIS.

n. Call takers must be signaled if the call they are answering has been detected as a TDD call.

o. When a call taker answers a silent call and suspects the caller may be a TDD caller having difficulty, the call taker must have a way to query the caller with a TDD message.

p. Simultaneously, the call taker must have the capability to continue to listen in the event a voice caller begins speaking during or after the TDD inquiry.

q. Vendors must describe whether TDD calls can be detected while in queue, and how TDD queue announcements can be provisioned.

r. Proposals must also describe whether the TDD Baudot/ASCII conversation is captured for output via the CAD interface or other methods.

s. Can a Telephone Device for the Deaf (TDD) "please hold" message be embedded in the first queue announcement?

t. Can the audio volume of queue announcements be changed?

u. Can TDD tones be detected while a call is in queue, and route the call to a different queue or otherwise alter routing of the call based on skill set?

## 20. Net clock for all CTS components

a. The CTS proposed must have the ability to independently use NTP protocol to maintain clock synchronization with a Master Clock.

# Technical Specifications -- 9-1-1 Call Taking System

Call Detail Record (CDR)

a. The desired solution must also contain a capability which automatically associates a related call, dispatch or radio event to allow for evidence organization.

b. Automatic Number Identification/Automatic Location Identification, location information and other information as i3 standards are developed must be captured and stored with each 9-1-1 call. The following items from the ANI/ALI data stream must be captured and stored in their own individual database fields of appropriate size that are sortable and searchable and as i3 standards are implemented that have the ability to capture and to comply with i3 standards:
- Originating phone number (ANI)
- Address or coordinate (ALI)
- Caller name
- ANI/ALI time of Initiation
- ANI/ALI time of pickup
- ANI/ALI time of disconnect
- ANI/ALI date
- ESN
- Class of service
- Carrier

c. List the specific fields of data that are captured for each call.

d. The CTS must provide the ability to simultaneously store Call Detail Records to file and send to a network printer.

e. The CTS must provide the ability to assign a CDR output and printer on a per agency basis when multiple agencies are using the system.

f. CDR printing can be configured to be line by line of all call events or as a concise single line print out for each call.

g. The CTS must provide integration to a fully featured MIS reporting application and send all call, agent to the MIS system for reporting purposes.

h. The CTS can be configured to print information for only 9-1-1 calls or to also include administrative calls.

i. The CTS must be configured to also print the ALI record for the call and the TTY/TDD conversation text for the call.

## 21. Management Information System (MIS)

a. The Vendor must provide comprehensive management and statistical reporting functionality to the PSAP management personnel with near real-time and historical information. It must be user-friendly, customizable, and capable of generating reports for varying time periods.

# Technical Specifications -- 9-1-1 Call Taking System

b.  This MIS must be capable of monitoring all lines within the CTS, including 9-1-1, seven-digit emergency, and administrative lines.

d.  The reporting interface must be capable of integrating multiple databases into one report with the ability to add attachments to the call record.

e.  The solution's reporting capabilities must be designed to enable authorized users to drill up/down and slice/dice the information to enable various agents, managers, supervisors and executives to answer virtually any telecom question in exactly the level of detail necessary to support a given administration decision.

f.  The solution must provide comprehensive management and statistical reports for all and individual PSAPs/jurisdictions.

g.  As a minimum, the following information must be readily available for reporting purposes:
    - ANI/ALI/Location Information
    - Seizure time
    - Position answered
    - Answer time
    - Disconnect time
    - Incoming trunk number
    - Total count of call type(s) such as but not limited to wireline, wireless, VoIP call types.
    - Average call waiting
    - Average call duration
    - Duration of transferred calls
    - Number of calls transferred to each PSAP
    - Total number of times a caller is transferred and to which PSAP(s)
    - Total abandoned calls
    - Calls by incoming trunk
    - Call by hour of day
    - Calls answered by position
    - Calls answered by all positions
    - Calls answered by each PSAP
    - Call answered by user ID

h.  The MIS solution must have traditional, industry-standard management and reporting capabilities.

i.  State-of-the-art technology must be used for the MIS solution. Describe what technology is used.

j.  The MIS must be designed to be highly reliable and protect data security and integrity.

k.  Describe the MIS integration capabilities and support for next generation media types.

l.  This MIS must be capable of monitoring all lines within the CTS, including 9-1-1, seven-digit emergency, and administrative lines.

m.  The MIS must incorporate the NG-1-1 call data records and telephone information into a PC for efficient storage, search, and retrieval of vitally important data and accessible analysis of system performance.

n.  Explain how PSAP administrators can export data from the MIS for more sophisticated analysis and/or long-term archiving (e.g., to Excel).

o.  Describe the proposed reporting system, including the hardware required.

p.  The MIS must be capable of generating reports from varying time periods of predefined reports.

q.  The report manager must support saving a customized report for quick access, such as a browser-type favorite for execution.

r.  Described the report-generation tools provided to create custom reports.

u.  Can your system provide separate answer time statistics on 10-digit trunk groups, and combine this data with 9-1-1 figures to report the PSAP's overall performance?

## 22. Interface Capabilities

a.  The system must support interfaces to multiple CAD servers using a standard NENA CAD spill over serial port or IP.

b.  The system must support allocation of up to 99 CAD groups to be assigned on a per position basis so that the CAD spill can be directed to the appropriate CAD port.

c.  The system must provide an optional CAD spill update when ALI is rebid.

d.  The Vendor must provide NENA-compliant serial system interfaces for the delivery of ANI/ALI information to CAD and Mapping applications.

e.  The system must be capable of delivering ANI/ALI information to CAD and mapping applications natively via IP without requiring a hardware or software upgrade.

f.  The system must also support delivery of legacy serial ANI/ALI information.

g.  The system must interface with the Agency's existing Digital Logger.

h.  The Call Taker Workstation must be interfaced/integrated with the radio system.

i.  Call Takers must use the same headset for both radio and telephone conversations.

## 23. CTS Monitoring and Administration

a.  The CTS must allow supervisors and/or call-takers to view real time, concise ALI

information of all 9-1-1 calls in queue at the PSAP.

b.  The system must be equipped with a monitoring capability that can be located with the Central Communications equipment or in a remote location.

c.  The system must be equipped to run self-diagnostic programs and to automatically report any error via audible and visible alarms.

d.  All maintenance and administration functions must be accessed via a browser-based application.

e.  The proposed system must be fully fault-tolerant. Vendor must describe how the proposed system meets this requirement.

f.  Describe you system's ability to display information such as the number of calls waiting in queue and longest queue time on the call takers' screens.