

**COMPLY.** The RedSky LIS will support comprehensive carrier ALI record transactions.

6. Need prompt system responses to ALI data inquiries (i.e., from initial ringing, call answer or repoll).

**COMPLY.** The ALI Query feature of the RedSky LIS provides “prompt system responses” to PSAP CPE querying the database for subscriber location.

7. Need to support electronic submission of database error reports to carriers from dispatch centers (e.g., web-enabled form, electronic mail or alternate).

**COMPLY.** The RedSky LIS supports the submission of database error reports from PSAPs in various formats, including a Web-enabled form/portal, via electronic mail, and where appropriate and feasible (i.e. can be provided on a case-by-case basis as an additional feature) via SOAP/XML Web Service via any PSAP application that may be used for this purpose.

8. Need to provide Master Street Address Guide (MSAG) for carriers to validate Service Order addresses and installation locations.

**COMPLY.** The RedSky LIS provides MSAG storage and address validation capability, so MSAG files uploaded by jurisdictions can be used by the carriers submitting their ALI records for address validation.

9. Need for Master Street Address Guide (MSAG) to capture and maintain Emergency Service Numbers (ESN) for address ranges.

**COMPLY.** The RedSky LIS provides the capability to capture and maintain ESNs for address ranges.

10. Ability to receive and integrate Private Switch ALI (PS-ALI) information from carriers or third parties such as PBX owners.

**COMPLY.** The RedSky LIS provides the capability to receive and integrate PS-ALI information from carriers or third parties such as PBX owners. As the leading provider of PS-ALI automation systems for enterprises in the industry, RedSky has unparalleled experience dealing with this sort of interface and understands the requirements from BOTH sides of the connection.

11. Ability to electronically utilize “Customer” ESRI GIS data for record validation (i.e., use GIS data as master validation source).

**COMPLY** via partner solution. RedSky has partnered with BullBerry Systems, Inc (for Synergem, change to GeoComm, Inc.), a leading GIS vendor, who will provide its NENA i3-standard Emergency Call Routing Function / Location Validation Function (ECRF / LVF) server as part of the CSI solution. The BBSI platform allows for the use of GIS data as the master address validation source. A fully integrated and tested solution, the RS/BBSI solution can meet this CSI requirement.

12. Need to provide for electronic export of ALI and MSAG information in format compatible for cross-validation with GIS information.

**COMPLY.** The RedSky LIS can export ALI and MSAG information in formats compatible for cross-validation with GIS information.

#### **Future Path Plans**

1. Vendor to describe the migration path to NENA Version 4, XML architecture. (NENA 02-010)
2. Vendor to describe plans for migration to NENA Next Generation i3 VoIP and telematics ALI architecture and the use of an Emergency Services Query Key (ESQK).

The RedSky LIS stores location data in several formats. Today, it supports both NENA i3 standard PIDF –LO (IETF RFC 4119 Presence Information Data Format-Location Object) format AND NENA 02-010 NENA2 format ALI files. RedSky is already designing and developing “LIS as ALI” systems for jurisdictions other than CSI that used NENA Version 4 files format, so our system will support this capability by 1Q CY2011.

As mentioned the RedSky LIS already complies with all extant NENA i3 standards (though we acknowledge those standards are still developing and we are actually helping to develop such standards) and can also support the use of ESQKs, and their associated Shell Records, for location update for VoIP Service Provider (VSP) subscribers, when the VSP is using one of the available nationwide VPC services, such as Intrado, TCS, or DASH Carrier Services.

#### **Wireless 9-1-1**

1. The proposed system shall capture and display the full call back number (CBN) of domestic calling parties.

**COMPLY.** The RedSky LIS supports the storage of “call back” numbers in its database or can obtain such, for wireless calls, from Mobile Network Operator (MNO) Mobile Positioning Centers (MPCs) via a NENA-standard ALI Steering interface.

Note that the actual display of the CBN is done by the PSAP CPE, discussed elsewhere in this proposal.

2. The proposed system shall display the Emergency Services Routing Key (ESRK) of the incoming call.

**COMPLY.** The RedSky LIS supports the use of the ESRK supplied by the Mobile Switching Center (MSC) to the PSAP for “looking up” the location information from a Mobile Network Operator’s (MNO) Mobile Positioning Centers (MPCs) via a NENA-standard ALI Steering interface.

Note that the actual display of the ESRK is done by the PSAP CPE, discussed elsewhere in this proposal.

3. The proposed system shall display the Wireless Carrier Name Identification; NENA or FCC Carrier ID as option,

**COMPLY.** The RedSky LIS, to the extent necessary, supports PSAP CPE display of Wireless Carrier Name Identification, and/or NENA or Carrier ID. This Information can either be stored directly in the ALI record in the LIS or can be obtained from an MPC via an ALI Steering interface.

4. ALI display shall display wireless carrier Class of Service codes (i.e., wireless phase designation).

**COMPLY.** To the extent it needs to support this feature (actual ALI display is done by the PSAP CPE), the LIS is capable of supplying Class of Service codes to the PSAP CPE upon an ALI query.

5. The proposed system shall capture and display tower identifier and antenna sector identification on ALI displays and through CAD interface data streams.

**COMPLY.** To the extent it needs to support this feature (actual ALI display is done by the PSAP CPE), the LIS is capable of supporting the capture and supplying tower identifier and antenna sector to the PSAP CPE upon an ALI query and/or re-bid. CAD interface data streams are a PSAP CPE requirement, discussed elsewhere in this proposal.

6. The proposed system shall provide the street address and related information (latitude/longitude) of tower and sector.

**COMPLY.** The RedSky LIS supports the transmittal of both street address and related information, such as the Lat/Long of the cell tower and sector the call is coming from to the PSAP CPE.

7. The wireless 9-1-1 ALI database shall accept dynamic updates from a wireless Mobile Position Center (MPC). The Contractor shall refer to J NENA recommendations for the Implementation of the Wireless Emergency Service Protocol E2 Interface via TCP/IP.

**COMPLY.** As mentioned the RedSky LIS supports NENA-standard interfaces to wireless MPCs and is compliant with EIA/TIA J-STD-036 requirements.

8. ALI display information shall include Confidence and Uncertainty factors if provided by the wireless carrier.

**COMPLY.** If they are provided by the carrier, the RedSky LIS interface will pass these parameters along to the PSAP CPE when a ALI request/re-bid is made.

9. ALI architecture to support multiple re-bids from dispatch centers; provide dynamic Phase II location updates if supported by carrier.

**COMPLY.** The RedSky LIS supports multiple ALI re-bids from PSAPs and can provide dynamic Wireless Phase II (WPH2) location updates if supported by the carrier and its MPC.

#### **Administrative Requirements**

1. Capability to generate canned and custom system reports. It is expected that such reports would include but would not be limited to:

1. TN Tally Report
2. TN Tally Report by Community
3. Service Order Fallout Report
4. Service Order Update Report
5. Service Order Updates 24 Hour Report
6. Service Order Processing Statistics Report

7. Service Order Corrections Statistics Report
8. Service Order Processing Errors Report
9. Service Order Error Codes Report
10. MSAG Updates Report
11. NRF Summary and Detail Reports
12. MSAG Overlaps Audit Report
13. MSAG Parity Report
14. MSAG Change Requests Report
15. ALI Audit: GIS site match Report
16. TNs by Community for Liaisons Report
17. Unnumbered Addresses Report

COMPLY. The RedSky LIS will support the provision of all of the reports listed above, and will also include a capability for CSI customer to custom generate system reports.

Proposer must specify all associated costs including maintenance and support a of the ALI database management solution in the Cost Proposal. These costs should be listed as a separate option for purchase.

As a hosted solution, all maintenance and support costs for the ALI / LIS solution are included in initial installation / startup and per TN/month charge for the solution, as detailed in the separate cost proposal. Fees associated with LIS operation are listed as an option in the cost proposal.

## **COMPUTER AIDED DISPATCH AND MAPPING INTEGRATION**

1. System shall transfer all of the available ANI/ALI data into a CAD incident entry application, including location lat-long data.	
2. System shall provide interface to third-party or vendor mapping application for real-time display of inbound call information. Integrated mapped ALI display is preferred.	C
3. Ability to support integrated mapping application co-resident on Intelligent Workstation.	C

## **INTEGRATED MAPPED-ALI DISPLAY**

### **TECHNICAL FEATURES AND CAPABILITIES**

#### **1.1 Minimum Requirements**

There are a number of minimum requirements that must be met by the proposed solution in order to provide a Mapped-ALI solution. These minimum requirements for the proposed solution includes

**1.1.1** The map display must utilize ESRI based standards for the mapping object libraries. The map must be built on ESRI ArcGIS 9.3 or newer platform.

C

**1.1.2** Interfaces with NENA standard 9-1-1 Call Processing Equipment

C

**1.1.2** Wireless Phase 1 and Phase 2 compliant.

C

**1.1.3** Capture map errors and/or discrepancies.

C

**1.1.4** Complete integration with vendor's GIS Data Management System.

C

**1.1.5** Ability to display CAD and AVL events on the map.

C

## **1.2 Functional Requirements**

Certain functional requirements, which are necessary to perform the tasks necessary for Mapped-ALI are listed below. For each requirement, proposer should include a detailed description of the proposed functionality and process.

**1.2.1** The application must have the ability to interface with and display digital orthophotos as well as have the ability to display other raster image data libraries.

**C**

**1.2.2** The primary data source for the mapping application will be ESRI based data.

**C**

**1.2.3** A legend must be available to the call-taker allowing any layer to be turned “on” or “off”.

**C**

**1.2.4** The Lat/Long of the current position of the mouse cursor must be able to be displayed.

**C**

**1.2.4.1** Lat/Long must be available in decimal degrees (DD), degrees - minutes –seconds (DMS), degrees-decimal minutes (DDM), State Plane and UTM.

**C**

**1.2.5** Map symbology must be based on attributes within the GIS data.

**C**

**1.2.6** Application must include a separate window displaying the entire map area or an area significantly larger than is displayed in the map window.

**C**

**1.2.7** Application must be able to search for a caller provided address or location to facilitate the determination of the emergency providers and facilities at that address or location.

**C**

**1.2.8** The mapping application must automatically display the tower and sector coverage area and the information provided by the CAS or NCAS solution for Phase I wireless calls.

**C**

1.2.9 The mapping solution must automatically display the lat/long and information provided by the CAS or NCAS solution for Phase II wireless calls. Symbol must change based on the latest class of service of the call  
C

1.2.10 Application must include an automated means of capturing ALI discrepancies and spatial discrepancies and reporting those back to a designated location.  
C

1.2.11 Application must provide a call history to easily return to a prior call for remapping or entry of discrepancy information.  
**CS – We have reserved call history for CAD systems and have worked with many CAD systems to provide this feature. We have done this to ensure that there isn't a duplication of call history or call details. That being said, if call-history is something that something that CSI wants (purely within the ALI-Map display application) we will provide it. Pricing for this is \$5000 for necessary development.**

1.2.12 Mapping system must have an easy method of updating each component of the map display system including: Configuration changes – System administrator must be able to make configuration changes in a central location and “push” the configuration to desired workstations.  
C

1.2.13 GIS data updates – GIS data will be maintained on site and in centralized locations. The mapping system must provide the functionality to provide automated updates of the GIS data at each call taking station over a WN/LAN.  
C

1.2.14 Print/Fax: Application should be able to print a map on a local or network printer or Fax a map to a secondary provider.  
C

1.2.15 Must include ability to display oblique imagery such as Pictometry's software.  
C

1.2.16 Proposer must specify associated costs and the details of maintenance and support of the Mapped ALI solution in the Pricing Proposal. These costs should be listed as a separate option for purchase.  
**C – Costs are 15% of mapped-ALI client software.**

<b>General Features</b>	
Ability to automatically display wireline, wireless Phase I and II, VoIP calls and ALI rebids.	C
Ability to view all active and prior call events in the system or PSAP, and all agent calls answered during the current session.	C – With the caveat mentioned in 1.2.11 regarding call history.
Ability to bookmark an unlimited number of preset map views.	CS - \$2500
Ability to customize user interface based on user permissions.	CS - \$7500
Ability to use layer caching for faster map loading.	C
Ability to create multiple and distinct map displays.	C
Ability to choose from shape and symbology options to create drawings on the map display (local or enterprise).	C
Ability to view ToolTips for site locations; ToolTips can include address information, geocoder match score and site picture(s).	C
Application must be NG9-1-1 ready.	C
Application must be built on the most current ESRI ArcGIS Engine (9.3.1).	C
Ability to support several geodatabase options, including Personal SDE, Workgroup SDE, Enterprise SDE, and File Geodatabase.	C
Allows for real-time GIS data updates.	C
Ability to answer a call directly from the map.	CS – This is supported but will require necessary interfaces to be written to the call answering software. \$1000
Allows for one-click dialout to response agencies directly from the map.	CS – This is supported but will require necessary interfaces to be written to the call answering

	software. \$1000
Ability to dispatch from the map.	<b>Not sure I understand the question but it sounds like they want to hit the radio system to dispatch from the map. \$1000</b>

<b>Searching Options</b>	
Ability to conduct multiple searches simultaneously.	C
Ability to return and zoom to search results for an exact address search.	C
Ability to return and zoom to geocoded search results for an approximate match of a searched address.	C
Ability to display "geocoder match scores" that rank search results for approximate matches of address searches.	C
Ability to return and zoom to search results for an intersection.	C
Ability to return and zoom to configurable "common place" locations.	C
Ability to search for an exit or mile marker.	C
Ability to perform a coordinates search using either Lat/Lon or x,y coordinates.	C
Ability to search for ESNs and associated response agencies.	C

<b>Discrepancy Management</b>	
Ability to create map discrepancies from active or previous calls, or create from scratch (ad-hoc).	CS - \$500
Ability to display map discrepancies for agent only, PSAP only and entire system.	CS - \$500
Ability to create ALI discrepancies from active or previous calls, or from scratch.	CS - \$500

Ability to display ALI discrepancies for agent only, PSAP only and entire system.	CS - 500
---	----------

<b>Map Navigation</b>	
Ability to "grab" and move the map display around without changing the viewing scale (pan).	C
Ability to measure distance and area using a variety of measure units (measure tool).	C
Ability to zoom in and zoom out using either a preset or user-determined scale.	C
Ability to quickly zoom to a predefined scale or manually enter a zoom scale .	C
Ability to select a layer or multiple layers and view the "raw" GIS data in the database (identify tool).	C
Ability to search the GIS data for information without needing pre-configured locators (find tool),	C
Ability to scroll around the map in all directions (roam).	C
Application must include a generalized, smaller-scale map (such as an overview map) that shows the limits of another map's extent along with its surrounding area.	EX – We have overview map capabilities but they are not provided as a separate window in the mapping graphical user interface (GUI). We have implemented this function in a way that is more convenient and makes better use of the GUI space.
Ability to display an electronic legend of map layer symbology (Table of Contents).	CS - \$1000. We provide a TOC today that includes all mapping layers in the map.

<b>Imagery</b>	
Ability to access image catalogs to display aerial imagery, orthographical photos and other scanned images.	C