DEPARTMENTAL INPUT
CONTRACT/PROJECT MEASURE ANALYSIS AND RECOMMENDATION

☑ New ☐ OTR ☐ Sole Source ☐ Bid Waiver ☐ Emergency Previous Contract/Project No.: BW9745-3/25

☐ Contract (RFP) ☐ Re-Bid ☐ Other

LIVING WAGE APPLIES: ☐ YES ☑ NO

Requisition No./Project No.: RQET1700027

TERM OF CONTRACT: 5 YEAR(S) WITH 2 5 YEAR OTRs

Requisition /Project Title: Computer Aided Dispatch Solution

Description: The County is soliciting proposals to obtain a turnkey, multi-function, multi-discipline Computer Aided Dispatch (CAD) / Mobile Solution (Solution) to automate emergency response and dispatch services for all County first responders, including integration with GIS, AVL, and Business Intelligence. This includes software and all associated services.

Issuing Department: ITD for MDPD/MDFR

Contact Person: Beth Goldsmith

Phone: 305-375-5683

Estimate Cost: $16,830,000 for initial 5 year

Funding Source:	GENERAL	FEDERAL	OTHER
		-	$16,830,000

ANALYSIS

Commodity Codes: 205 | 92045 | 91829 | 72518

Contract/Project History of previous purchases three (3) years

Check here ☑ if this is a new contract/purchase with no previous history.

	EXISTING	2ND YEAR	3RD YEAR
Contractor:			
Small Business Enterprise:			
Contract Value:	$	$	$

Comments:

Continued on another page (s): ☐ YES ☑ NO

RECOMMENDATIONS

	Set-aside	Sub-contractor goal	Bid preference	Selection factor
SBE				

Basis of recommendation:

See scope.

Signed: Beth Goldsmith

Date sent to SBD: 4/17/2017

Date returned to ISD Procurement:

COMPUTER AIDED DISPATCH SOLUTION

This document is a draft Scope of Services for a future solicitation and is subject to change without notice. This is not an advertisement.

Background

Miami-Dade County has a population of over 2.6 million residents, making it the most populous county in Florida. The Miami-Dade Communications Center is the busiest Public Safety Answering Point (9-1-1 Center) in the southeastern United States, processing 9-1-1 calls for the unincorporated area of the County and over 30 municipalities. On average, over two million service calls are handled on an annual basis. When a person in need calls 9-1-1, an extensive communication network is instantly activated to properly route the call to all of the necessary agencies for dispatch. In many cases, a single emergency will require different agencies to respond to an incident with coordinated action. The County's current system is Motorola Solutions Inc.'s Premier CAD 7.0 Computer Aided Dispatch (CAD) System and supporting Premier Mobile Data Computing (PMDC) applications, which were deployed in August of 2005. The System is used jointly by Miami-Dade Police Department (MDPD) and Miami-Dade Fire Rescue (MDFR) Department.

The ultimate goal of this initiative is to provide the County with a state of the art, integrated, commercially available Computer Aided Dispatch/Mobile System that will collectively satisfy the needs of its key stakeholder departments MDFR and MDPD, as well as, the public safety needs of the citizens of the County well into the 21st century. The proposed Solution should provide all necessary public safety functionality including AVL/closest unit dispatching. The proposed Solution is expected to provide a unified system that will maximize operational efficiencies across agencies leading to increased situational awareness, improved first responder safety, enhanced interoperability across supporting systems, and ultimately reduce response times. The proposed Solution must advance the overall mission, goals, and objectives of the County by making public safety personnel more effective in preventing, combating, and responding to public safety matters through strategic resource deployment.

The selected Proposer should provide a Solution to meet the needs outlined in this Section 2.0, including but not limited to planning, design, configuration, interfaces development, testing, training, documentation, implementation, Software License, and subsequent software maintenance, escrow, and technical support services throughout the term of the resultant contract.

The County is seeking a commercially available, highly configurable Solution to achieve the objectives listed below and automate emergency response and dispatch services for all County first responders including a seamlessly integrated CAD/Mobile application. The proposed Solution and supporting infrastructure will reside and be maintained at the following facilities:

- Miami-Dade County's primary Public-Safety Answering Point located in the Integrated Command Facility Building (ICFB), also referred to as Light Speed Building located at 11500 NW 25 Street, Doral, FL.
- Miami-Dade Fire Rescue Regional Communications Center (MDFR-HQ) located at 9300 NW 41 Street, Doral, FL
- Miami-Dade County's Data Processing and Communication Center (DPCC) data center located at 5680 SW 87 Avenue, Miami, FL (Functions as a warm back-up site, which can be activated to run concurrently under emergency scenarios)

- Miami-Dade County's Data Processing and Communication Center Annex (DPCA), located at 5600 SW 87 Avenue, Miami, FL

ITD is the central technology provider for the County and oversees the use of existing and emerging technologies in support of County government operations and services to the public. The Solution will be used by MDPD, MDFR, and various municipal agencies for which the County provides 9-1-1 and police dispatch services.

Objectives

The proposed Solution should advance the overall mission, goals, and objectives of the County by making public safety personnel more effective in preventing, combating, and responding to public safety matters through strategic resource deployment. The project's strategic goals and objectives are best summed up as follows:

- Improve 9-1-1 call taking times
- Reduce overall response times
- Improve incident location and call type accuracy
- Enhance the safety of Police and Fire Rescue first responders
- Alleviate the workload and burden placed on communications dispatchers and call takers
- Improve interoperability of applications
- Enhance the reliability, accuracy, and quality of data available operating on the principle of "single point of data entry"
- Improve coordination of police, fire and EMS resources
- Improve cost effectiveness of PSAP operations

The proposed Solution should give the County the ability to prevent, respond to, actively manage, and analyze situations threatening the safety, welfare, and property of citizens will be notably enhanced, including public safety enhanced initiatives such as:

- Intelligence led policing incorporating predictive analysis
- Informed fire suppression and emergency medical services
- Strategic public safety deployment
- Implementation of industry best practices to achieve operational and informational effectiveness
- Implementation of Enterprise wide systematic notifications
- Support of Next Gen 9-1-1 protocols, technology, and functionality thereby incorporating digital information (e.g., voice, photos, videos, text messages) to flow seamlessly from the public, through the 9-1-1 network, and on to emergency responders.
- Enhanced coordination and collaboration across municipal agencies using C2C interoperability
- Integrated incident reporting for future MDPD & MDFR RMS
- Improved coordination of Emergency Management across all public safety agencies including municipal first responders

Current Operating Environment

The County 9-1-1 system is a secure, closed environment. The County provides an IP Ethernet network with firewall controlled access to support the 9-1-1 production environment. All Emergency 9-1-1 calls in the County are routed to the Miami-Dade Communications Center by the local telecommunications carriers. The Communications Center serves as Miami-Dade County's primary Public-Safety Answering Point (PSAP) call center responsible for answering

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9-1-1 and public safety non-emergency calls requesting for police, firefighting, and emergency medical services. The Center processes 9-1-1 calls in the unincorporated area of Miami-Dade County and over 30 municipalities with an annual average of over two million calls for service are handled, over 60% of which are 9-1-1 calls.

The County maintains a sufficient staffing level of Call Takers, including bilingual staff assigned to all shifts, with access to interpreter services at all times.

MDPD's Communications Bureau oversees all call taking and police dispatch functions for MDPD. MDPD currently staffs over 100 police call taking positons with an additional 46 dedicated police dispatchers. MDPD dispatch operations are primarily operated out of ICFB. Each of the primary dispatch positions is responsible for a geographical portion of the County, commonly referred to as a district. With the exception of emergency calls, which take into account closest unit available, the vast majority of police related dispatch is conducted exclusively to units assigned within a designated geographic area. Each district is divided into pre-defined patrol areas with assigned units responsible for handling calls within that area. A given district's patrol area breakdown can be revised based upon the day of week, shift/time of day, or other special event.

At County PSAP facilities, call taking functions are handled centrally by MDPD Police Complaint Officers (PCOs). Each PCO uses a computer console designed to input incident information provided by the 9-1-1 caller. Each console position incorporates Enhanced 9-1-1, which provides the caller name and location. Incidents can also originate from units in the field as "on scene" or field initiated events. The call taker enters the incident information into the current CAD system. Only call takers actively communicate with the public during the course of a 9-1-1 incident. The system then routes the information to the appropriate dispatch console at either MDPD or MDFR (or both) depending on the nature of the incident, based on the location of the incident. The dispatcher(s), which may include staff from both MDPD and MDFR working simultaneously in the CAD system, then assumes control of the incident and dispatch appropriate resources. The County uses both AVL and CAD recommendations when dispatching resources. Additional information may be added to the original incident information in the CAD system at any point during the course of the incident by dispatchers and call takers. Communications between PCOs and dispatchers on an incident basis, is customarily conducted electronically via the existing CAD solution using incident comments.

Fully redundant, geographically diverse, unified call taking and dispatching facility for MDPD and MDFR are located at the DPCC and DPCA. The "back-up" sites are fully operational at all times, maintained in a "warm" state, and activated on a monthly basis by MDPD and MDFR personnel to ensure its availability and continuity. It is possible, due to extreme operational necessity that both the primary and back-up centers would be used concurrently.

Itemized below are relevant statistics for 9-1-1 CFS volumes, as well as, MDPD and MDFR incident and reporting totals.

CAD 9-1-1 / MDPD / MDFR	2015	2016
Calls For Service		
Total Calls for Service	2,410,347	2,451,983
9-1-1 Call Volume	1,592, 438	1,551,556
Avg. Call Processing Time	71 seconds	73 seconds
Police CAD Related Incidents		
MDPD	853,098	864,156
Municipal PD	271,759	268,691

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Police Reports		
MDPD	490,362	493,217
Municipal PD	43,880	48,423
Fire / EMS Information		
9-1-1 CAD Fire/EMS Incidents	283,572	285,347
Fire Inspections	90,031	92,361

MDPD Alternate Response Unit

Within the MDPD Communication's Bureau resides the Alternate Response Unit (ARU). ARU receives CAD incidents from the PCO for minor incidents, as defined by MDPD standards and protocols, where on-scene, direct response by a uniform patrol officer is deemed optional and the caller accepts a reduced level of response to expedite the handling of the CFS. ARU is responsible for the creation and capture of police incident reports for these minor incidents. ARU personnel may in the course of their tasks interact with the CAD system to update the incident, re-assign/transfer the incident as necessary, and close the incident once the report has been completed. The unit consists of six report writers and processes approximately 5,000 basic telephone reports annually. ARU's hours of operation are between the hours of 6AM and 7PM and they are housed at the ICFB.

MDFR Communications Division

MDFR's Communications Division oversees dispatch functions for MDFR. MDFR dispatch operations are primarily operated out of MDFR-HQ. MDFR currently staffs over 70 dispatchers and dispatch supervisors, with over 10 staff members routinely operating concurrently.

Current Technology Environment

The applications outlined below currently slated for replacement by the proposed Solution. The systems are presently utilized in one form or another as part of the current CAD/Mobile production environment and are associated to their current departmental business unit owner. In some cases, replacement of the full application, (e.g. ePolice, Deccan BARB, Zetron) will be determined at a later date based upon the proposed Solution's functional capabilities.

Current System	Description	Dept /Owner
Motorola Premier 9-1-1 CAD System with AVL	Mission critical application supporting the 9-1-1 call taking & computer aided dispatch functions for both MDFR & MDPD, along with over 30 other municipal agencies.	MDPD/MDFR
Motorola Premier MDC (PMDC)	Mobile computing unit application utilized in Police and Fire Rescue vehicles to directly communicate with CAD, support mobile queries, unit to unit, user messaging, mobile mapping, incident reporting integration, and AVL.	MDPD/MDFR
Motorola Advanced Tactical Mapping (ATM)	Embedded mapping application for CAD & PMDC	MDPD/MDFR
ATM Configuration application	Application used to configure and administer Advanced Tactical Mapping system	MDPD/MDFR
Message Switch related	Message Switch applications and services to support	MDPD/MDFR

systems/services	connectivity between CAD & MCU, unit to unit messaging, as well, connectivity/interfacing with back end county systems (e.g. CJS)	
Printrak InterConnect Server	Inclusive within the Message Switch solution	MDPD/MDFR
PMDC Message Switch	Inclusive within the Message Switch solution	MDPD/MDFR
Open Query Server	Inclusive within the Message Switch solution - Application that enables FCIC/NCIC interfacing.	MDPD
Client Soft Web Services	Web services used to interface with mainframe based applications (e.g. CJS, AUTO, LEIS)	MDPD/ITD
LadyBug application	County developed application to capture, document, and disseminate CAD system errors. Current error capturing mechanism is accomplished via the custom-built Ladybug application for which a viable replacement is sought.	MDPD/MDFR
Attunity	Middleware software used to load data (Personnel, Vehicle, Radio, Grid) to current CAD system	MDPD/MDFR
ePolice	Web based CAD query functionality along with supplemental inquiry functions to other departmental systems. Selected CAD related inquiry component will be considered for replacement.	MDPD
ePolice Mobile (Android and iOS version of ePolice Web)	Smartphone ePolice version enabling CAD query functionality & FCIC/NCIC query capabilities Selected CAD related inquiry component will be considered for replacement.	MDPD
West (formerly Intrado) Viper & Standalone 9-1-1 Customer Premise Equipment (CPE)	West Viper related hardware/software. Based upon the solution's ability to support integrated call management.	MDPD
Zetron	Backup fire station alerting system. Device generates tones for broadcast over the Motorola UHF radio system for station alerting.	MDFR
Deccan BARB	Application utilized in the building of static run-cards for CAD.	MDFR
Motorola MGU Geofile application	GIS Import utility for loading of geo based information into CAD	MDPD/MDFR/ITD
AVL Reporting system	Utility that pulls AVL data for a user defined period of time for a given unit. Data is graphically presented.	MDPD/MDFR
Open Query Client & Admin	Application used to configure and administer the Open Query application & server	MDPD
eCard	Offline CAD incident entry system	MDPD/MDFR

Harris Radio Environment

The County operates a county-wide, Harris P25, 800 MHZ 40 channel simulcast radio system, encompassing 10 tower sites. The system supports approximately 15,000 user devices from over 100 local, state, federal and tribal public safety agencies. The system includes over 40 dispatch consoles housed within the primary and back-up dispatch centers. The County's current Harris radio system platform utilizes Harris MaestroIP Dispatch Console for dispatch operations with an anticipated upgrade to Harris Symphony consoles within the next 24 to 36 months.

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CADLINK II provides an interface for emergencies and status updates confined to notifying the dispatcher of the disposition of an incident when it was cleared as well as a few administrative statuses.

Motorola Radio Environment

MDFR operates a 47 site UHF conventional simulcast radio system. This system is designed for firefighting, specifically combat operations in structures. All on-duty firefighters carry portable radios, which includes approximately 450 user devices and over 150 P25 devices associated with front line units. The system has substantial interoperability with other public safety entities in South Florida.

CAD Workstation Environment

The chart below breaks down all existing and planned CAD workstations across the MDPD and MDFR environments. The County expects to replace all existing workstations to conform to the selected Proposers recommended workstation specifications. Workstation replacement costs are not included within the scope of this procurement. The minimum transmission speed to a CAD workstation is 380Kb per second.

CAD Workstations		
Location	**Role/Position**	**Number**
Police		
ICFB	Call-taker	60
ICFB	Dispatcher	24
ICFB	Supervisor Call-taker	2
ICFB	Supervisor Dispatch	2
ICFB	Shift Commander	1
ICFB	Alternate Report Unit	1
DPCA	Call-Taker	20
DPCC	Call-taker	20
DPCC	Dispatcher	15
DPCC	Supervisor Call-taker	1
DPCC	Supervisor Dispatcher	2
DPCC	Shift Commander	1
ICFB	CAD ADMIN	7
ICFB	Digital Research-ADMIN Call-taker-ADMIN	3
ICFB	EMD Unit - ADMIN	4
MDPD Headquarters	RTCC/Call-taker	13 active (Licensed for 25)*
Municipalities	Dispatcher	5
District Stations	Dispatcher	9
MDPD - Training Bureau	Dispatcher	1
MDC ITD GIS	CAD ADMIN	1
MDPD - General Investigations Unit	Dispatcher	8
ICFB	Call Taker – Training	10
ICFB	Dispatcher - Training	10
Police sub-total		232
Fire Rescue		

MDFR-HQ	Dispatcher	18
MDFR-HQ	Supervisor Dispatcher	5
MDFR-HQ	CAD ADMIN	4
Lifeboat	Dispatcher	7
DPCC	Dispatcher	13
DPCC	Supervisor Dispatcher	3
DPCC	Training	9
MDFR Command Posts	Dispatcher	4
Fire Rescue sub-total		63
Total		295

Geographic Information Systems Environment

The County hosts an enterprise-wide GIS infrastructure in which every County department is responsible for maintaining current data relative to their respective business processes. The County utilizes products developed by ESRI through a negotiated Enterprise License Agreement. GIS applications and data are made available to all through its robust infrastructure. Citizens access GIS applications through the County's web site, http://www.miamidade.gov/gis, and access GIS data directly through the open data site, http://gisweb.miamidade.gov/opendata. Below is a brief description of the versatile GIS platform.

The ArcGIS Server GIS Internet and Intranet production infrastructures are configured for high availability and high capacity. The ArcGIS Server application servers are load balanced for performance and failover to ensure 24/7 availability. They host over 260 map services, 20 geoprocessing services, 50 custom applications, 5 cached base maps, and 20 address and web services (please see attachment titled "GIS WEB Services"). Application functions range from viewing property data to querying crime data in selected neighborhoods. The GIS internet infrastructure handles approximately 40 million map requests on a monthly basis.

The County supports two GIS cloud platforms, the first hosted externally by ESRI, ArcGIS Online (AGOL), http://mdc.maps.arcgis.com and the second an internally secure portal containing the same functionality as AGOL but with the addition of Insights, GeoEvent and GeoAnalytics servers.

The County has a structured batch processing environment supporting ArcGIS version 10.4.1 and programs coded in python, .net, and C#. Batch jobs are executed on a 24/7 schedule through the IBM mainframe scheduler.

The County maintains enterprise wide, fully redundant, ArcSDE, Microsoft SQL Server relational database infrastructure for various platforms including development, Internet, Intranet, and desktop. Additionally, separate and secure infrastructures are maintained in support of the County's 9-1-1, AForm, CrimeView and 311 systems. There are over 1,200 shared geographic layers stored and maintained in both 2D and 3D.

Raster and image data is stored centrally and shared using ArcGIS Server Image Extension through web services. New flights are flown annually and a fresh service published. The County has imagery dating back to 1999. Oblique Photography obtained through Pictometry is stored locally and accessed through GIS desktop software as well as consumed via externally hosted services.

ArcGIS desktop software, ArcMap and ArcGIS Pro, are available to all County employees through a CITRIX environment. The GIS/CITRIX environment currently hosts over 1,100 users (approx. 125 concurrently) and over 15 customized data editing and querying applications.

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The County maintains technically proficient GIS development and infrastructure staff that continuously demonstrates ownership and pride in their work at all levels.

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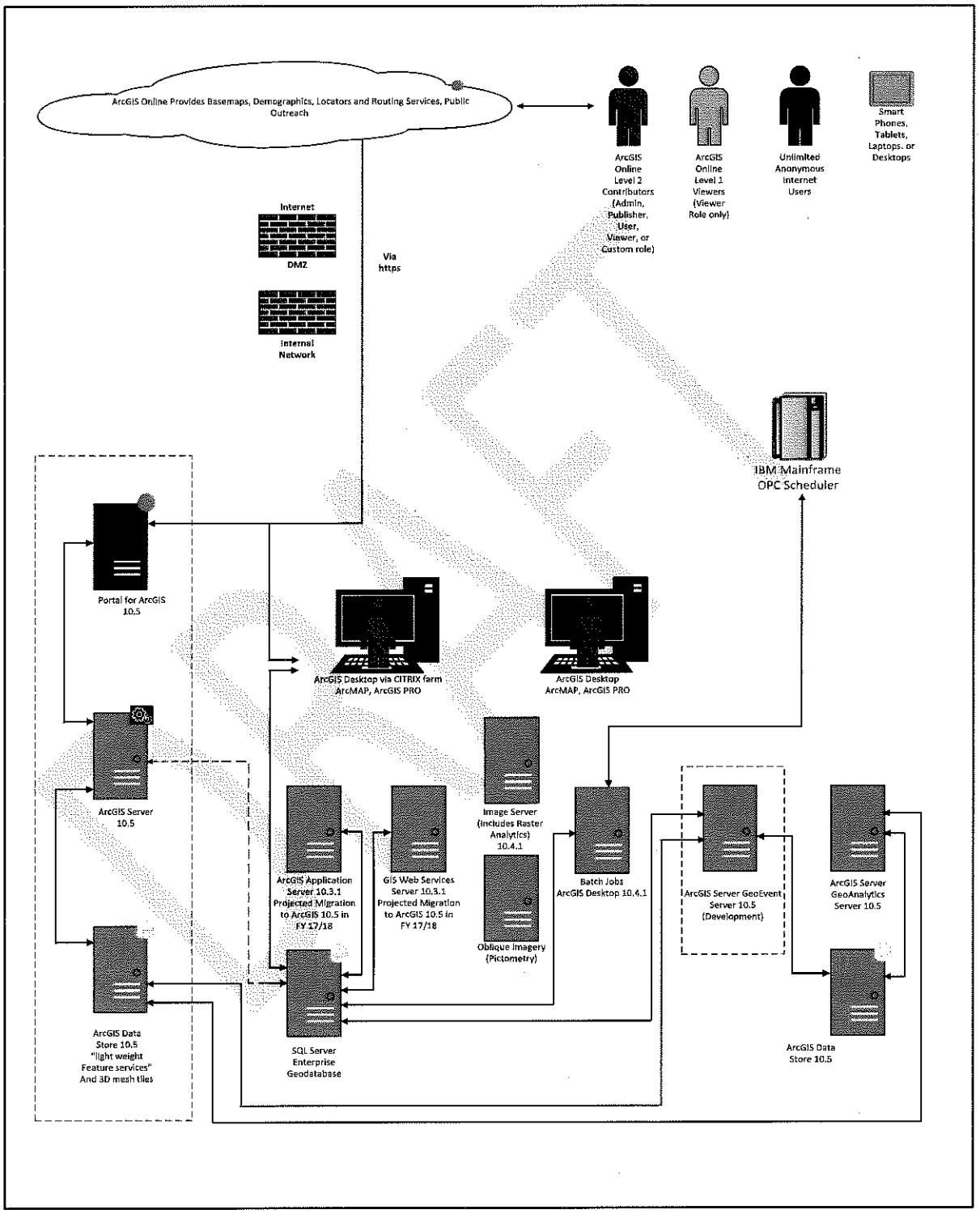

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Mobile Workload

Mobile Data Computer (MDC) activity generally encompasses the following types of functional transactions including:

- CAD Incident
  - Roster/Roll Call for shift start & end
  - Initial dispatch information
  - Unit Status - Acknowledge, en-route, arrived on scene, with the patient/problem
  - Incidents status – Working fire, working cardiac, etc.
  - Incident updates
  - Incident closure/disposition codes
- Unit to Unit / Unit to Dispatch Messaging
- BOLOs & Alerts – Police only
- Queries
  - Law enforcement – People, addresses (incident history), vehicles, property, external databases (FCIC/NCIC/NLETS)
  - Fire Rescue – Addresses (incident history)
  - Both – External databases, websites
- GIS/Mapping
  - AVL – Routing directions
  - Mapping layers and location information
- Field Based Reports – Law enforcement (NIBRS) via eOIR application, Fire (NFIRS), EMS (ePCR)
- Third party applications (eNotify – Subpoenas, CJS – Criminal Court case information, DAR-Daily Activity Reporting)
- Other tasks (Email)

MDFR Technology Environment

MDFR dispatch workstations provide access to CAD functions allowing users create and updated incidents, route incidents, dispatch MDFR resources, access history records, among a multitude of other non CAD related functions.

Listed below are the principal applications running on Fire Rescue dispatch workstations:

- Windows OS Enterprise Edition (Currently Windows 7)
- Diskeeper 2016
- Intel Rapid Storage Technology (RAID manager)
- Microsoft Silverlight
- Microsoft .Net Framework
- Display multi-monitor management card (currently Catalyst Control Center)
- Adobe Reader
- RealVNC®
- Trend Micro Office Scan
- Internet Explorer
- Windows Media Player
- Citrix online plug in
- Ladybug application (developed in house)
- eCard application (developed in house)
- Motorola CAD installs

- Advanced Workstation for Windows (AWW)
- CAD Client
- Advanced Tactical Map (ATM)

MDFR Mobile Environment

MDFR has approximately 350 mobile computing units currently deployed across its vehicles supporting its mobile operations with roughly half or 175 units typically online at any moment.

MDFR MCU's are currently Panasonic CF31 with data connectivity to the Miami-Dade network accomplished using AT&T's 4G/LTE broadband wireless network using Netmotion software as a secure tunnel for authentication and connectivity. It is expected that the devices will be replaced based upon the recommended hardware and configuration provided by the selected Proposer.

Listed below are the principal applications currently installed on MDFR MCUs:

- Premier MDC (part of Motorola today)
- Premier ATM (part of Motorola today)
- Netmotion Mobility Client
- Adobe Reader
- Cameo Chemicals 2.4.1 - r181
- Cameo Version 3.01
- RealVNC® Server 5.2
- Wiser 4.5 for windows
- Trend Micro Office Scan Client

MDFR Electronic Patient Care Reporting Tablets

MDFR presently uses Android-based tablets for patient care reporting processes. It is anticipated that the proposed Solution will be installed on these tablets. It is expected that the devices will be replaced and may include both Android and iOS based devices.

Detailed below are the applications presently installed on MDFR tablets:

- ePCR Dictionary Sync (in house app to sync personal dictionary)
- ePCR Messages (in house app to check drug log, sync info and receive messages from ePCR)
- Department of Transportation Emergency Response Guide Book
- MDFR-MOBI (in house app MDFR Mobile Medical Operations Manual – Android Only app)
- Notepad
- PAD Support (in house app to send in Support Tickets)
- SafetyPad ePCR (EMS Report writing software)
- Wireless Information System for Emergency Responders (WISER)
- Adobe Reader
- Battery Status
- USDD Phoenix G2 (station alerting application)
- AirWatch Agent (County mobile device management system)
- AirWatch Browser (County mobile device management system)
- AirWatch Secure Launcher (County mobile device management system)

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MDPD Technology Environment

MDPD CAD workstations provide access to CAD functions allowing users to answer 9-1-1 calls, create and updated incidents, route incidents, dispatch MDPD resources, access history records, perform federal/state/local queries, and reference a phone file of commonly used phone numbers, among a multitude of other non CAD related functions. Most remote municipal workstations are connected to the CAD system by T1 circuits. The municipality of South Miami has a CAD workstation allowing South Miami personnel to create and receive incidents for dispatch.

Software currently deployed on MDPD CAD workstations.

- Windows OS Enterprise Edition (Windows 7 & 10)
- Internet Explorer
- Diskeeper 2016
- Reflection for IBM 2014 R1 (3270 Client)
- Trend Antivirus
- Intel Rapid Storage Technology (RAID manager)
- Adobe Reader
- RealVNC®
- Citrix online plug-in
- BlackBox Glide & Switch software
- Microsoft .Net Framework
- Microsoft Silverlight
- Paramount (ProQA)
- Nice Verify
- Nice Inform
- Multi-monitor control display software (Catalyst Control Center)
- Aqua Evolution
- Avaya CMS Supervisor
- ATMEL Flip
- Java
- Motorola CAD – Advanced Workstation for Windows (AWW), CAD Client & Advanced Tactical Map (ATM)
- Open Query
- Ladybug application (developed in house)
- eCard application (developed in house)

MDPD Mobile Environment

MDPD has approximately 2,000 mobile computing units currently deployed across its uniform patrol units, unmarked units, and specialized vehicles supporting its mobile operations, with roughly a third of them typically online at any moment.

MDPD's MCU's are currently Panasonic CF53 and CF54 devices with data connectivity to the Miami-Dade network accomplished using AT&T's 4G/LTE broadband wireless network, using Netmotion software as a secure tunnel for authentication and connectivity. It is expected that the devices will be replaced based upon the recommended hardware and configuration provided by the selected Proposer.

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The MCU clients currently run the following applications:

- eCrash
- eOIR for Offense Incident Reporting
- Daily Activity Reporting (DAR)
- Field Interview Reporting (FIR)
- Automated Arrest Form System
- PMDC
- DAVID
- EDMS
- eCitation
- Web based applications including
    - ePAR
    - eNet
    - eNotify
    - ePolice
    - AFM-Aform
- Vievu
- LPR
- Adobe Acrobat
- Office 2013
- Java
- TrendMicro
- Imprivata
- Netmotion
- Sierra Watcher from Netmotion
- Chrome
- Internet Explorer

CAD 9-1-1 ANI/ALI Integration

MDPD currently utilizes a West: Viper system to import 9-1-1 ANI/ALI data into the CAD system to pre-fill the CAD incident mask and geo-verify the location information, as well as, original call receipt time at both the and backup DPCC site. The 9-1-1 West Viper system CAD port connection will require two connection points (5680 and ICFB). The connections are serial port and ITD uses a Lantronix box model # UDS1100 to convert from serial to IP.

FCIC/NCIC Communications Link

Communications with FCIC/NCIC is provided through an IBM P7 server (using the FCIC-2 Java Gateway software) communicating directly with the IBM mainframe via sockets over TCP/IP. The Java Gateway formats the messages that are sent to or received from the IBM Mainframe, and forwards them to the Florida Department of Law Enforcement (FDLE) FCIC server via sockets over a TCP/IP connection.

Crime Data Warehouse (CDW) Infrastructure

CDW serves as MDPD's principal data warehouse providing statistical, business intelligence, and summary/detailed information reporting for major law enforcement related incidents including: CAD events, Arrests, Incident Reporting,

Field Interviews, Traffic/Crash Reporting. MDPD anticipates continuing the use of its existing CDW/BI reporting system with the new CAD/Mobile solution.

Currently residing on an Oracle Exadata Storage Server X4-2, running Oracle version 11g, containing 421 gigabytes of information. CDW retains historical CAD incident data going back to 1995, nearly 40,000,000 events. CDW receives CAD incident information on a daily basis via the ePolice operational database.

The business intelligence/reporting engine is supported by IBM Cognos version 10.2.2 FP4, running on a Red Hat Enterprise Linux Server release 6.6 (Santiago) for System Z (z\VM 6.3). Additionally, there is a cross-platform installation with Cognos gateways installed on Windows Server 2012 R2 (64-bit).

Planned Technical Initiatives

Listed below are planned projects/initiatives with possible impact to the proposed CAD/Mobile solution. Proposers should take note that their projected deployments may have a direct bearing on desired system interfaces and associated functionality.

Project	Projected Deployment	Note
Harris Symphony Consoles	2018/2019	County's current radio system platform utilizes Harris MaestroIP Dispatch Consoles for dispatch positions
Telephony/ESInet	Late 2017	
LawQuery	2018	Replaces existing LEIS/AUTO mainframe applications
100 megabit upgrade to network connectivity for all MDFR fire stations.	2017/2018	
CJS/CCMS	2020/2022	Replaces current CJS mainframe application
eNotify	2018/2019	Replaced with new law enforcement subpoena tracking system
JMS	2017/2018	Replaces targeted Corrections-related functionality within existing CJIS application
IOC	2017/2018	Primary application used by RTCC
CryWolf	TBD	
ShotSpotter	2018	
Traffic & Signal Control	TBD	
NICE	Late 2017	
Enterprise Notification System	TBD	
TeleStaff for MDFR	Late 2017/2018	Transition to WebStaff by Kronos underway
TeleStaff for MDFP	Late 2017/2018	
MDPD RMS	2018/2020	
MDFR RMS	2018/2020	
Documentum Content Management System	Mid/Late 2017	Transition of MDPD Offense Incident and Arrest affidavits document images from existing emPower content management system.

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Solution Functionality

Core functionalities encompass fundamental specifications incumbent upon a multi-function, multi-discipline Solution in order to effectively administer the life cycle of a public safety incident. The life cycle of a CAD incident is defined as commencing with the moment a Law Enforcement/Fire/EMS event is initially reported up through the conclusion of the incident.

The proposed Solution should incorporate fully integrated mapping/geospatial functionality, incorporate the use of Smart Devices to provide field personnel with real-time access to CAD functionality, include interfaces with internal County and 3rd party vendor applications as defined below, provide enhanced integrated call management functionality, and include web based functionality to enable operations outside County dispatch centers without the need for physical CAD workstations.

For purposes of this RFP, core operational features are comprised of the following:

- Call Handling
- CAD Event Creation
- Dispatch Support
- Resource / Unit Management
- Incident Management
- Resource Request and Tracking
- Call Stacking/Call Scheduling
- Response Plans
- Recommendations
- C2C via Peer to Peer/Point to Point
- Incident Disposition
- Mobile CAD
- Messaging
- Mapping & Geo-file support
- Premise Alert
- AVL
- BOLO
- Tow Rotation
- Notifications
- Queries
- System Administration
- Reporting and Monitoring
- Interfacing & Integration

Interfaces

The proposed Solution should provide one-way and bi-directional interfaces to various third party and internal County systems as further defined below. Proposer should conduct a thorough review / assessment of all interfaces to be provided. Noted below are the principal recognized application interfaces required for the proposed Solution.

Third (3rd) Party System Interfaces

Key Interface related Terms

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The column heading **"Req'd for Go-Live"** indicates the need for the specific interface to be operational with the initial deployment of a new CAD/Mobile solution.

- **Y:** Signifies the interface is required to be operational in order to deploy the new CAD/Mobile solution.
- **N:** Signifies that an interface is not mandatory in order to initially deploy the CAD/Mobile solution. However, the County expects to have the interface operational prior to final user acceptance.

The column heading "Frequency of Data Flow" describes the anticipated occurrence or regularity of the interface's data transfer.

- **Real time**: Indicates an interface that must operate dynamically, on demand between systems.
- **Batch:** indicates a grouped, multiple record/transaction based interface between systems. Typically file based in nature, and often on a predetermined interval (e.g. hourly, daily, weekly, monthly, etc.)

The column heading **"Mode"** describes the direction of the interface between the CAD/Mobile system and the external system.

- **Data Exchange**: Signifies a bidirectional functional interface between systems where data is exchanged between systems.
- **Two-way / Query**: Signifies an interface with a request transaction which receives a data response from the queried system.
- **One-way / CAD:** Signifies a unidirectional interface between systems in which data is pushed to the CAD system.
- **One-way / Application:** Signifies a unidirectional interface between systems in which data is pushed from the CAD system to the application.

The column **"Type"** describes the current state of the interface as to whether it presently exists or is simply planned for and expected desired of the new CAD/Mobile solution.

- **Existing**: Identifies an interface that is operational and currently in place.
- **Planned**: Identifies an interface that is not operational but is expected to be deployed with the proposed Solution.

3rd Party Interfaces							
#	**Application**	**Req'd for Go-Live**	**Vendor**	**Description**	**Frequency of Data Flow**	**Mode**	**Type (Planned/ Existing)**
1.	CryWolf – v2.1.3.11	Y	CryWolf	False Alarm System – Application used to track false alarms and active alarm systems within the County. https://www.crywolf.us/	Batch	Data Exchange	Existing
2.	NetClock	Y	Stratum 1	Standardize date/time stamps across public safety applications via time server using Network Time Protocol (NTP).	Real time	One-way / CAD	Existing

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3.	West Viper v5.1	Y	West	System used to import 9-1-1 ANI/ALI data into the CAD system to pre-fill the CAD incident mask and geo-verify the location information, as well as original call receipt time. The interface should also deliver call receipt information for calls received on the non-emergency or administrative lines.	Real time	Data Exchange	Existing / Planned
4.	Harris P25 Radio System - Symphony **	Y	Harris	Planned upgrade to Harris 800 MHz system	Real time	Data Exchange	Planned (2019)
5.	Harris P25 Radio System – Maestro **	Y	Harris	Current 800 MHz radio system	Real time	Data Exchange	Planned / Pending Symphony upgrade
6.	Motorola MCC 7500 v7.11 or greater UHF Radio system	Y	Motorola	UHF Radio system to communicate with field personnel.	Real time	Data Exchange	Planned
7.	Priority Dispatch ProQA – Paramount	Y	Priority Dispatch	Application used by call takers to triage medical calls and provide pre-arrival medical instructions and classifies CFS, which in turn activates response plans.	Real time	Two-way / Query	Existing
8.	NICE	Y	NICE	MDPD's audio recording and screen capture system. Recording audio from the Motorola/Harris radio and Avaya/Cisco telephony system. Screen capture from CAD workstations. 9-1-1 data from West: Viper system captured.	Real time	One-way / Application	Existing/ Planned for screen capture & NG911
9.	Verint	Y	Verint	MDFR's audio recording and screen capture system. Recording audio from the Motorola/Harris radio and Avaya/Cisco telephony system. Screen capture on CAD workstations.	Real time	One-way / Application	Existing / Planned for screen capture
10.	Omega CrimeView mapping application	Y	TriTech	Strategic crime mapping application used by MDPD for CAD incidents	Batch	One-way / Application	Existing
11.	IBM's Intelligent Operations Center (IOC)	Y	IBM	Intelligence system supporting MDPD's Real Time Crime Center operations	Real time	One-way / Application	Planned
12.	Miami-Dade Public School Board Police RMS	N	Sunguard	OSSI CAD/RMS v.16.3.0.	Real time	One-way / Application	Planned
13.	Miami Gardens PD (C2C)	Y	Sunguard	C2C for Police – ONESolution CAD v 6.0.0.24.48	Real time	Data Exchange	Planned

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14.	South Miami PD (C2C)	Y	Sunguard	C2C for Police – ONESolution CAD	Real time	Data Exchange	Planned
15.	Aventura PSAP (C2C)	Y	Sunguard	C2C for Fire/Rescue – ONESolution	Real time	Data Exchange	Planned
16.	Pinecrest PSAP (C2C)	Y	Sunguard	C2C for Fire/Rescue - ONESolution v16.2	Real time	Data Exchange	Planned
17.	AMR Ambulance Dispatch (C2C)	Y	Logis	C2C for Fire/Rescue – Logis v13 (As of Jan 2017)	Real time	Data Exchange	Planned
18.	Avaya Phone System	Y	Avaya	Telephony system used by MDFR. Initiate voice call from CAD to Avaya phone system.	Real time	One-way / Application	Planned
19.	Cisco Phone System	Y	Cisco	Telephony system used by MDPD/MDFR. Initiate voice call from CAD to Cisco phone system.	Real time	One-way / Application	Planned
20.	FirstWatch	Y	FirstWatch	Application used to support real time monitoring of operations	Real time	One-way / Application	Planned
21.	SafetyPAD	Y	SafetyPAD	Application used to provide electronic Patient Care Reporting (ePCR)	Real time	One-way / Application	Existing
22.	Telestaff/Webstaff	Y	Kronos	Application used for rostering and staff management	Batch	One-way / CAD	Planned
23.	USDD Fire Alerting System	Y	USDD	Primary Fire Station Alerting system	Real time	Data Exchange	Existing
24.	Westnet Fire Station Alerting system	Y	Westnet	Fire Station Alerting system (used by City of Miami & Key Biscayne)	Real time	Data Exchange	Existing
25.	Collabria ReadyOp	Y	Collabria	Notification system to disseminate critical information to users via alerts, SMS, MMS, e-mail, phone calls, conference, and land mobile radio system.	Real time	One-way / Application	Planned
26.	HipLink	Y	HipLink	Real-time universal messaging system that complements public safety efforts for both 9-1-1 and emergency operations systems providing wireless emergency alerts to any device serviced by a commercial carrier.	Real time	One-way / Application	Planned
27.	ShotSpotter	Y	ShotSpotter	Application used for gunfire detection. Interface needed to extract info to create CFS.	Real time	One-way / CAD	Planned
28.	Deccan LiveMuM	Y	Deccan	LiveMUM (Live Move-Up Module) is a real-time operational module that provides dispatchers with instant, optimal move-up recommendations.	Real time	Data Exchange	Planned

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29.	Deccan BARB*	Y	Deccan	System used by MDFR to build static run cards	Batch	One-way / Application	Existing
30.	Rhodium	Y	Rhodium	System to support real time, on-scene incident management by MDFR personnel	Real time	One-way / Application	Planned
31.	3SI's ESP® (Electronic Satellite Pursuit)	N	3SI	High-value asset tracking system that combines High Sensitivity GPS, Cellular, and RF Location Technology into one effective tracking and apprehension tool. Facilitate incident creation.	Real time	One-way / CAD	Planned
32.	Zetron 25*	Y	Zetron	Tone generator connected to CAD & the Motorola UHF 450 Mhz radio system via analog interface	Real time	One-way / Application	Existing
33.	Fleet Focus M5	Y	AssetWorks	System maintaining Fleet management information for MDPD/MDFR units	Batch	One-way / CAD	Planned
34.	eCitation (LexisNexis)	Y	LexisNexis	System used to by MDPD to handle citation reporting from MCUs.	Real time	Two-way Query	Existing
35.	eCrash (LexisNexis)	Y	LexisNexis	System used to by MDPD to handle Traffic/Crash reporting from MCU's.	Real time	Two-way Query	Existing
36.	MCM CommShop 360	Y	MCM	Asset management system to track radio assets and their respective assignments	Real time	One-way / CAD	Planned
37.	Infor Enterprise Asset Management System (EAMS) Version 11.1, migrating to 11.3 in 1st qtr 2017	N	Infor	County's enterprise wide asset management system. Will eventually contain radio information for the police agencies for whom MDC dispatches.	Batch	One-way / CAD	Planned
38.	CopLogic (LexisNexis)	N	LexisNexis	On-line citizen reporting system which allows a citizen to submit a police report and receive a tracking number/ police case number.	Real time	Data Exchange	Planned
39.	FCIC/NCIC/NLETS	Y	FDLE / FBI	State/federal criminal system/database accessed to conduct subject, vehicle/property checks	Real time	Two-way Query	Existing
40.	DAVID	Y	DHSMV	Application providing access to FL DHSMV DAVID / Drivers And Vehicle Information Database. Primarily for MCUs	Real time	Two-way Query	Planned
41.	eNotify v.5.3.8.1	N	Orion	System used to administer law enforcement related electronic subpoenas and officer work schedules	Real time	Two-way Query	Existing

42.	Automated Secure Alarm Protocol (ASAP)	N	TBD	Standard data exchange for transmitting information using automation between an Alarm Monitoring Company and a PSAP	Real time	Data Exchange	Planned
43.	Juvenile/Adult Photo Imaging System v.5.104	Y	DataWorks Plus	MDC enterprise wide system to capture and administer arrestee / booking mugshot photos	Real time	Two-way Query	Planned
44.	Geographic Information System (GIS)	Y	ITD/ESRI	County GIS/geospatial application used by both CAD and mobile users providing • County Geofile • All County layers & boundaries • Street network • Common places • Postal Address Validation MGU is an import/transformation utility used by existing CAD system ATM/ATMM – Utility to manipulate base maps used by the existing CAD system	Batch	One-way / CAD	Existing
45.	Pictometry	N	ITD/ Pictometry	Repository of oblique & ortho imagery maintained by ITD GIS	Batch	One-way / CAD	Planned
46.	KITS - Advanced Traffic Management System (ATMS) v.14.12.10.4	N	Kimley-Horn and Associates	System used to manage traffic and signal controls across MDC.	Real time	One-way / Application	Planned
47.	Documentum Content Management System v.7.x	Y	Documentum	MDC enterprise wide document management system storing MDPD Offense Incident report and Arrest Affidavit images.	Real time	Two-way Query	Planned

****Harris P25 Radio System -** The County's current radio system platform utilizes Harris Maestro!P Dispatch Console positions for dispatch operations with an anticipated upgrade to Harris Symphony consoles within the next 24-36 months. As a result of the future transition from the Maestro platform to the Symphony platform, the proposed Solution should provide the capability to interface with the Harris Maestro Dispatch Console and the Harris Symphony Dispatch Console concurrently without any degradation to radio functionality.

Internal County System Interfaces

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Internal County System Interfaces							
#	**Application**	**Req'd for Go-Live**	**Vendor**	**Description**	**Frequency of Data Flow**	**Mode**	**Type (Planned/ Existing)**
1.	ePolice	Y	ITD	Custom built Web based application providing query access to live and historical 9-1-1 CAD data	Batch	One-way / Application	Existing
2.	LawQuery	Y	ITD	Custom built middleware application to handle FCIC/NCIC/DHSMV/NLETS and local mainframe queries (e.g. CJIS, AUTO, etc.)	Real time	Two-way Query	Existing / Planned migration of LEIS /AUTO function
3.	MDPD HR/Personnel system	Y	ITD	Custom built system used to administer MDPD Personnel information.	Batch	One-way / CAD	Existing

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4.	MDFR Fire Hydrant System	Y	ITD/MDFR	Custom built, multi-jurisdictional GIS based Fire Hydrant Maintenance system	Batch	One way / CAD	Existing
5.	Traffic Information System (TIS)	Y	ITD	Custom built local mainframe application that provides traffic related case management.	Real time	Two-way Query	Existing
6.	Mayor's Crash Tracking System	Y	ITD	Custom built web site that provides a display of countywide traffic accident incidents on map.	Batch	One-way / Application	Existing
7.	Criminal Justice System (CJS)	Y	ITD	Custom built local mainframe IDMS application providing local criminal history & criminal court case management functionality. Current interface supports CAD positions via Open Query and PMDC/MCUs.	Real time	Two-way Query	Existing
8.	MDPD Department Inventory system (DIS)	Y	ITD	Custom built MDPD Fleet inventory information management system supplying vehicle inventory data	Batch	One-way / CAD	Existing
9.	MDPD eOIR system	Y	ITD	Custom built MDPD field reporting system used by ARU & officers.	Real time	One-way / Application	Existing
10.	MDPD eFIR	Y	ITD	Custom built MDPD field interview reporting system	Real time	Two-way Query	Existing
11.	Daily Activity Report (DAR)	Y	ITD	Custom built application used by MDPD to create the officer's daily activity report containing all shift related activity	Real time	Two-way Query	Existing
12.	Control Access Database	Y	ITD	Local database used to track radio assets assigned to personnel. Data base contains every radio that is assigned to the countywide 800MHz system (Police, Fire, Municipal agencies, federal agencies, Public Works, Water and Sewer....)	Batch	One-way / CAD	Existing
13.	CoP	N	ITD	Custom built COP (Community On Patrol) app for the public to report a suspicious event or subject and include by text, video, or other image. Alert is routed to MDPD's RTCC. Tip could generate a 9-1-1incident / police case number.	Real time	One-way / CAD	Planned
14.	Crime Data Warehouse (CDW)	Y	ITD	MDPD's primary crime data warehouse for statistical analysis and business intelligence reporting	Batch	One-way / Application	Existing

15.	Countywide BOLO/Alert system	N	ITD	Custom built, enterprise wide system to manage BOLOs/alerts across all Miami-Dade law enforcement agencies	Real time	Data Exchange	Planned
16.	MDFR RMS	Y	MDFR	Custom built MDFR records management system used for statistical analysis and business intelligence reporting.	Real time	One-way / Application	Existing

Standards and Compliance

The County strives to abide by the rules and regulations mandated by Federal, State, and local government organizations. Public Safety divisions also consider performance standards set forth by public safety professional associations such as:

- The Association of Public Safety Communications Officials (APCO)
- National Emergency Number Association (NENA)
- National Fire Prevention Agency (NFPA)

Beyond these the proposed Solution should comply with and incorporate National and Industry public safety standards or governing policies including:

- National Information Exchange Model (NIEM)
- Law Enforcement Information Technology standards (LEITS)
- FBI CJIS Security policy
- National Fire Protection Association (NFPA) standards 1221 & 1710
- NENA ALI/GIS Standards
- National Fire Incident Reporting System (NFIRS)
- National Institute of Standards and Technology (NIST) Best Practices
- Federal Information Processing Standards (FIPS)
- Automated Secure Alarm Protocol (ASAP)
- Health Insurance Portability and Accountability Act (HIPPA) of 1996

Integrated 9-1-1 Call Management Function

MDPD is seeking a solution that will integrate the 9-1-1 call management function thereby provides the ability to receive and manage traditional wireline and wireless calls, leverage the architecture and scalability of a modern CAD system to consolidate hardware and software resources as one seamless application. Furthermore, with the deployment of NG 9-1-1 standards, the solution must accept and interact with voice, text, and other multimedia communications. By pursuing an integrated call management solution, MDPD seeks to streamline emergency call workflows so that call takers can focus on managing the incident, expediently creating the call for service, while removing traditional third-party hardware dependencies.

Next Generation 9-1-1 (NG 9-1-1)

The County is currently migrating the 9-1-1 infrastructure, as it relates to call/data delivery to the PSAP, to an Emergency Service IP Network (ESInet). The migration project includes modification of the automatic location

identification (ALI) database in anticipation of supporting the NG 9-1-1 delivery of caller location. The County is seeking a Solution that will adhere to applicable National Emergency Number Association (NENA) Next Generation 9-1-1 (NG 9-1-1) capabilities of accepting, processing, disseminating, and storing location protocol (Presence Information Data Format-Location Objects [PIDF-LO]) and various data (e.g., text, photo, video, audio, X/Y coordinates). As NG 9-1-1 industry standards continue to evolve, the County is seeking a solution that is robust, flexible, and will continue to update existing CAD system functionality as new NG 9-1-1 standards, functionalities and features are established.

CAD to CAD (C2C)

Due to the numerous municipalities and PSAPs located in geographic Miami-Dade County, a C2C point to point environment is needed to provide interoperability between selected jurisdictions and allow for the transfer of CAD information from one jurisdiction to another without the need for dispatcher intervention between communications centers. As a result, response times are anticipated to be substantially reduced and public safety agencies will be provided with a greater breadth of information regarding events in neighboring localities. Accordingly, the County is in need of a C2C Peer-to-Peer/Point-to-Point environment with selected municipal CAD systems to better serve the public safety needs of its citizens.

Archival and Data Purge

The County desires a proposed Solution with the ability to automatically archive, retrieve and purge data. The County expects that purging shall be administrator configurable by multiple parameters, (e.g., date, file, field value, user identification (ID) and location), and that all purges shall be subject to strict audit tracking and reporting. The County also expects that purging shall occur while the Solution is fully operational without degradation of performance.

Solution Performance Specifications

The proposed Solution must meet the following performance specifications as measured by requested response time. Response time is measured as the time between a user-initiated command via any mode and the return of the requested data or action from the proposed Solution. A workstation shall be deemed locally attached when it is on the same network as the application server. The response time for CAD queries that necessitate access to data sources outside the County's computing environment, such as an FCIC/NCIC inquiry, shall be measured as the response time provided by the external source plus two seconds, for a maximum response time of three seconds.

Transaction	Requested Response Time
Locally attached CAD workstations, no external data access	Sub-second to 1 second
Locally attached CAD workstations, geo-file validation required	1 second
Locally attached CAD workstations, non-CAD data access required	3 second
Standalone MCU, single record access	2 second

System Architecture and Technical Environment

The County operates five separate environments to support the proposed Solution: Testing/Staging, two Training (one for MDPD and one for MDFR), and two Production environments to meet or exceed the performance standards. The Testing/Staging and Training environments will not be required to be fault tolerant or high availability.

Functionality to push updates and data across environments is required to facilitate migrations is required. The County is open to proposed Solutions that operate in a virtualized environment

Network Specifications

The County, in conjunction with the selected Proposer, will conduct a network analysis based on proposer recommendations, to determine if the current network infrastructure meets or exceeds the proposer's requirements, or if upgrades may be required to meet the proposer's stated network connectivity requirements. The proposed Solution should minimize the number of ports required for accessing the system external to the County's firewall.

Hardware Specifications

It is the County's preference for all hardware and workstations to be purchased directly by the County. As such, no hardware or peripheral purchases are included within the Scope of this RFP. All equipment shall be installed according to manufacturers' requirements.

CAD Standalone Mode

The County desires that the proposed Solution provides the ability to operate in a standalone or offline mode or similar functionality to facilitate continuing operations in the event of the CAD servers becoming unavailable or network connectivity is lost. The proposed Solution should have the ability to append incident data from the workstations in a store-and-up load capacity or similar when the servers are back on line.

CAD Querying and Reporting

MDPD currently has a Crime Data Warehouse (CDW) that provides statistical, business intelligence, and summary/detailed information reporting for major law enforcement related incidents. MDPD anticipates continuing the use of its existing CDW reporting system with the new Solution. MDPD also expects to utilize the base reporting features provided with the proposed Solution as a supplement to its current CDW reporting system.

MDFR currently generates CAD statistical reporting from an internally developed Fire RMS database. MDFR anticipates continuing the use of its existing reporting system with the new Solution. MDFR anticipates eventually replacing this database with a RMS with business intelligence capabilities. MDFR also expects to utilize the base reporting features provided with the proposed Solution as a supplement to its current reporting system.

The County expects that the proposed Solution will provide the ability for end-user querying and reporting to be performed without negatively impacting performance. The County anticipates using the built-in proposed Solution's query capabilities to support basic reporting functions such as:

- User workload and performance analysis reporting
- Ad hoc incident based querying and reporting
- Basic report formatting features
- Standard report features including filtering, grouping, sorting, and summarizing
- Export, save, and standard report dissemination features (e.g. PDF, email, etc.)

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Web-based Functionality

The proposed Solution should provide robust web-based or web-enabled functionality in addition to a locally installed client application. The County will primarily use the locally installed client application, and will utilize the web-based or web-enabled portions for operating outside of the dispatch centers.

Data Integrity

The proposed Solution should ensure the integrity of the data. Interruptions in processing due to incidents such as aborted transactions, hardware failures, or network unavailability should not result in inaccurate or inconsistent data residing in the proposed Solution. If data transfers occur, the proposed Solution should provide a method of audit validation to ensure all data sent was received in the target application.

Scalability

The proposed Solution should be able to scale up to handle increased load without any performance impact on operations to facilitate demand. Increased loads of up to 100 percent may be the result of temporary surges based on a major event or natural catastrophe such as a hurricane. Under a worst case, the Solution must be capable of handling all MDPD and MDFR smart devices and mobile clients: MDPD MCUs, MDFR MCUs, and all licensed CAD workstations operating online concurrently while maintaining performance measures as defined in Section XXXX. This must include AVL/ARL functionality.

Automated Update of Workstations and Mobile Computers

Licensed Software installation and updates to both desktop workstations and MCUs should be accomplished through an automated network facility and not require a technician to perform a manual procedure on each workstation/MCU. This update utility should be configurable by multiple parameters (e.g. workstation type, able to support the scheduling of update activities in batch and non-batch modes). A summary report is required documenting the results of the update activity.

Security

The proposed Solution must be supported by enhanced security controls, given its mission-critical role affecting the safety of the public as well as the County's first responders.

A detailed activity auditing and reporting module with the capability to log, query and report all user actions, including keystrokes, at specified positions, throughout the Solution. Logging should be configurable by the security administrator. Log entries should be customizable by the security administrator to handle the different requirements of the County but should minimally contain a user and workstation ID, date and time.

Business Continuity

The County seeks a High Availability/Fault Tolerant solution using the County's primary and backup data centers. The proposal must include hardware, software, networking, and operational requirements to implement a solution in the case of a single component failure or a widespread disaster at the production data center. The back-up data center is located within 15 miles and has broadband connectivity.

Redundancy

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The County requires two separate production computing environments for the proposed Solution, with the ability to run concurrently. Fully automated failover to the redundant environment is required. The County expects both environments to be technically equivalent. The County will fully replicate the infrastructure environment for both sites. The production environments shall be located at DPCC and ICFB. These geographically diverse, redundant sites shall be fully operational at all times, maintained in a mirrored state.

The County's interfaces and operational procedures should be identical regardless of the locations performing the functions. System backups must be accomplished without taking the application out of service and without degradation of performance or disruption to County operations.

System Availability and Access

The public safety mission requires consistent operations. The proposed Solution is expected to maintain a Solution availability of 99.999% uptime annually. Routine maintenance or administrative procedures should not require Solution down time or a re-start to take effect.

Disaster Recovery Operations

The County requires the proposed Solution to have appropriate fully automated backup capabilities for the purpose of disaster recovery. This should include all database and application data. Backup media shall be in a format suitable for convenient off-site storage. The proposed Solution shall provide differential backup schedules for various Solution components configurable by the system administrator. Incremental and full back-up capabilities shall be provided. All backup and recovery processes shall be subject to auditing and reporting. Solution backups shall be accomplished without taking the application out of service and without degradation of performance or disruption to operations.

Implementation Services

The selected Proposer shall be responsible for providing Implementation Services to include: planning, design, configuration, customizations, testing, and on-site installation for the proposed Solution. The County expects the selected proposer to install and perform configuration of proposed Solution with County staff on site to allow County personnel to observe, assist with, and document the installation and configuration process. County staff will install Server operating system software and implement network configurations to support the Proposer's solution. The County prefers an Implementation schedule that provides Final Acceptance within 18 months of the Notice to Proceed.

In conjunction with County staff, the selected Proposer shall be responsible for testing the proposed Solution and ensuring proper functionality, prior to Go-Live. The selected Proposer must perform all implementation/installation services in accordance with applicable laws, ordinances, rules, and regulations. The Proposer is expected to perform any implementation services during the course of normal business hours (i.e., Monday through Friday: 8:00 a.m. to 5:00 p.m.), with the understanding that production deployment or Go-Live may be conducted at an off peak date and time to minimize operational impact to public safety services. Any exception to the performing of implementation tasks outside normal business hours, must be approved beforehand by the County.

The selected Proposer will be responsible for project organization and management, to include the various project stages and milestones, change of Scope management, and implementation. The selected Proposer will develop a comprehensive project plan, and actively manage the responsibilities of their internal management team, and work with County staff as required to complete the project.

System Testing and Acceptance

The selected Proposer shall be responsible for conducting all testing activities in conjunction with the County including but not limited to:

- Developing a draft test plan for approval by County staff
- Product performance testing
- Interfaces testing
- Parallel testing for MDPD and MDFR (if parallel processing is appropriate)
- Security testing
- Hardware and network capacity testing
- Load testing
- Fail-over testing

Data Conversion

The County does not anticipate conducting any data conversion of existing CAD information into the proposed Solution. The County's preference is to deploy the Solution with a pristine load of administrative data. Similarly, BOLO/Alert, CAD premise history, and other related transactional information will be freshly collected from the Go-Live date moving forward.

Minimum Software Licenses

Proposer's proposal submission and associated pricing shall include software license(s) to accommodate the estimated number of Users as listed below. The County prefers not to purchase separate licenses for third party applications which are embedded into the solution. All licenses that may be required by the solution for third party software are to be included with the proposed Solution and maintained throughout the term of the resultant contract. Licensing must include all licenses required to operate and maintain the testing/staging and training environments. All costs are to be included within the proposal response.

If the proposed Solution requires third party software licenses not embedded into the solution in order to meet the technical and functional specifications of this solicitation, the County reserves the right to leverage software license agreements that may be in place between any proposed third party software copyright holder. This entitles all parties included as "Users" for this solicitation, with the advantage of reducing software acquisition or maintenance costs. ("Users" includes other entities in addition to the County).

Proposed Solution is not required to use a "Per User" license model, however, the proposed Solution must accommodate, at a minimum, the number of Users listed below. The County prefers an Enterprise License model that does require user counts.

- Estimated 300 Named Users (PCO/Call Takers, Police Dispatchers, Fire Rescue Dispatchers)
  - 235 MDPD call takers and dispatchers
  - 65 MDFR dispatchers
- Estimated 2850 Mobile Named Users (MDPD and MDFR)
  - 2500 MDPD mobile users
  - 350 MDFR mobile users
- Estimated 800 Concurrent Web Based Users (MDPD and MDFR) with an unlimited number of Named User accounts

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Maintenance Services

The selected Proposer shall provide maintenance services to the County throughout the term of the resultant contract, including any optional renewal periods. At a minimum, maintenance services should include updates and upgrades to the proposed Solution. Such updates and upgrades shall include correction of substantial defects, fixes of any minor bugs, any fixes due to any conflicts with mandatory operating system security patches, enhancement to Solution functionality, as well as upgrades to new version releases and must maintain compatibility with all customizations and interfaces. The software maintenance plan may include the option of installation of new releases by the selected Proposer. Additionally, updates to the Solution must be provided as determined by legally mandated requirements, such as amendments to local, state or federal laws. Upgrades and updates to the Solutions may be provided via remote Server Access to any County server providing the application services either by Citrix SSL VPN, Encrypted Connection, or dedicated IP address; access will require prior approval from the County. Maintenance of other non-production County environments, such as testing/staging and training shall be included as part of the maintenance services provided.

Technical Support Services

The selected Proposer shall be responsible for providing technical support services to ensure optimal performance of the proposed Solution, including all components, throughout the term of the resultant contract, including any optional renewal periods. The selected Proposer must have technical support services available in the form of unlimited email and/or telephone support as well as live help desk support 24 hours per day, seven days per week, including holidays. The selected Proposer shall also provide on-site technical support when required. This on-site support may be requested when it is determined the problem cannot be corrected by telephone/remote support. Proposers shall include description in the proposal response outlining the support services offered and any limitations thereof.

The County's preferred escalation process is outlined below:

Severity	Definition	Response Time	Resolution Time	Status Frequency Update
1=Critical	A critical component of the System, whether hardware or software, is in a non-responsive state and affects Users' productivity or operations. A high impact problem which affects the Users.	15 minutes	One (1) Hour	15 minutes
2=Urgent	Any component failure or loss of functionality not covered in Severity 1, which is hindering operations, such as, but not limited to: excessively slow response time (exceeds maximum defined response times); functionality degradation; error messages; backup problems; or issues affecting the use of a module or the data.	One (1) Hour	Two (2) Hours	30 minutes
3=Important	Lesser issues, questions, or items that minimally impact the work flow or require a work around.	4 hours	Twenty-Four (24) Hours	Four (4) Hours
4=Minor	Issues, questions, or items that don't impact the work flow. Issues that can easily be scheduled such as an	8 hours	72 hours for an acceptable work around until final	Weekly Status Call

Severity	Definition	Response Time	Resolution Time	Status Frequency Update
	upgrade or patch.		resolution	

Technical Support Communication

The County prefers an electronic ticketing system with the ability to add attachments, in addition to the help line outlined above that is live person answered (an IVR system may not have greater than 1 selection to reach the live person). Additionally, the County prefers, at a minimum, a weekly report of all outstanding, open service tickets. Such reports may include:

Ticket number
Location or site
Date/time opened
Date/time of initial vendor response
Date/time closed (if applicable)
Opened by Agency/User Name
Severity level
Brief description of issue
Agency point of contact/lead
Vendor assigned point of contact
Date/time of resolution
Description of resolution

Post-Implementation Support

In order to ensure a smooth transition and minimize complications, the County seeks post implementation support after Go-Live during the Reliability testing phase for a period a minimum of ninety (90) calendar days. Proposers should take into consideration that during this post implementation period, support will be required at separate MDPD and MDFR sites.

Training

A primary factor to the success of this project is ensuring personnel are trained to an appropriate level of proficiency as the various applications are implemented. As such the County seeks a proposed comprehensive training plan that strives to ensure that County operational and technical staff are adequately trained to utilize and support the proposed Solution The approach and methodology to delivering the required training shall be included in the proposal response. Training shall be provided including but not limited to the following roles: end-users, configurators, and application/system administrators. Classes are to be conducted within Miami-Dade County at various sites. The specific training sites are yet to be determined and will be scheduled based on the selected Proposer's timeline and approach. The County shall provide sufficient space for conducting the training and housing and securing the training equipment.

The County seeks dedicated, contractor-supplied training personnel, per agency (MDFR and MDPD), during the bulk of the training regimen to ensure that the training program is properly implemented.

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Any proposed training course must be reviewed and approved by the County project team prior to commencement of that course.

The County foresees the use of a multi-tiered on-site approach to training as delineated below.

- **Tier 1:** Proposer-provided system specific functional area training to targeted users (Call takers, dispatchers, supervisors, etc.).
- **Tier 2:** Proposer-provided Train-The-Trainer training.
- **Tier 3:** Proposer-provided System Administrator training for staff identified as problem solvers, configuration specialists, and administrators of the sub-systems.

Operational Training Staff Requirements

It is anticipated that training will be provided for the following County staff as follows:

Summary of Training for MDPD

Users	Tier 1 Count	Tier 2 Count	Tier 3 Count
Call takers	121	10	N/A
Dispatchers	97	10	N/A
Call-Taking Supervisors	10	10	N/A
Dispatch Supervisors	7	7	N/A
System Administrators	5	5	5
MCU Field Users Train-the-Trainer	150	150	N/A

Summary of Training for MDFR

Users	Tier 1 Count	Tier 2 Count	Tier 3 Count
Dispatchers	67	20	N/A
Dispatch Supervisors	12	6	N/A
System Administrators	5	5	5
MCU Field Users Train-the-Trainer	75	25	N/A

Technical System Support Training

The County desires a classroom based training program for technical support staff as follows:

- Application System support specific training (Applications Support Staff)
- Technical System Support & Administrators training (Staff identified as technical, infrastructure support staff including hardware, application, database support, etc.)

- GIS/Geospatial support staff

Users	Count
Application System Administrators	15
Technical System Support Administrators	10
GIS/Geospatial Support Staff	10

Training Documentation and Materials

To meet the needs of the County, end-user training documentation will require customization. The County expects to receive final versions of training materials in hardcopy and electronic formats, using the Microsoft Office suite of applications. The County shall have full authority to edit/customize all proposer provided end user and system administrator training documentation. The Proposer shall be responsible for providing sufficient training materials and documents such as:

- Instructor Manual(s)
- Student Training Manual(s)
- All manuals in MS Office format

Training Schedule

Given the shift assignments of public safety personnel, training courses will often need to be scheduled outside of normal working hours, including weekends.

In the event of unforeseen circumstances (e.g., public emergency) necessitate a disruption or delay of training, the Proposer will work with the County to reschedule training in a mutually agreeable manner without additional cost to the County.

Documentation

The County seeks thorough documentation for the installation and configuration of the proposed Solution. System documentation should be provided in a MS Office format for the County to distribute as needed.

The Proposer should, at no additional charge to the County, provide updated Technical Documentation when system changes or updates occur such as versions or releases. All new versions and releases should be accompanied by a document clearly explaining the new functionality, features, corrections, etc., addressed by the release or version. This documentation should be consistent in content and appearance with the original documentation. Further, the Proposer's online help files should also be updated to reflect system changes and updates.

Technical Documentation

Technical Documentation shall include all components of the proposed Solution's installed environment, such as:

- Network schematics
- Server/Infrastructure layout

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- Solution diagram
- Process flow diagram
- Database: Data dictionary, table layouts and Entity Relationship Diagrams (ERD)
- Interface specifications
- APIs
- Extensible Markup Language (XML) schema
- Stored queries and procedures
- Reports
- Configuration Management

COMPUTER AIDED DISPATCH SOLUTION
Global System Functional Matrix

Item #	GLOBAL FUNCTIONAL MATRIX
1.1	**GLOBAL SYSTEM FEATURES**
1.2	System must be able to support at least 40 municipal agencies
1.3	Ability to provide an integrated CAD and mobile applicaion
1.4	Ability for each Agency to define separate configuration parameters
1.5	Ability to support multiple command lines
1.6	Ability to define multiple command codes based on the following parameters:
1.6.1	Globally
1.6.2	By Agency
1.7	Ability to support entry of data into the CAD via the following:
1.7.1	Command line
1.7.2	Forms
1.7.3	Function Keys
1.7.4	Map
1.7.5	Mouse
1.7.6	Drop down menus
1.8	Ability for the order of commands on the command line to be customizable by each Agency
1.9	Ability for command line to display predictive text/prompt for the next command in a command string sequence
1.9.1	Users should be allowed to toggle this functionality on/off
1.10	Ability to support cut and paste functionality
1.11	Ability to support geography that can be activated for neighboring PSAPs during critical incidents for mutual aid or evacuation purposes

Item #	GLOBAL FUNCTIONAL MATRIX
1.12	Ability to provide users with alerts/notifications that indicate the success or failure of a transaction via the following:
1.12.1	Audible Alert
1.12.2	Visual Alert
1.13	Ability to support Network Time Protocol (NTP) for time sync
1.14	Ability to automatically adjust number sequencing each calendar year for the following:
1.14.1	Incident numbers
1.14.2	Case numbers
1.15	Ability to support unique case and incident number configurations for each Agency (per Agency/Municipality)
1.16	Ability to support the assignment of multiple case numbers to an incident
1.17	Ability to support the assignment of multiple incidents to a single case number (E.g., Master Case Number)
1.18	Ability to support unit based case number assignment rather than the unit's current geography or the assigned Agency incident type
1.19	Ability to add/remove a case number from an incident as necessary and have that case number be reissued as the next case number
1.20	Ability for entry of the fewest number of significant digits of an incident number to allow users to recall the incident for update and review
1.21	Ability to automatically account for daylight savings time and all related parameter changes to daylight savings
1.22	Ability to automatically calculate the day of the week for any entered date
1.23	Ability to maintain the integrity of the database without duplicating entries or deleting current entries
1.24	Ability to provide narrative/comments fields to allow at least 2000 characters for a single entry (If field has a lower character limit – indicate the maximum allowable amount)
1.25	Ability to configure the character limit by field
1.26	Ability to support vendor remote log in using multi-factor authentication for maintenance/troubleshooting purposes
1.27	Ability for an RMS application to systematically request an Agency case number (feature would entail the automatic creation of an incident)
2.1	SYSTEM TABLE AND CODE TABLE LIST MAINTENANCE
2.2	Ability to comply with NIEM standards for export and import of data lists
2.3	Ability to comply with NIST standards for export and import of data lists
2.4	Ability for table data to be imported by a system administrator from a CSV, Microsoft Excel format
2.5	Ability for table data to be exported by a system administrator into a CSV, Microsoft Excel format
2.6	Ability for system administrator to modify tables and code lists dynamically without interrupting operations (E.g., without requiring the users to log off or reboot the workstation)

Item #	GLOBAL FUNCTIONAL MATRIX
2.7	Ability to use a form based GUI to manage and provision data in the system table and code lists
2.8	Ability for modifications made to the tables and code lists must be logged
2.9	Ability for the tables and code list logs to be:
2.9.1	Searchable
2.9.2	Saveable
2.9.3	Printable
2.10	Ability to create and maintain code table data by Agency, to include but not limited to the following:
2.10.1	Telephone numbers
2.10.2	Special Skills
2.10.3	Capabilities
2.10.4	Personnel data
2.10.5	Units in Station
2.10.6	Vehicle data
2.10.7	Vehicle make/model
2.10.8	License plate type
2.10.9	Radio data
2.10.10	Street closures
2.10.11	Article codes
2.10.12	Gun codes
2.10.13	Dispositions
2.10.14	Incident types/signals
2.10.15	Incident priority
2.10.16	Modifying Circumstances
2.10.17	Response Class
2.10.18	Response Type
2.10.19	Status codes
2.10.20	Grids
2.11	Ability to add Agency defined fields without vendor intervention
2.12	Ability to use a 'set-like' parameter that propogates data across tables (E.g., Law Agencies are 'set-like' each other, Run cards can be 'set-like' the surrounding run cards when a grid is added, etc.)
2.13	Ability to allow Agency to rename label names without vendor intervention
2.14	Ability to share code tables among application components and agencies
2.15	Ability to prevent Agency specific code tables from being display to users from other agencies
2.16	Ability for code table updates to propagate throughout the system (E.g., an update in a code table for one application component updates the same code table in other application component, including clients)
2.17	Ability to designate code table values as obsolete and unavailable for current use, preventing further entry of that value, yet retain the value in the table for inquiries on historical data

Item #	GLOBAL FUNCTIONAL MATRIX
2.18	Ability to retain values made to data and code tables in the event of a system upgrade
2.19	Ability to allow Agencies to define the following:
2.19.1	Disposition codes
2.19.2	Incident types/signals (minimum of 2000)
2.19.3	Incident status codes
2.19.4	Unit status codes (minimum of 1000)
2.19.5	Priorities assigned to incident types/signals (minimum of 500)
2.20	Ability to include, at a minimum, the following data tables:
2.20.1	Call source (E.g., officer-initiated, 911, 10-digit)
2.20.2	Call types and priorities
2.20.3	Commands
2.20.4	Dispositions
2.20.5	Equipment
2.20.6	Server stored workstation event error logs (so vendor can identify and troubleshoot errors)
2.20.7	Response Areas
2.20.8	Personnel, including emergency contact information and current assignment
2.20.9	Skills
2.20.10	Timers
2.20.11	Unit status types (E.g., assigned, unassigned, assigned but available)
2.20.12	Units
3.1	**GEOGRAPHIC INFORMATION SYSTEM (GIS) LOCATION VERIFICATION AND**
3.2	Ability to assign coordinates to a call by clicking on the location on the map (E.g., mouse geocoding)
3.3	Ability to verify Latitude and Longitude by entering:
3.3.1	Decimal Degrees (E.g., 25.775561, -80.196652)
3.3.2	Degrees and Decimal Minutes (E.g., 25 46.53366, -80.11.79912)
3.3.3	Degrees, Minutes and Decimal Seconds (E.g., 25 46 32.0196, -80 11 47.9472)
3.4	Ability to default to the northern and western hemispheres when the hemisphere directions are omitted
3.5	Ability to default to the western hemisphere when the negative sign (E.g., '-') is omitted
3.6	Ability to enter degrees, minutes, and/or seconds without identifying them with special letters, symbols, or characters
3.7	Ability to verify Common Places using:
3.7.1	An abbreviated process (E.g., entering 'PALM' displays choices beginning with 'PALM' such as 'PALM LAKES ELEM' in alphabetical order)
3.7.2	An optional wildcard search (E.g., entering 'PALM' displays choices containing 'PALM' such as 'BASCOM PALMER EYE' in alphabetical order)
3.8	Ability to quickly view each matching common place choice on the integrated map to assist with selection
3.9	Ability to display the address of the selected common place, if populated

Item #	GLOBAL FUNCTIONAL MATRIX
3.10	Ability to verify Addresses and Street Intersections using USPS-standard street type abbreviations and USPS-standard formatting for dual street types.
3.11	Ability to display all matching choices including those with prefix direction when prefix direction is omitted (E.g., entering '2 PALM DR' displays '2 E PALM DR' and '2 W PALM DR')
3.12	Ability to display all matching choices including those with street types when street type is omitted. (E.g., entering '5600 SW 87TH' displays '5600 SW 87TH AVE' and '5600 SW 87TH ST')
3.13	Ability to display all matching choices including those with suffix directions when suffix direction is omitted. (E.g., entering '12102 SW 110TH ST CIR' displays '12102 SW 110TH ST CIR N' and '12102 SW 110TH ST CIR S')
3.14	Ability to display all matching choices from multiple cities, if applicable when the city is omitted. (E.g., entering '521 NW 10TH ST' displays the same address in Florida City, Homestead, and Miami.
3.15	Ability for addresses and intersections from all areas to always be searched by default without the user having to indicate it
3.16	Ability to avoid mismatches during address and intersection verification as follows:
3.16.1	Displays only identical house numbers. (E.g., entering '100 MAIN ST' does not display '1000 MAIN ST' and vice versa)
3.16.2	Displays only identical prefix directions when specified. (E.g., entering '18250 NW 137TH AVE' does not display '18250 SW 137TH AVE')
3.16.3	Displays only identical street names. (E.g., entering '100 PALM DR' does not display '100 PALMER DR' and vice versa)
3.16.4	Displays only identical street numbers. (E.g., entering '15900 SW 10 ST' does not display '15900 SW 100 ST' and vice versa)
3.16.5	Displays only identical street types when specified. (E.g., entering '11103 SW 145TH AVE' does not display '11103 SW 145TH CT')
3.16.6	Displays only identical suffix directions when specified. (E.g., entering '12102 SW 110TH ST CIR S' does not display '12102 SW 110TH ST CIR N')
3.16.7	When there is only one matching address or intersection, the system displays it as a single choice without automatically selecting it
3.16.8	Intersecting streets can be entered in any order within the CAD
3.17	Ability to display separate and distinct street intersection location choices both on the integrated map and from the list when the two street names cross each other in different places
3.18	Ability to notify that there are common places associated with the selected address
3.19	Ability to utilize composite address locators (or similar) so that addresses not available in the situs address point layer are validated using street centerline address ranges
3.20	Ability to guide the user through the matching choices during address and intersection verification as follows:

Item #	GLOBAL FUNCTIONAL MATRIX
3.20.1	Sorts the situs address point before the street centerline range when the user enters an address equally similar to both. (E.g., entering '1088 MOWRY DR' displays the '1088 W MOWRY DR' situs point before the '1088 E MOWRY DR' street centerline)
3.20.2	Maps the choices from the same screen without having to re-enter the address or intersection elsewhere. (E.g., via a direct relationship between the list of choices and the integrated map)
3.20.3	Sorts the choices in order from closest match to least, if applicable
3.21	Ability to display matching choices with real-time response. (E.g., entering 'SW 10TH ST & SW 10TH AVE' displays matching choices with real-time performance)
3.22	Ability to initiate an optional Soundex (or similar) search to assist with validation. (E.g., entering '2005 SAN SOUCI BLVD' has no match but the Soundex button can display '2005 SANS SOUCI BLVD')
3.23	Ability for the user to display their original entry along with the selected choice for comparison, at the user's request
3.24	Ability to utilize a large geocoding offset (>15 feet) to determine coordinates when verifying addresses against the street centerline range. (E.g., push the point away from the centerline based on even vs. odd address parity)
3.25	Ability to configure whether or not to display street centerline range choice when the same address point exists
3.26	Ability to configure the geocoding offset distance (for address validation against the street centerline range)
3.27	Ability to indicate that the caller is at the address (dirt) or in front of the address (pavement) and modify the coordinates accordingly
3.28	Ability to enter the common places, addresses and street intersections all from one single input text box
3.29	Ability to bypass or override address validation
3.30	Ability to see the reporting grid for a verified location without generating an incident
3.31	Ability to view the beats for a verified location without generating an incident
3.32	Ability to view a report of bypassed or overridden addresses
3.33	Ability to configure formatting of prefix/suffix directions so they resolve during address and intersection validation. (E.g., 'SOUTHWEST' = 'SW')
3.34	Ability to configure common misspellings of street names so they resolve during address and intersection validation. (E.g., 'FOUNTAINBLUE BLVD' = 'FONTAINEBLEAU BLVD' globally)
3.35	Ability for the CAD to correct the spelling of the street name as defined in the GIS reference data table, when a common misspelling is entered
3.36	Ability to configure formatting of street types so they resolve during address and intersection validation. (E.g., 'AVRD' = 'AVENUE RD')
3.37	Ability to utilize point-in-polygon computational geometry to determine the beat(s) on the fly for locations captured from:
3.37.1	Mouse click on map

Item #	GLOBAL FUNCTIONAL MATRIX
3.37.2	Latitude and longitude entered
3.37.3	Common Place
3.37.4	Address matched to situs address point
3.37.5	Address matched to street centerline range
3.37.6	Street intersection
3.38	Ability to automatically prompt the user with a list of beat choices falling within a buffer search radius of the verified street intersection
3.39	Ability to automatically prompt the user with a list of beat choices when there are overlapping beat polygons at the verified location and to notify more than one Agency based on overlapping jurisdictions. (E.g., the MetroRail station at 5400 PONCE DE LEON BLVD displays two different beat choices which overlap at this one point)
3.40	Ability to configure schedules for beats (time-dependent polygons) so they become active or inactive during specified time ranges. (E.g., a beat choice for Florida Highway Patrol becomes active between 8:00 and 17:00 daily, otherwise the overlapping beat for Kendall is the choice always available.)
3.41	Ability to import and/or utilize Environmental Systems Research Institute (ESRI) native GIS data file structures via a direct interface for:
3.41.1	CAD Location Verification
3.41.2	Response Determination
3.41.3	Routing
3.41.4	CAD mapping
3.41.5	Mobile Location Verification
3.41.6	Mobile mapping
3.41.7	Mobile Routing and driving directions
3.42	Ability for system to be compatible with ESRI software
3.43	Ability for the System to fully utilize map documents (*.mxd) authored in ESRI software to include:
3.43.1	Initial/default scale and extent
3.43.2	Layer draw order
3.43.3	Scale dependent rendering (E.g., visibility range of a layer)
3.43.4	Complete symbology definitions
3.43.5	Layer transparency levels (E.g., 40% transparent)
3.43.6	Definition queries (E.g., to display subsets of features)
3.43.7	Field name aliases
3.43.8	Auto-labeling
3.43.9	Label text symbology including halo
3.43.10	Label placement properties
3.43.11	Label conflict detection
3.43.12	Label expressions
3.43.13	Scale dependent labeling (E.g., visibility range of auto-labels
3.44	Ability for the system to import and utilize two different street centerline layers – one for location verification and one for routing

Item #	GLOBAL FUNCTIONAL MATRIX
3.45	Ability for the system to utilize street centerline data for routing that is compatible with ESRI's network dataset functionality
3.46	Ability for routing configuration to have the ability to utilize various costs or restrictions including:
3.46.1	Drive Time
3.46.2	One-Way
3.46.3	Elevation
3.46.4	Time of day and/or day of week
3.46.5	Left turn penalty based on degree of turn
3.46.6	Real-time traffic (E.g., Waze)
3.46.7	Peak and nonpeak travel costs
3.46.8	Vehicle length, height and weight
3.46.9	Close or open network elements in near real-time
3.46.10	Close or open network elements at scheduled times
3.47	Ability to begin routes from the street centerline to which the address verifies rather than as the crow flies from the situs address point to the nearest street. (E.g., routes from 991 NW 106TH AVENUE CIR do not jump over the backyard fence to the expressway)
3.48	Ability to import polygon layers with overlapping polygons within the same layer and Agency supported. (E.g., an Agency type or Agency may have overlapping jurisdictions within itself)
3.49	Ability to utilize field mapping for the import of the source GIS data into the required schema(s) of the system
3.50	Ability to import common places with or without addresses
3.51	Ability to import the source GIS data into an inactive geodatabase
3.52	Ability to automate the import of the source GIS data into the inactive geodatabase
3.53	Ability to script the automated importation of the source GIS data into the inactive geodatabase. (E.g., tools available in ArcCatalog which can be scripted in python)
3.54	Ability to have an automated importation process that automatically determines which geodatabase is inactive, and to be updated, without the user specifying it
3.55	Ability to view specific error messages generated by error trapping when the automated GIS data import process fails
3.56	Ability to view logs generated by the automated GIS data import
3.57	Ability to instantly switch the CAD active geodatabase to the inactive, and roll back if necessary (E.g., toggle geodatabases)
3.58	Ability to automatically synchronize or propagate the active/inactive toggling of all GIS derived information (maps, geodatabases, routing, etc.) system wide from one control point
3.59	Ability to support multiple street aliases down to the individual line segment (E.g., 'Main St' and 'JFK St' are the aliases for only certain blocks of SW 1ST St.)
3.60	Ability to support multiple common place aliases

Item #	GLOBAL FUNCTIONAL MATRIX
3.61	Ability to batch upload common places (E.g., 300 locations within the Airport, Colleges, etc.)
3.62	Ability to update all geographic data, including street aliases and street intersection aliases, via the import of GIS data that is maintained outside of the system (E.g., no requirement to maintain geographic data within the
3.63	Ability to automatically split streets at beat boundary crossings, assign new address ranges, and populate left and right beat attributes in batch as part of GIS data import, if applicable
3.64	Ability to override the automatic point-in-polygon response determination by pre-populating beat attributes in the imported GIS data
3.65	Ability to optionally import a point feature class of street intersections to:
3.65.1	Replace those created by the system for use in location verification
3.65.2	Augment those created by the system for use in location verification
3.65.3	Remove/hide those created by the system for use in location verification (E.g., remove one of two duplicates because they're actually part of the same intersection)
3.66	Ability to measure in various units on the integrated CAD map:
3.66.1	Feet
3.66.2	Yards
3.66.3	Meters
3.66.4	Miles
3.66.5	Kilometers
3.67	Ability for the CAD Map to integrate with oblique imagery technology
3.68	Ability for the mobile map to integrate with oblique imagery technology
3.69	Ability for the CAD map to interface with Fire Hydrant Maintenance to change hydrant status (in service/out of service)
3.70	Ability for the mobile map to integrate with Fire Hydrant Maintenance to change hydrant status (in service/out of service)
3.71	Ability to reverse geocode (E.g., assign an address, intersection, common place, or aerial subdivision to a call, when only the coordinates are known)
3.72	Ability to verify addresses with numeric, alphanumeric and hyphenated house numbers as specified in the USPS Address Standards
3.73	Ability to optionally support building and unit numbers/names on the address points to accurately depict the location of residences or businesses that share the same house number and street name (E.g., mobile home parks or shopping centers)
3.74	Ability to verify block numbers as follows: A block number (E.g., 100 BLK MAIN ST) entered and selected by the user gets geocoded the same as it would a house number (100 MAIN ST) but only against the street centerline range and without the x,y geocoding offsets applied
3.75	Ability to spatially query features from any functional feature class within a specified radius of a specified location (E.g., see previous incidents, premise/hazard or units within 1/2 mile of a location)

Item #	GLOBAL FUNCTIONAL MATRIX
3.76	Ability to spatially query features from any functional feature class within a polygon drawn by the user (E.g., see previous incidents, premise/hazard or units within a 6-edged polygon)
3.77	Ability to query features in any functional feature class by any functional attributes
3.78	Ability for CAD mapping to toggle between base maps available in the ArcGIS Online cloud, ESRI's Portal for ArcGIS, and/or Miami-Dade County's web services
3.79	Ability of mobile mapping to toggle between base maps available in the ArcGIS Online cloud, ESRI's Portal for ArcGIS, and/or Miami-Dade County's web services
3.80	Ability to connect to and publish RESTful web services
3.81	Ability to receive the z-coordinate (elevation) from the call and display it in the map using 3D visualization
3.82	Ability to determine the cross streets of any given street segment or a list of cross streets of any given street name.
3.83	Ability to support an open application programming interface (API) with sensory devices to collect data such as:
3.83.1	Vehicle data, speed
3.83.2	Vehicle in motion
3.83.3	Warning systems (lights and sirens) activation
3.83.4	Personnel data
3.83.5	Self-contained breathing apparatus air levels
3.83.6	Biostatistics
3.83.7	Devices
3.83.8	Heat sensors, toxic gas sensors
3.83.9	Video surveillance sensors
3.83.10	Gunshot detection system Shotspotter
3.84	Ability to support an open application programming interface (API) with meteorological applications to import weather data for a specific location and overlay it on the map
4.1	**PREMISE/HAZARD MAINTENANCE**
4.2	Ability to enter premise/hazards associated with:
4.2.2	Specific locations
4.2.3	Address and address ranges
4.3	Ability to assign a priority to a premise/hazard entry
4.4	Ability to capture and maintain specific premise information, including but not limited to the following:
4.4.1	Alarm/access information
4.4.2	Emergency contact information
4.4.3	Business Owner Name
4.4.4	Occupant Name
4.4.5	Building Name
4.4.6	Suite/Apartment number
4.4.7	Hazardous conditions

Item #	GLOBAL FUNCTIONAL MATRIX
4.4.8	Fire Suppression System
4.4.9	Medical information
4.4.10	Gate code
4.5	Ability to record/assign the following when entering premise/hazard data:
4.5.1	Expiration date
4.5.2	Time and date stamp at time of entry
4.5.3	ID of person entering information
4.5.4	Authorization of entry
4.6	Ability, based on permissions, to view an audit log of the following information when premise/hazard information is added or changed
4.7	Ability to maintain premise/hazard data until manually removed by the system administrator
4.8	Ability to archive deleted/purged premise/hazard data
4.9	Ability for premise information to be parsed into separate data fields/tabs
4.10	Ability to access files (pdf, jpeg, etc.) attached to a premise record:
4.10.1	In CAD environment
4.10.2	In Mobile environment
4.11	Ability to create categorized lists of premise/hazards
4.12	Ability to print premise/hazard data reports
4.13	Ability to apply premise/hazard data to multiple addresses (E.g., for all addresses within an apartment complex, all houses in a subdivision -*gate codes etc.)
4.14	Ability to attach files to a premise/hazard record (E.g., floor plans, building diagrams, special instructions)
4.15	Ability for premise/hazard information to apply to multiple addresses
4.16	Ability to create multiple premise/hazard records at the same location with the same common place/business name
4.17	Ability to assign a priority level to premise/hazard data (E.g., at a given location an occupant has made threats to police (Priority 1 - LEO Alert) vs. maintaining information for the key holder at the location (Priority 5))
4.18	Ability to store images with premise/hazard data (E.g., image of Knox Box location/LEO Alert bulletin/BOLO)
4.19	Ability for premise/hazard image files to be attached to the incident when necessary
4.20	Ability to automatically insert a response message into the audit trail/incident log upon incident creation to alert users of special circumstances that apply to the following: (E.g., PD incident types/signals that require only a phone report, FD incidents are denoted with ALS/BLS responses, locations with LEO Alerts, etc.)
4.20.1	Incident type/signal
4.20.2	Common Place
4.20.3	Area
4.20.4	Beat

Item #	GLOBAL FUNCTIONAL MATRIX
4.20.5	Grid
4.21	Ability to attach more than one response message to an incident via the following:
4.21.1	Incident type/signal
4.21.2	Location
4.21.3	Common place
4.21.4	Grid
5.1	**SECURITY ADMINISTRATION**
5.2	System must comply with the following software/application security policies and requirements:
5.2.1	FBI/CJIS (5.5 version or later)
5.2.2	FDLE
5.2.3	FCIC/NCIC
5.2.4	NENA
5.3	Ability to maintain compliance with CJIS software/application security requirements over the lifetime of the system
5.4	Ability to encrypt data transmissions per FBI CJIS (Version 5.5 or later) security policy requirements
5.5	Ability to create a role-based security model using the following parameters:
5.5.1	Creation of multiple security groups based on Agency to include but not limited to the following:
5.5.1.1	Agency Type
5.5.1.2	Administrator
5.5.1.3	Dispatcher
5.5.1.4	Call Taker
5.5.1.5	Supervisor
5.5.1.6	Chief
5.5.1.7	Analyst (Real Time Crime Center)
5.5.2	System should support the ability to lock out a user after multiple unsuccessful sign-on attempts
5.5.3	Assignment of users to one or more security groups
5.5.4	Ability to assign users to multiple security groups across multiple agencies
5.6	Ability to view, add, maintain, modify and delete security profiles based on:
5.6.1	Agency
5.6.2	Role
5.6.3	User
5.6.4	Workstation
5.7	Ability to create role-based and group security permissions defined for the following:
5.7.1	Add
5.7.2	Delete
5.7.3	Disable

Item #	GLOBAL FUNCTIONAL MATRIX
5.7.4	Modify
5.7.5	Query
5.7.6	Print
5.7.7	View
5.7.8	Database
5.7.9	Field
5.7.10	Record
5.7.11	System Administration
5.7.12	Screen/Transaction
5.7.13	Audit trail/Incident log access
5.7.14	System audit trail access
5.8	Ability to create temporary profiles
5.9	Ability for user ID and password creation to be definable by Agency
5.10	Ability for the system to force the user to change passwords at defined intervals configurable by the Agency
5.11	Ability to produce an auto-notification of impending password expiration
5.12	Ability for the system administrator to reset and modify passwords
5.13	Ability to provide a single sign on capability across all system applications
5.14	Ability to sync personnel IDs and passwords across all system environments
5.15	Ability for system administrators to change a user ID but keep the user profile associated with the user ID (E.g., employee name change, employee promotion, etc.)
5.16	Ability for system administrators to view a history of all deactivated user IDs
5.17	Ability to support multi-factor authentication for user sign-on to Mobile application
5.18	Ability to support multi-factor authentication for Smart Devices
5.19	Ability to allow for the remote log off of a workstation
5.20	Ability to lock out a user after a predefined number of unsucessful sign-on attempts
5.21	Ability to disable the lock out feature
6.1	**SYSTEM AUDIT TRAIL**
6.2	Ability to maintain a system audit log at the following levels:
6.2.1	User or systems authentications (successful and failed)
6.2.2	User account password revisions (successful and failed)
6.2.3	Any and all user/system updates to application data
6.2.4	Any and all revisions to user accounts and their associated roles and permissions
6.2.5	Queries performed by users
6.2.6	Access or modifications to an audit log (successful or failed)
6.2.7	Transaction types among Agency systems
6.2.8	Track who viewed documents
6.3	Ability for authorized users to view all system audit log records
6.4	Ability for the system to log all actions including, but not limited to:
6.4.1	CAD system related errors

Item #	GLOBAL FUNCTIONAL MATRIX
6.4.2	File maintenance transactions (E.g., create, read, add, update, delete transactions)
6.4.3	Inquiries to all internal and external systems (E.g., queries to CJIS systems)
6.4.4	Transaction entries
6.4.5	Print jobs
6.4.6	Messages sent/received/deleted (from/to Mobile/CAD)
6.4.7	Emails
6.5	Ability to search CAD and Mobile message logs
6.6	Ability for the system to produce a report defining all CAD related activity performed by a specified user during a period of time
6.7	Ability for the system to log interfaces accessing the system during a defined time parameter (via report and notification)
6.8	Ability for the system to provide a "System Change Log" (E.g., a listing of all changes to the systems such as a system update, a new field added)
6.9	Ability to notify Agency users whenever a system change is made by the administrator (E.g., field or module additions)
6.10	Ability to provide an acknowledgement within the notification that logs whether an individual has viewed the notification
6.11	**AUDIT TRAIL/INCIDENT LOG**
6.12	The Audit Trail/Incident Log should store data to include but not limited to:
6.12.1	User
6.12.2	Terminal/Device ID (E.g., Mobile, PC)
6.12.3	IP address
6.12.4	Date and time stamp
6.12.5	Transaction type (E.g., Incident/Unit update)
6.12.6	Before and after values of all modified data
6.13	Ability to provide an automated archival of historical data by which logical record sets (associated records across tables) are archived and purged from the production database configurable by Agency
6.14	Ability to assign a unique identifier to each record (E.g., Log ID)
6.15	Ability to extract reports from the system audit trail
6.16	Ability to capture screen shots of user activity on demand
6.17	Ability to generate keystroke logs
6.18	Ability to capture CPU usage data
6.19	**AUDIT TRAIL / INCIDENT LOG / TIME STAMPS**
6.20	Ability to time stamp all activities
6.21	Ability for all time stamps all activities with the user ID
6.22	Ability to manually enter a time stamp (E.g., unit forgets to take an arrival and dispatcher needs to alter the time stamp to indicate the unit's arrival time)
6.23	Ability to restrict the entry of a manual timestamp by user, group or Agency
6.24	Ability for all overridden date and time stamps to be visually distinguished from automatic timestamps
7.1	**SYSTEM RELATED ELECTRONIC DOCUMENTATION**

Item #	GLOBAL FUNCTIONAL MATRIX
7.2	Ability to edit text and augment Agency specific content within the Help Menu to address Agency specific topics
7.3	Ability to provide an HTML formatted page allowing each Agency's users to select hyperlinks within the Help / Reference Menu
7.4	Ability for system administrator to add, modify and edit the Help / Reference Menu
7.5	The system must include a searchable Agency specific electronic Help / Reference Menu:
7.5.1	Keywords
7.5.2	Phrases
7.5.3	Topics
7.5.4	Similar topics/wild cards
7.6	Ability to provide a configurable alphabetized Address Book
7.7	Ability to attach/insert Address Book information into an incident/message if requested
8.1	**GLOBAL SEARCH**
8.2	Ability to search data fields, including, but not limited to:
8.2.1	Location
8.2.2	Proximity to location/address
8.2.3	Address
8.2.4	Date and time (range)
8.2.5	Telephone number
8.2.6	Incident type (Signal)
8.2.7	Beat
8.2.8	Area
8.2.9	Agency
8.2.10	User ID
8.2.11	Personnel number
8.2.12	Officer ID
8.2.13	Badge number
8.2.14	Vehicle number
8.2.15	Radio number (Logic ID)
8.3	Ability to search Audit Trail/Incident Log Comments/Remarks field by:
8.3.1	Word(s)
8.3.2	Exact Match
8.3.3	Partial Match
8.3.4	Search operators (E.g., string together compound search requests using the words 'or', 'and', etc.)
8.3.5	Partial Information
8.3.6	Wild Card
8.4	Ability to filter search results
8.5	Ability to highlight search results
8.6	Ability to sort search results using multiple fields
8.7	Ability to group search results (E.g., by operator, incident type, etc.)
8.8	Ability to cancel a search

Item #	GLOBAL FUNCTIONAL MATRIX
8.9	Ability for the system administrator to define maximum historical date parameters on search queries
8.10	Ability to clear criteria from all fields within the search form simultaneously
8.11	Ability to indicate the number of report/records found
8.12	Ability to allow the user to return to the active work window, without disruption, upon completion of the query (E.g., dispatch screen or call taker screen)
8.13	Ability to ignore case sensitivity
8.14	Ability to modify search criteria after results have been displayed without reentering previously entered search criteria
8.15	Ability to search and report all users currently logged into system
9.1	**QUERY FEATURES**
9.2	Ability to simultaneously search/query multiple systems including:
9.2.1	CAD
9.2.2	NCIC/FCIC
9.2.3	CJIS (local main frame)
9.2.4	Law Query/AUTO
9.2.5	DAVID (Mobile application)
9.3	Ability to conduct federated searches with a single query
9.4	Ability to conduct federated queries to customer defined local databases (E.g., Crime Data Warehouse (CDW), Traffic Information System (TIS), Criminal Justice System (CJS), Sexual Predator, etc.)
9.5	Ability to drill down within the search results and retrieve associated data upon executing a search that would take the user to the details of the incident
9.6	Ability to attach/insert query responses into the Audit trail/Incident log of the incident
9.7	Ability to define queries by Agency available to users based on
9.8	Ability for the system to segregate query returns in a separate inbox
9.9	Ability to consume and display XML format from query responses and populate in designated fields incorporating cascading queries and their associated responses as necessary.
10.1	**REPORTING FEATURES**
10.2	Ability to provide a reporting tool that can:
10.2.1	Access multiple files and tables
10.2.2	Allow the user to define the titles for ad hoc reports
10.2.3	Auto generate Agency defined fields, including:
10.2.3.1	Current Date
10.2.3.2	Pagination
10.2.4	Provide a print preview
10.2.5	Print the entire report
10.2.6	Print specific pages
10.3	Ability to manipulate data in ad hoc reports by:
10.3.1	Sorting (multiple fields)
10.3.2	Grouping (unlimited groups)
10.3.3	Creating statistical summaries

Item #	GLOBAL FUNCTIONAL MATRIX
10.3.4	Performing calculations:
10.3.4.1	Sum
10.3.4.2	Percentage
10.3.4.3	Average
10.3.4.4	Filtering
10.4	Ability to enter free-form text into ad hoc reports
10.5	Ability to enter graphics into ad hoc reports
10.6	Ability to filter ad hoc reports by any operational data field
10.7	Ability to filter ad hoc reports by multiple operational data fields
10.8	Ability to drill down to data in ad hoc reports to view suppressed details
10.9	Ability to support standard SQL report writing software:
10.9.1	Crystal Reports
10.9.2	Microsoft SQL Server Reporting Service
10.9.3	Business Analytics
10.9.4	Cognos (Business Intelligence)
10.10	Ability for any user to generate an ad hoc report – based on permissions
10.11	Ability to export ad hoc reports into standard formats, including:
10.11.1	MS Word
10.11.2	MS Access
10.11.3	MS Excel
10.11.4	XML
10.11.5	CSV (delimited text file)
10.11.6	PDF
10.11.7	HTML
10.12	Ability to set parameters for reports (E.g., don't return more than 10,000 records, etc.)
10.13	Ability to add a report shortcut button/link to any application menu in order to run a predefined report
10.14	Ability to cancel a report
10.15	Ability to present statistics in graphical formats, including, but not limited to the following:
10.15.1	Pin Maps
10.15.2	Bar Graphs
10.15.3	Pie Charts
10.15.4	Density Maps
10.15.5	Line Graphs
10.16	Ability to generate reports on a predetermined schedule
10.17	Ability for report generation schedule to take into account the following:
10.17.1	Date
10.17.2	Time
10.17.3	Day of Week
10.17.4	Time Intervals
10.18	Ability to, based on permissions, automatically send scheduled reports to:
10.18.1	Individual

Item #	GLOBAL FUNCTIONAL MATRIX
10.18.2	User-defined group
10.18.3	SharePoint
10.19	Ability to have electronically distributed reports to be provided as:
10.19.1	Email attachment
10.19.2	Hyperlink
10.20	Ability to send a report to a user-defined printer
10.21	Ability to print a report of all transactions conducted on a Mobile computer
10.22	Ability to export a report of all transactions conducted from a Mobile computer
10.23	Ability to print a report of all mobile activities by any combination of the following:
10.23.1	User
10.23.2	Date Range
10.23.3	Time Range
10.23.4	Agency
10.23.5	Unit/Vehicle ID
10.24	Ability to provide workload and performance analysis reporting. (E.g., report that provides call taker/dispatcher performance benchmark statistics)
10.25	Ability to push or extract CAD information into an external database. Feature shall provide the ability to:
10.25.1	Scheduled near real-time extract of CAD incident information for a given date/time range (E.g., current day CAD activity)
10.25.2	On demand extract of user defined data for a given date/time range (extract of historical data)
10.25.3	Incident updates delivered as they occur rather than at incident closure
10.26	Ability to systematically redact CAD incident information based upon criteria such as incident type (E.g., sexual crime), involvement of a minor, etc.
11.1	**SYSTEM ALERTS**
11.2	Ability to create an alert based on records matching specific criteria. (E.g., on a shooting, notify the Major/Chief/Shift Commander, etc.)
11.3	Ability for Agency to create and define any number of alert categories
11.4	Ability to establish expiration dates for alerts
11.5	Ability to configure whether or not expired alerts remain in the system, at the Agency level
11.6	Ability to capture the user ID of the individual who created the alert
11.7	Ability to copy and paste alert
11.8	Ability to track the creation of alerts based on date/time
11.9	Ability to configure alerts based on security profile and role
11.10	Ability to automatically present user alerts associated with:
11.10.1	License Plate (E.g., stolen vehicle)
11.10.2	Driver's License Number (E.g., suspended)
11.10.3	Person (E.g., wanted)
11.11	Ability to assign a priority to an alert (E.g., routine, urgent, 1,2,3...)

Item #	GLOBAL FUNCTIONAL MATRIX
12.1	**FLAGS**
12.2	Ability to assign a priority to a flag (E.g., routine, urgent, 1,2,3...)
12.3	Ability to assign an icon/indicator that denotes the priority of the flag
13.1	**SYSTEM TIMERS**
13.2	Ability to configure timers, by Agency, based on the following parameters:
13.2.1	Incident type
13.2.2	Incident status
13.2.3	Unit status
13.2.4	Priority of incident
13.2.5	Incident time length
13.3	Ability to alert user of timer expiration
13.4	Ability for the System Administrator to define, by Agency, timeout values for unit status timers, using the following parameters:
13.4.1	Tenths of a minute
13.4.2	By priority
13.4.3	Whether or not the unit is available
13.4.4	Whether or not the unit is recommendable
13.5	Ability to allow multiple unit status timers within a set time frame (E.g., within a 60 second time frame, dispatch status acknowledgement and en route status - when acknowledgement time is reached, en route timer is not affected/reset) Note: two independent unit timers that run concurrently
13.6	Ability for the System Administrator to define a unit status as the following:
13.6.1	Field Initiated
13.6.2	Administrative
13.6.3	Clear/Available
13.6.4	Assigned
13.6.5	Reset
13.6.6	Out of service
13.6.7	Move up
13.7	Ability for the System Administrator to assign values to each status that allow a visual indication to the user that the unit/incident status has timed out, such as:
13.7.1	Color
13.7.2	Reverse video
13.8	Ability to configure a night mode so that users with permissions can alternate between a day/night mode on the CAD (similar to the mobile environment)
13.9	Ability to notify field supervisor when a unit within their responsibility is out of service for longer than a defined time period
13.10	Ability to provide the following options when a unit/incident status timer expires:
13.10.1	Modify to new time value
13.10.2	Reset to default value
13.10.3	Cancel a timer

Item #	GLOBAL FUNCTIONAL MATRIX
13.11	Ability for System Administrator to set priorities within the timer for incident types that allow visual and audible cues for the dispatcher relating to the height of the priority (E.g., High priority incident types/signals are configured to reverse video and emit a chime when they hit the pending queue)
14.1	**MULTIPLE ENVIRONMENTS**
14.2	System must have the capability of supporting multiple environments to include:
14.2.1	Production (CAD/Mobile)
14.2.2	Training (CAD/Mobile)
14.2.3	Staging (CAD)
14.2.4	Backup/Test (CAD)
14.3	Ability to modify a single environment and propogate modifications to the production environment
14.4	Ability to propagate changes to all environments simultaneously without user disruption
14.5	Ability to simultaneously run all environments (E.g., production, staging – to test geography, incidents types etc., and training in different locations on separate workstations)
14.6	Ability to provide visual distinction upon which environment the user is operating
14.7	Ability to modify the production environment and propagate modifications to other environments
15.1	**ENVIRONMENT PREFERENCES**
15.2	Ability to support a homogeneous HP server environment
15.3	Ability to have compatibility to the following equipment:
15.3.1	Cisco Network
15.3.2	Checkpoint Firewall
15.4	Ability for user authentication for the mobile unit sign-on (Application based, not Windows based)
15.5	Ability for the client software to support network teaming configuration
15.6	Ability for the client software to support RAID configuration
15.7	Ability to automatically backup to NAS with status notifications
15.8	Ability to support multiple monitors per workstation (minimum 5)
15.9	Ability to support an automated CAD archive from the server level
15.10	Ability to perform backups to the system, determined by Agency, daily, weekly, monthly, etc.
15.11	Ability to perform backups to the system on the following:
15.11.1	Active files
15.11.2	Static files
15.12	Ability to perform backups to the system without affecting operational performance
15.13	Ability to send a notification to the system administrator when the backup/archive has completed
15.14	Ability to support physical servers
15.15	Ability to support a virtualized server environment

Item #	GLOBAL FUNCTIONAL MATRIX
15.16	Ability to support network monitoring software SolarWinds
15.17	Ability to support MS Server 2012 R2 or later version
15.18	Ability to support MS Windows 10 or later version on the workstation
15.19	Ability to have defaulted configurations for window settings that can be locked down by the administrator for:
15.19.1	Agency
15.19.2	Role
15.20	Ability to support 99.999 percent availability
15.21	Ability to assign default printers to a CAD workstation
15.22	Ability to print from the CAD system automatically without user being required to select a printer
15.23	Ability for the user, as permissions allow, to change the selected printer upon demand
15.24	Ability to allow system administrators to add or remove devices from the system (E.g., Workstations, printers, etc.) without vendor involvement
15.25	Ability to assign default network printers to individual CAD workstations
15.26	Ability to allow the default printer to print a job without the user selecting the printer each time
15.27	Ability to allow the user to select a different printer prior to printing when necessary
15.28	Ability to allow event data to be printed to any CAD configured printer
16.1	**CONTINUITY OF OPERATIONS PLAN (COOP)**
16.2	Ability to support geographically diverse redundancy of the core system and any ancillary critical systems
16.3	Ability for the system to provide a hot standby
16.4	Ability for transition to hot standby to be seamless to operations requiring only a sign-on rather than a system shutdown and restart
16.5	Ability for the transition to hot standby to retain sequential incident and case numbers after failover
16.6	Ability for the transition to hot standby to retain active incident data after failover
16.7	Ability to recover from the hot standby back to the primary system in an offline mode
16.8	Ability for the primary system to function temporarily in an offline mode until full operational data transfer is achieved
16.9	Ability for the CAD workstation to transition to hot standby without user intervention
17.1	**NOTIFICATIONS**
17.2	Ability to make notifications:
17.2.1	Via SMS text
17.2.2	Via Email
17.2.3	Via Printer
17.3	Ability to make notifications based upon incidents with Modifying Circumstance (FD)
17.4	Ability to make notifications based upon incident alarm escalations

Item #	GLOBAL FUNCTIONAL MATRIX
17.5	Ability to make notifications when a unit or combination of units are assigned to an incident
17.6	Ability to make notifications when a defined number of units are assigned to an incident
17.7	Ability to make notifications using an algorythmic logic (E.g., if...then...)
17.8	Ability to make notifications based upon geo-fencing (E.g., active shooter would auto-notify school police if ocurring within defined distance from a school)
17.9	Ability to support telephonic/SIP notifications via multiple PBX environments (Avaya & Cisco) on premise
17.10	Ability to support multiple Active Directory forest structures
17.11	Ability to send notifications to a secure Smart Device application
17.12	Ability for systematic notifications to comply with the CJIS security policy
17.13	Ability to have a windows based desktop application to receive notifications
17.14	Ability to send notifications from a Smart Device application
17.15	Ability to send pre-defined/templates notifications from a selectable format
17.16	Ability to confirm notification was received when sending to Smart Device application
17.17	Ability to send notification messages to multiple groups simultaneously
17.18	Ability to track all messages and monitor delivery
17.19	Ability to send message notifications via disparate devices to a single recipient (E.g., Smart Device, Phone, Laptop, email, etc.)
17.20	Ability to restrict notification messages via roles/permissions
17.21	Ability to send notification messages via web browser
17.22	Ability to support two-way messaging via Smart Device
17.23	Ability to support notification rotations/grouping
17.24	Ability to send notifications upon incident dispatch based on the following criteria:
17.24.1	Incident type/signal (E.g., Fire, Shooting, Suicide, Stabbing, Plane Crash, Explosion, etc. is occurring)
17.24.2	Unit
17.24.3	Location
17.24.4	Grid
17.24.5	Common Place
17.24.6	Address
17.24.7	Pre-defined geo-fences
18.1	**WORK STATION DISPLAY CONFIGURATION**
18.2	Ability to configure workstation views by permissions/roles
18.3	Ability to configure a default view for each dispatch group (by Agency) for the pending queue to filter defined areas of control (E.g., South dispatcher views South incidents, but configuration allows the ability to "filter in" other areas as needed)
18.4	Ability to configure the pending queue to include the following:
18.4.1	Priority
18.4.2	Priority and time received

Item #	GLOBAL FUNCTIONAL MATRIX
18.4.3	Time received
18.4.4	Area
18.4.5	Incident Number
18.4.6	Incident Type/Signal

Computer Aided Dispatch System Functional Matrix

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
1.1	**GENERAL CAD FEATURES**
1.2	Ability to accommodate multi-disciplinary call taking and dispatching for:
1.2.1	Law Enforcement
1.2.2	Fire/EMS
1.3	Ability to dispatch both fire/EMS and law enforcement units from the same CAD application window (E.g., without having to toggle between windows)
1.4	Ability to limit dispatch, based on permissions, role and Agency from a single CAD window
1.5	Ability to accommodate a multi-agency/PSAP environment
1.6	Ability to record time of transfer across Agencies to be included in response time analysis reports
1.7	Ability to determine what information is displayed based on agency roles and permissions (E.g., Incidents, pending incidents, units)

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
1.8	Ability to comply with published NENA & NG911 standards
1.9	Ability to capture all CAD transactions in an audit trail/incident log
1.10	Ability to capture all CAD keystrokes in an audit trail/incident log
1.11	Ability to allow multiple users to simultaneously update a single incident
1.12	Ability to provide a visual identification (E.g., ID and time stamp) to identify which operator entered specific information into a incident
1.13	Ability to automatically generate incident numbers
1.14	Ability to define parameters for incident number configuration by Agency (E.g., AGYYMMDD-123456)
1.15	Ability to automatically generate case numbers
1.16	Ability to define parameters for case number configuration by Agency (E.g., AGYYMMDD-123456)
1.17	Ability to display date and time in 24-hour format
1.18	Time is displayed as HH:MM:SS
1.19	Ability for system to automatically adjust to Daylight Savings Time (DST) and back without impacting operations
1.20	Ability to configure the date display per Agency
1.21	Ability to configure the time display per Agency
1.22	Ability to define (by Agency) when case numbers reset:
1.22.1	Daily
1.22.2	Monthly
1.22.3	Annually
1.23	Ability to define (by Agency) when incident numbers reset:
1.23.1	Daily
1.23.2	Monthly
1.23.3	Annually
1.24	Ability to allow for use of a keyboard with programmable function keys (E.g., MDC currently uses Quest Versakey 60 programmable keys with up to 120 macro combinations)
1.25	Ability to configure function keys by:
1.25.1	Agency
1.25.2	Role (E.g., Call Taker/Dispatcher)
1.26	Ability to support multiple CAD status windows simultaneously
1.27	Ability to display system alert without utilizing a pop-up box or causing the user to acknowledge the alert (configurable by Agency)
1.28	Ability to customize (by Agency) CAD status monitor screens
1.29	Ability for each Agency to determine which fields are contained in the status monitor screens
1.30	Ability to anchor the main work area to a primary (or defined) screen
1.31	Ability for each Agency to determine the order of fields within a status monitor screen
1.32	Ability for each Agency to configure and layout fields contained within a status monitor screen
1.33	Ability for each Agency to design data entry forms

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
1.34	Ability for each Agency to determine the order of fields within a data entry form
1.35	Ability for each Agency to configure and layout fields contained within a data entry form
1.36	Ability for each Agency to determine which fields are considered mandatory within a data entry form
1.37	Ability to monitor at least 1000 active incidents (if less than 1000, indicate the maximum in the 'comments' section to the right)
1.38	Ability to simultaneously assign 100 units to an incident (if less than 100, indicate the maximum in the 'comments' section to the right)
1.39	Ability to view, based on permissions, incidents in an Agency regardless of status
1.40	Incident statuses can be configured to display in various colors or reverse video (configurable by Agency)
1.41	Unit statuses can be configured to display in various colors or reverse video (configurable by Agency)
1.42	Incident types/signals can be configured to display in various colors or reverse video based on the assigned priority (configurable by agency)
1.43	Ability to assign 250 units to an incident (if less than 250, indicate the maximum in the 'comments' section to the right)
1.44	Ability to right click on an incident within the unit monitor or incident display form to display all units assigned to that incident
1.45	Ability to show incidents on the CAD mapping display (configurable by Agency)
1.46	Ability to group multiple agencies together to form a 'dispatch group' (E.g., Any defined set of areas and agencies that are used for logging onto the CAD system – All Agency and areas will be covered by the dispatcher signing into the predefined dispatch group)
1.47	Ability to have multiple dispatch groups within one log-in (configurable by Agency)
1.48	Ability for the user (Dispatcher / Call Taker) to add a dispatch group/Agency or area to their responsibility on-the-fly
1.49	Ability to transfer the CAD workload to another operator at the same workstation without signing out of the application entirely
1.50	Ability to transfer the CAD workload to another workstation
1.52	**GENERAL CAD FEATURES - GEOGRAPHY**
1.53	Ability to update the system with a new geofile without system downtime or degradation
1.54	Ability to update the system with new plans without system downtime or degradation
1.55	Ability to test new geofile updates in staging for accuracy and errors, prior to updating the production geofile
1.56	Ability for geofile updates to be recognized without requiring logging off and logging back on to the system

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
1.57	Ability to include overlays and digital ortho-photography (satellite imagery) in mapping application
1.58	Ability for Administrators to add/update/delete geographic information into the CAD in an ad hoc manner as needed – including, but not limited to the following:
1.58.1	Common Places (to include the X/Y coordinates)
1.58.1.1	Common place name to be 60 characters or more
1.58.2	Street Aliases
1.58.3	Streets
1.58.4	Block ranges
1.59	Ability to associate geofile data with the following:
1.59.1	Beats
1.59.2	Reporting Districts
1.60	Ability to allow for geographic plans to differ based on Agency
1.61	Ability to allow for activation of the geographic plans (based on permissions) without interrupting floor operations or degrading system performance
1.62	Ability to create override plans to route incidents in the event disaster management or alternate response is required (E.g., Incident type/signal needs to route to Alternate Response Unit (ARU) for processing; All incidents from a particular beat needs to be rerouted due to storm or other emergency)
1.63	Ability to, upon activation of geographic plan, any changes should be reflected in any incident that resides within the updated area
1.64	Ability to restrict the activation of plans if a component (such as a beat or response) is missing
1.65	Ability to highlight missing components within a plan
1.66	Ability to add pseudo areas within a plan (E.g., during the SuperBowl, an area is created to route incidents to that specific location)
1.67	Ability to apply defined icons on the CAD map view to include, but not limited to the following:
1.67.1	Units by agency (E.g., visually distinguish between MDPD and other Agencies)
1.67.2	Unit type (Fire Truck, K9, etc.)
1.67.3	Incident types/signals
1.67.4	Pre-plans
1.67.5	Fire Hydrants
1.67.6	Common Places
1.67.7	Cellular phone calls
1.67.8	Landline phone calls
1.68	Ability for CAD Administrators to view which plan is currently active
1.69	Ability to define multiple plans per Agency
1.70	Ability to activate plans/geography from the command line
1.71	**GENERAL CAD FEATURES– CAD REPORTING**
1.72	Ability to create ad hoc CAD reports based on CAD data fields

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
1.73	Ability to run CAD reports without exiting the operational CAD application
1.74	Ability to generate reports by any combination of the following:
1.74.1	Alarm type
1.74.2	All associated geofile information
1.74.3	ANI/ALI data including address and phone number
1.74.4	Business or premise name
1.74.5	Call length
1.74.6	Call source (E.g., officer-initiated, 911, 10-digit)
1.74.7	Call type
1.74.8	Comments/narrative (unlimited)
1.74.9	Common Place name (E.g., parks, streets, schools)
1.74.10	Date and time call answered
1.74.11	Date and time call entered
1.74.12	Date and time call received
1.74.13	Date and time incident entered
1.74.14	Date and time incident routed to dispatch
1.74.15	Date and time location verified
1.74.16	Date and time of cleared incidents
1.74.17	Date range
1.74.18	Day of week
1.74.19	Disposition
1.74.20	En route to on-scene time
1.74.21	Gap between time a call was received by a dispatcher and the time it was dispatched to a unit (incident pending time)
1.74.22	Geographical areas defined by the user (E.g., area, agency, fire zone box)
1.74.23	Incident number
1.74.24	Incident priority
1.74.25	Incident type
1.74.26	Officer ID
1.74.27	User ID
1.74.28	Premise and previous history flag
1.74.29	Responding Agency
1.74.30	Telephone number
1.74.31	Reporting parting information
1.74.32	Shift
1.74.33	Time range
1.74.34	Unit ID
1.74.35	Primary unit
1.74.36	Unit status
1.74.37	Workstation ID
1.75	Ability to use multiple field variables when running reports (E.g., entering several different dispositions or incident types/signals)
1.76	Ability to print a chronological incident report

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
1.77	Ability to capture and generate activity reports by any combination of the following:
1.77.1	Unit ID
1.77.2	Badge Number (court ID)
1.77.3	Personnel Number
1.77.4	Assigned Vehicle Number
1.77.5	Assigned Radio Number
1.77.6	Unit Status
1.77.7	Location
1.77.8	Shift
1.78	Ability to generate customizable report headers/footers to include the following:
1.78.1	Transaction type (deletion, edit, etc.)
1.78.2	Unit ID
1.78.3	Workstation/Terminal ID
1.78.4	Before and after value
1.78.5	Ability to create PDF file or Excel spreadsheet of report
1.79	Ability to email created report
1.80	Ability to query and view the following by any public safety boundary layer (E.g., beat, area):
1.80.1	Active calls
1.80.2	Assigned calls
1.80.3	Closed calls
2.1	**GRAPHIC USER INTERFACE**
2.2	Ability to customize the user interface at the following levels:
2.2.1	Role
2.2.2	Agency
2.3	Ability to customize the following: (Note: if certain features are customizable at only the Role and Agency level, indicate in the comments column)
2.3.1	Font size
2.3.2	Font type
2.3.3	Font color(s)
2.3.4	Window background color
2.3.5	Window sizes
2.3.6	Window locations
2.3.7	Order in which fields are displayed
2.3.8	Ability to restrict fields by permissions
2.4	Ability to allow users to return to application default settings as defined by each Agency
2.5	Ability for each Agency to define fields that are mandatory to display in status windows (E.g., define what parameters may be modified by an individual user)
2.6	Ability for user to enlarge and shrink columns in their status windows

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
2.7	Ability to save windows configurations based on user IDs (E.g., not workstation specific)
2.8	Ability to create a master configuration for window settings that can be locked down by the administrator (configurable by Agency)
2.9	Ability to maintain configuration settings during upgrades
2.10	Ability to display one or more status windows at the same time
3.1	**GENERAL DATA ENTRY**
3.2	Ability to support data entry using the following methods:
3.2.1	Mouse (point and click/drag and drop)
3.2.2	Command line
3.2.3	Touch Screen
3.3	Ability to click on the map and populate the location into the address field
3.4	Ability to click on the map and populate the latitude/longitude into the address field
3.5	Ability to enter commands using the mouse (E.g., right click on unit will display available list of pre-defined commands to select)
3.6	Ability to provide type ahead prompts that provide hints to the user as to the syntax of the command string
3.7	Ability to turn off type ahead prompts based on Agency/permissions/roles (E.g., trainer can toggle the feature on/off for a trainee)
3.8	Ability to support multiple command lines operating simultaneously
3.9	Command lines do not restrict entry of data to a particular incident and can support any command
3.10	Ability to enter any command on any command line
3.11	Ability to enter commands in any order on the command line (definable by Agency)
3.12	Ability to enter more than one command on a single command line (E.g., allow the user to clear a unit from a call and place the unit at the station)
3.13	Ability to define the order the tab cursor movement from field to field per Agency
3.14	Ability to use navigational shortcuts to navigate between fields (E.g., Alt + L sends the cursor to the "Location" field)
3.15	Ability to define mandatory required fields based on Agency
3.16	Ability to mitigate data loss during incident initiation by displaying a warning dialog allowing the user to cancel or accept the operation. (E.g., warning dialog would display if the user inadvertently closed or cleared the Initiate Incident form or command line)
3.17	Ability to create and close an incident in one step without allowing the call to pend (E.g., for testing purposes or for informational purposes)

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
3.18	Ability to simultaneously view two or more incident detail windows separately when necessary as defined by Agency. (Similar to the 'orphan' functionality in CAD / used for data comparison and emergencies with multiple incidents involved)
3.19	Ability to display a drop-down list containing incident types
3.20	Ability to configure incident types based on Agency
3.21	Ability to define priorities of incident types by Agency
3.22	Ability to prevent the display of incident types not applicable to an Agency
3.23	Ability to assign a priority to a location in which any incident at the location automatically is adjusted to the set priority (E.g., for major event) Role based permissions
4.1	**CALL TAKING – CALL RECEIPT**
4.2	Ability to receive incoming data from:
4.2.1	E911 phone system
4.2.3	TDD/TTY
4.2.4	SMS Messages
4.2.5	MMS and streaming video
4.2.6	CryWolf (E.g., False alarm response notifications)
4.2.7	ASAP to PSAP
4.2.8	Multiple Cellular telephone carriers
4.2.9	Wi-fi Calls
4.2.10	Accept, translate & display a Z coordinate (altitude) to achieve an acceptable location for indoor use based on FCC standards
4.2.11	ANI/ALI spill that should auto-populate into CAD
4.3	Ability to provide Advanced 911 Connect (A9C) Integrated call control (hardware/software interface with WEST Positron Viper):
4.3.1	Ability to communicate through the WEST Positron Viper via urgent messages
4.3.2	Ability to configure audible tones to be heard either through the headset or the external speaker
4.3.3	Ability for the Call Taker to call another Call Taker by selecting the name from an agent list
4.3.4	Ability to configure the status of a Call Taker (E.g., log off, not ready, ready, on call, etc.)
4.3.5	Ability to query a call for incident information from the ALI screen
4.3.6	Ability to screen shot the ALI as it is presented to the Call Taker (and for troubleshooting purposes)
4.3.7	Ability to link to various (in-house) reference word documents or HTML pages and files - Currently, MDPD uses references (SOPs) through the Positron Viper and the ATM mapping application - we would also like to expand this functionality
4.3.8	Ability to configure predefined text responses

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
4.4	Ability to allow CAD to CAD (point to point) interface (Allowing for the bi-directional exchange of data between disparate CAD systems without third party intervention)
4.5	Ability for the CAD-to-CPE interface to accept NENA i3-compliant data transfer, when available
4.6	Ability to capture all incoming call information from the E911 system into the CAD call entry form (Note: Information that cannot be transferred into the CAD application should be indicated in the "comments" field)
4.7	Ability to transfer Wireless Phase 1 data to the CAD call entry form:
4.7.1	Automatically
4.7.2	Manually (E.g., via function key and mouse click)
4.8	Ability to transfer Wireless Phase 2 and dispatchable location data to the CAD call entry form:
4.8.1	Automatically
4.8.2	Manually (E.g., via function key and mouse click)
4.9	Ability for location changes that occur as a result of a wireless caller rebid to not automatically update the event location. The system prompts the operator as to whether or not to update the event location
4.10	Ability for operator to initiate a rebid from the CAD
4.11	Ability for text-to-911 data to be transferred via the interface and logged as a searchable part of the CAD log and incident record
4.12	Ability to populate location information from the texter into the CAD from the CPE. (E.g., texter is asked their address and types - 18520 SW 128 CT; address should populate into the location/address field for validation within the CAD application)
4.13	Ability to retain text messages in conjunction with the incident
4.14	Ability to accept and append pictures and video to an incident record
4.15	Ability to cross reference multiple text messages in the event they are related to the same incident
4.16	Ability to accept emergency call and location data originating with Session Initiation Protocol (SIP) with location conveyance
4.17	Ability for the CAD system to accept and process call location data in PIDF-LO format for address verification, when available
4.18	Ability to accept X/Y coordinates for address verification (E.g., lat/long) for conversion to the closest address, address point or common place / landmark
4.19	Ability for the system to provide a visual and audible (optional using system configuration) notification when a 911 call arrives at a workstation for call entry
4.20	Ability to manually override the following call data transferred from the CPE to CAD during address verification:
4.20.1	Address
4.20.2	Phone number

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
4.20.3	Beat (Area of Patrol)
4.20.4	Area
4.20.5	Agency
4.20.6	Grid
4.21	Ability for the system to prompt the user to validate the address received or entered into the CAD Address field using the following methods:
4.21.1	On Demand
4.21.2	By using the tab key to move the cursor to the field following the Address field
4.22	Ability to record original call receipt time from the CPE and have that information accessible in CAD (E.g., for more accurate response time analysis)
4.23	**CALL TAKING – CALL ENTRY**
4.24	Ability to create and update incidents using a predefined form
4.25	Ability for forms to be configured by Agency
4.26	Ability to create and update incidents using only the command line
4.27	Ability to enter standard information in defined fields for the following:
4.27.1	Incident address
4.27.2	Apartment number
4.27.3	Building number
4.27.4	Caller address
4.27.5	City
4.27.6	Incident/premise Phone number
4.27.7	Caller phone number
4.27.8	Location description/name
4.27.9	Signal/Type
4.27.10	Vehicle/Subject
4.27.11	Plate number
4.27.12	Incident priority
4.27.13	Modifying Circumstance
4.27.14	Comments
4.28	Ability to initiate an incident by:
4.28.1	Selecting a location on map
4.28.1.1	Display address
4.28.1.2	Display lat/long
4.29	Ability to input all call and narrative information within one screen
4.30	Ability to auto-launch the incident initiate screen upon call answer. The incident initiate screen must populate with the ANI/ALI
4.31	Ability to configure an incident timer that will display a time out message when incidents are unprocessed in the initiate incident form after a specified time frame (E.g., 3 minutes or more)
4.32	Ability for the phone number to populate and parse as XXX-XXX-XXXX

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
4.33	Ability to allow the Call Taker to click on the phone number field to redial the caller
4.34	Ability for a Call Taker to conduct a previous telephone number check via CAD (E.g., If caller has called from a specific number multiple times in the past)
4.35	Ability to separately capture the following times:
4.35.1	ANI/ALI spill
4.35.2	Phase 1 to Phase 2 refresh
4.35.3	New incident initiation form is opened
4.35.4	Call Taker begins data entry into the incident initiation form
4.35.5	Incident submitted to pending
4.36	Ability to denote an incident as a mutual aid response, identifying which Agency responded and for whom the service was provided. This would create a unique number that would track both the Agency requesting and Agency responding. This tracking number could be reset (annually, monthly, etc.)
4.37	Ability for each Agency to control what information is shared across agencies while remaining autonomous via security permissions
4.38	Ability to provide a prompt/notification/alert to a user when creating an incident for an outside Agency
4.39	Ability to manually verify an address without creating an incident and display the following:
4.39.1	Area
4.39.2	Beat
4.39.3	Grid
4.39.4	Jurisdiction
4.39.5	Run card order
4.39.6	Map display
4.40	Ability to create multiple incidents at the same location simultaneously. (E.g., multiple vehicle burglaries in an apartment building parking lot)
4.41	Ability to schedule the creation of an incident to be initiated at a future date/time (E.g., watch order)
4.42	Ability to view and modify scheduled incidents for dispatching at a future date/time
4.43	Ability to schedule an incident to be created at specific intervals (E.g., Directed patrol at hourly intervals – defined by Agency at time of scheduled incident creation)
4.44	Ability to generate an incident from an existing or previous incident (Similar to the clone feature – where the created incident is cloned or associated after a parent incident has been created)
4.45	Ability to notify personnel, upon the creation of the incident, via the following methods:
4.45.1	SMS Text

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
4.45.2	Email
4.45.3	Printer
4.46	Ability to send notifications upon incident creation based on the following criteria:
4.46.1	Incident type/signal (E.g., Fire, Shooting, Suicide, Stabbing, Plane Crash, Explosion, etc. is occurring)
4.46.2	Unit
4.46.3	Location
4.46.4	Grid
4.46.5	Common Place
4.46.6	Address
4.46.7	Pre-defined geo-fences
4.47	Ability to allow the operator to route the cloned incident to any designated Agency at the time of creation
4.48	Ability for the system to automatically generate an Agency specific incident number for incidents that are cloned for another Agency
4.49	Ability to clone incidents from the command line and the form
4.50	Ability for cloned incidents to maintain the current date and time as well as the date and time of the original incident
4.51	Ability to create multiple cloned incidents simultaneously (within and across agencies)
4.52	Ability to copy comments into the cloned incident at the time of creation
4.53	Ability to exclude comments from the cloned incident at the time of creation
4.54	Ability to add additonal comments at the time of creation to a cloned incidents
4.55	Ability to add a Modifying Circumstance at the time of creation to a cloned incident
4.56	Ability to assign a Primary Unit to a cloned incident at the time of creation
4.57	Ability to associate a cloned incident at the time of creation
4.58	Ability to create an incident using the fewest required fields possible (E.g., Location and Incident type/signal)
4.59	Ability to send a call to dispatch prior to call completion, based on the priority of the incident, using a visual indicator, such as a flag, to indicate to dispatch that there would be more information to follow
4.60	Ability to transfer a call to dispatch prior to call completion without disrupting the active view
4.61	Ability for the system to utilize the following methods to advise users additional information has been entered into an incident:
4.61.1	Audible tone
4.61.2	Visual Flag
4.62	Ability to distinguish 'priority' comments from routine comments (E.g., gun involved, subject on-scene, person injured, etc.)
4.63	Ability to visually distinguish 'priority' flags from routine flags

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
4.64	Ability for users to add comments to an incident after it has been dispatched
4.65	Ability for any user to add comments after incident dispatch that can be viewed dynamically without refreshing the screen
4.66	Ability for CAD to automatically route an incident to the responding Agency based on incident type/signal and location
4.67	Ability for the call taker/dispatcher to update any field:
4.67.1	After the incident has been dispatched
4.67.2	Address field updates should always go through address validation
4.67.3	Updates shall display in the comments section/audit log of the incident
4.68	Ability for the system to display a visual confirmation to the user that an incident has been created
4.69	**CALL TAKING – DUPLICATE INCIDENTS**
4.70	Ability for the system to recognize potential duplicate addresses of created active incidents and alert the user creating the incident using the following parameters:
4.70.1	Exact address
4.70.2	Proximity to the address entered (definable by Agency)
4.70.3	Display proximity calls on map
4.70.4	Common place name
4.70.5	Intersection (E.g., SR 826/Coral Way)
4.71	Ability to provide the user with the following information about possible duplicate incidents (E.g., call synopsis):
4.71.1	Incident comments
4.71.2	Caller phone number
4.71.3	Incident status
4.71.4	Incident type
4.71.5	Time of creation
4.71.6	Units assigned
4.71.7	Initial Dispatcher
4.72	Ability for the user to do any of the following if a CAD incident is determined to be a duplicate call:
4.72.1	Add to the original incident record additional information with complete complainant information and additional incident comments
4.72.2	Close a duplicate incident and cross-reference/associate it to the original CAD incident
4.72.3	Ability to close a pending call, determined to be a duplicate incident, using a "duplicate command" and associate the call to one or more incidents (role based)
4.72.4	Ability to manually associate any additional calls and all associated calls across agencies
4.72.5	Create an entirely new incident using existing address data (not a duplicate)

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
4.73	Ability to include closed incidents in the potential duplicate call identification process.
4.74	Ability for potential duplicate parameters to be definable by each Agency to include the following:
4.74.1	Proximity to the incident being created (E.g., closed incidents will be displayed that were within 1000 feet)
4.74.2	Time (E.g., Closed incident will be searched within the last hour of being closed)
4.75	**CALL TAKING – DUAL DISPATCHING/ASSOCIATION**
4.76	Ability to simultaneously create an incident across multiple agencies that share the original call information with the relevant Agency while allowing each Agency to be responsible for dispatching their own resources
4.77	Ability to share the location and type code for an incident dynamically to multiple agencies and immediately allow each Agency to dispatch relevant disciplines (E.g., an incident must be routed to two dispatch centers, one dispatch center is responsible for fire dispatching the other law enforcement)
4.78	Ability to create and route simultaneous calls for service to differing agencies with differing response plans and recommendations based on geography and Agency and incident type (E.g., MDFR responds to a broken arm while MDPD does not, but North Miami PD does respond - For all law agencies, the incident type/signal is classified using the same nature code)
4.79	Ability for creation of simultaneous incidents to be automatically associated to one another across agencies
4.80	Ability to manually associate incidents to one another across agencies
4.81	Ability to dynamically send updates performed in all fields or specifically selected fields across all associated incidents
4.82	Ability to associate two or more active incidents (if there is a limit, please indicate)
4.83	Ability to associate two or more closed incidents (if there is a limit, please indicate)
4.84	Ability to associate active incidents to closed incidents
4.85	Ability for updated comments to be displayed across associated incidents
4.86	Ability for future comments to be added into all associated incidents as the default - dispatch/call taker would have the ability to exclude selected information
4.87	Ability to 'un-associate' active or closed incidents associated in error
4.88	Ability to have a priority notification for priority comments and priority updates that will propagate across all associated incidents

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
4.89	Ability for the Call Taker/Dispatcher to add a modifier to an incident to alert or heighten the priority of the defined incident to give it a greater priority for the dispatcher (similar to the way Modifying Circumstances (PD) works) (E.g., an incident involving a mentally ill person will receive a response recommendation for an officer with an electronic control device and who is Critical Incident Trained)
4.90	Ability to review recordings of 911 calls in conjunction with CAD incidents and attach to the incident - This functionality should be available on a tablet utilizing the NICE recording solution (This functionality should be based on whether or not an incident has been created - could be definable by incident) MDPD refers to this functionality as "Call Review"
4.91	**CALL TAKING – FALSE ALARMS**
4.92	Ability to have information from an alarm monitoring unit directly import into CAD per APCO/CSAA ANS 2.101.1-2008 (ASAP to PSAP) (https://www.apcointl.org/doc/911-resources/apco-standards/77-alarm-monitoring-company-to-public-safety-answering-point-asap-computer-aided-dispatch-cad-exter/file.html)
4.93	Ability to transfer false alarms to a burglar alarm tracking system with the following information:
4.93.1	Incident Address
4.93.2	Business name
4.93.3	Billing Address
4.93.4	Responding Agency
4.93.5	Date and Time
4.93.6	Incident Number
4.93.7	Complex name
4.93.8	Apartment, unit, suite, lot
4.93.9	Permit number
4.93.10	Owner name
4.94	Ability to search burglar alarm database by the following:
4.94.1	Permit number
4.94.2	Business name
4.94.3	Address
4.94.4	Owner name
4.95	Ability to segregate false alarms by Agency
4.96	Ability to create an incident from information obtained from an alarm monitoring company
4.97	Ability to create specific false alarm dispositions
5.1	**PREMISE / HAZARD FILE / PREVIOUS INCIDENT INFORMATION**
5.2	Ability to automatically add a premise/hazard notification into the incident upon incident initiation.
5.3	Ability to automatically allow insertion of premise/hazard information into the incident upon creation (configurable by Agency)

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
5.4	Ability to search for premise / hazard information based on:
5.4.1	Exact address match/direct hit
5.4.2	Specific (Agency defined) radius from the location
5.4.3	Apartment number
5.4.4	Intersection
5.4.5	Common Place/Business Name
5.4.6	Building Number
5.4.7	Block Range
5.4.8	Map area (E.g., Gate code for an apt complex or gated community rather than a pin point location)
5.5	Ability to retrieve and attach to the incident, any information associated with the premise (E.g., pre-plan information, hazards, access codes, and previous calls for service)
5.6	Ability to allow premise/hazard sort order that determines how premise information is displayed within the CAD incident
5.7	Ability to allow configuration of priority premise/hazard alerts
5.8	Ability to support an audible/visual notification for priority premise/hazard alerts for CAD
5.9	Ability for premise information to be available to the user but not prevent the user from continuing current work (E.g., window does not cover entire workstation screen)
5.10	Ability to view premise information without being required to create an incident
5.11	Ability to time stamp the audit trail/incident log when premise information is viewed by an user/mobile user
5.12	Ability to denote an expiration date to premise information
5.13	Ability to manually generate a report of expiring premise information
5.14	Ability to produce a report, at defined intervals, of expiring premise information
5.15	Ability to auto-purge premise information at expiration date
5.16	Ability to auto notify the CAD administrator when premise information expires
5.17	Ability to define valid date ranges for time limited premise information at a given location (E.g., information valid between <start date> and <end date>)
5.18	Ability to create (based on roles/permissions) a temporary premise/hazard to be vetted at a later time by a CAD Administrator
5.19	Ability to notify the CAD Administrator that a temporary premise/hazard has been inserted
5.20	Ability to auto purge the temporary premise/hazard after a predefined time period (configurable by Agency)
5.21	Ability to show previous incident history related to a current incident
5.22	Ability for the Agency to define parameters related to viewing previous incidents based on the following:

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
5.22.1	Time (E.g., recent or within a defined time frame)
5.22.2	Agency Type
5.22.3	Incident type/signal (E.g., include previous incidents when the signal is the same or of a priority nature and also exclude previous incidents based on type/signal – Don't want to display off duty jobs at a location, but want to see shoplifter calls, etc.)
5.23	Ability to view upon address verification, any previous incidents that were created at the address
5.24	Ability for the system to automatically update previous incident history whenever an incident is created at the same location
5.25	Ability to use a link to view specific previous incident history information whenever a user enters a location
5.26	Ability for previous incident history to contain:
5.26.1	Address
5.26.2	Location
5.26.3	Contact information
5.26.4	Date and time
5.26.5	Incident number
5.26.6	Incident type
5.26.7	Common place/Landmark
6.1	**MAP**
6.2	Ability to view, based on Agency's role/permissions, on map the locations of:
6.2.1	Incoming 911 Calls location
6.2.2	Caller's telephone number on incoming 911 calls
6.2.3	All pending and dispatched incidents across dispatch groups
6.2.4	Incident number upon creation of incident in addition to the wireless number
6.2.5	Units based on AVL (denotes AVL)
6.2.6	Units based on other GPS enabled devices
6.2.7	Units based on last known locations (denotes non-AVL)
6.2.8	Phase 1 wireless 911 calls
6.2.9	Phase 2 wireless 911 calls
6.2.10	Latitude /Longitude coordinates
6.3	Ability to open and view multiple maps with different filters applied to each (note the quantity of maps that can be opened concurrently)
6.4	Ability for mapping functionality to be integrated into CAD starting at call receipt and continuing through to the conclusion of a CAD incident
6.5	Ability to distinguish between Phase I and Phase II wireless calls on map by using different symbols, colors and/or text
6.6	Ability to obtain detailed incident information by double-clicking on a created incident within the map
6.7	Ability to hover/click on map and display:
6.7.1	Incident location
6.7.2	Incident number

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
6.7.3	Units assigned to call
6.7.4	Latitude /Longitude coordinates
6.8	Ability to zoom the map to a unit's location via the command line using a unit number
6.9	Ability to provide users with the following map navigation functionality via keyboard:
6.9.1	Pan from given area to adjacent area
6.9.2	Return back to previous view
6.9.3	Zoom in on area for enhanced detail
6.9.4	Zoom out of an area
6.9.5	Move up and down
6.9.6	Move left and right
6.10	Ability to provide users with the following map navigation functionality via mouse:
6.10.1	Pan from given area to adjacent area
6.10.2	Return back to previous view
6.10.3	Zoom in on area for enhanced detail
6.10.4	Zoom out of an area
6.10.5	Move up and down
6.10.6	Move left and right
6.11	Ability to center map display on:
6.11.1	CAD incident location
6.11.2	Last known location of vehicle (AVL or unit status)
6.11.3	Specified geographic area
6.11.4	Specified vehicle/unit
6.11.5	Vehicle activating radio emergency button dependent upon Harris P25 Interface
6.12	Ability to define default map layers
6.13	Ability for users to adjust the following:
6.13.1	Map layer transparency
6.13.2	Map layer display
6.13.3	Location of unit's icon on the map (E.g., temporarily moving a unit's icon in order to better view the incident)
6.14	Ability to view an incident and display the individual units, without stacking, that are assigned to that incident
6.15	Ability to indicate that additional information (E.g., attached files or additional map layer data) is associated with a location displayed on the map
6.16	Ability to access additional information associated with a location displayed on the map by clicking on the icon
6.17	Ability to click on a location on a map and pull up any supplemental information associated with an Agency-defined radius around the location (address, building, and block):
6.17.1	Pre-Plans
6.17.2	Premise / Hazards
6.17.3	Incident History

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
6.17.4	Grids
6.17.5	Areas
6.17.6	Beats
6.17.7	Zip Codes
6.18	Ability to view map in a separate window
6.19	Ability to allow system administrators to configure map views including, but not limited to:
6.19.1	Font size
6.19.2	Zoom Level
6.19.3	Map Layers
6.20	Ability to display incident location in relation to other active incidents on the map during the incident entry process
6.21	Ability to visually distinguish units on the CAD map display by the following:
6.21.1	Unit status
6.21.2	Unit status color
6.21.3	GPS/AVL is operational and working as defined (displays in Agency defined color)
6.21.4	GPS/AVL is not operational and not working as defined (displays in Agency defined color)
6.21.5	Prioritize color based upon unit status as defined by Agency
6.22	Ability for mapping application to have video capabilities that permit incident management by allowing the dispatcher to view real-time video from the CAD map and also deliver tactical video information to the dispatcher's position based on incident location
6.23	Ability to dynamicaly create an incident geo-fence with predefined criteria (E.g., radius 100 meters)
6.24	Ability to support geo-fencing incident locations to include advisory notifications when a unit is within the boundaries of a geo-fenced area
6.25	**MAP – ROUTING DIRECTIONS**
6.26	Ability to provide routing directions (when requested) to an incident from:
6.26.1	Last known location
6.26.2	AVL/GPS location
6.27	Ability to provide routing directions when requested from: (any combination of)
6.27.1	Two selected points on the map
6.27.2	Common Place
6.27.3	Address
6.27.4	Street intersections
6.28	Ability to display an estimate travel time on map when routing directions are requested
6.29	Ability for the dispatcher to view the drawn route on the map
6.30	Ability to view routing directions in a separate window using turn by turn
6.31	Ability to insert routing directions into an incident

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
6.32	Ability to cut and paste routing directions
6.33	Ability to adjust routing recommendations based on closed streets
6.34	Ability to close streets by clicking on a specific area (E.g., street, hundred block area) from the CAD map (permissions based)
6.35	Ability to sun-set (timeout) a closed/open street
6.36	Ability to generate system alert to predefined user groups for closed/open streets
6.37	Ability to automatically populate to other dispatch groups any closed/open streets
6.38	Ability for user to define an expected duration for street closures (permissions based)
6.39	Ability to push closed street information to mobile computers
6.40	Ability to push closed street information to Smart Devices
7.1	**POLICE DISPATCH – UNIT MANAGEMENT**
7.2	Ability to log a unit on duty via the following methods:
7.2.1	Command line
7.2.2	Form
7.2.3	Mobile Computer Unit
7.2.4	Roll Call (Rostering)
7.3	Ability for the system to validate unit IDs against a Unit ID Table defined by the Agency
7.4	Ability for the system to support no less than 8-characters for the unit number field
7.5	Ability to allow a unit to log in via a mobile application without being logged off, if the unit has already been logged in manually by dispatch
7.6	Ability to allow a unit to log in via a mobile application without being removed from an assigned incident, if the unit has already been logged in manually by dispatch and assigned
7.7	Ability for the system to allow for temporary units by using only the unit number to log into CAD during an emergency
7.8	Ability to allow the user to update personnel information connected to the temporary unit while the unit remains assigned to an incident
7.9	Ability to simultaneously log on a temporary unit and place that unit on-scene (E.g., during an emergency)
7.10	Ability for temporary units (not connected to personnel information), should be removed from the CAD after clearing an assignment
7.11	Ability to simultaneously log in, assign a unit to an incident and place them in an arrival status (on-scene)
7.12	Ability to log one or more units on duty/off duty with a single command (similar to Roll Call)
7.13	Ability to define and maintain a roster (E.g., Squad or company)
7.14	Ability to place all units in a previously defined roster on or off-duty with a single command

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
7.15	Ability to generate a roster of personnel on-duty at a specific time
7.16	Ability to generate a roster of personnel logged on at a specific time
7.17	Ability to view all units on-duty by:
7.17.1	Agency
7.17.2	Dispatch Group
7.17.3	Station
7.18	Ability to display an 'electronic lineup' for each district (similar to roll call functionality)(E.g., units can be entered onto the CAD with notes indicating that they have court at 10AM, or are riding one-man, training, no emergency equipment, etc.)
7.19	Ability to search for officer/firefighter personnel information (whether entered via interface (E.g., through Kronos/Telestaff), imported or entered manually) using any combination of the following:
7.19.1	Name
7.19.2	Vehicle number
7.19.3	Personnel number
7.19.4	Badge Number (court ID)
7.19.5	Radio number (Logic ID)
7.20	Ability to identify units by special capabilities (E.g., rescue tools, breathalyzers)
7.21	Ability to identify units by special skills (E.g., ability to speak a foreign language, drug recognition expert, DUI certified, Electronic Control Device (ECD) Certified, etc.)
7.22	Ability to add/remove capabilities or equipment as required (E.g., unit does not have emergency equipment or is not carrying an ECD) regardless of their status
7.23	Ability to assign multiple personnel numbers to a single unit number (E.g., two-man units, field force, etc.)
7.24	Ability to recognize if a personnel number being assigned is one that is already on duty and should prompt the user with an error message
7.25	Ability to recognize if a vehicle number being assigned is one that is already on duty and should prompt the user with an error message
7.26	Ability to recognize if a radio number being assigned is one that is already on duty and should prompt the user with an error message
7.27	Ability to visually distinguish units signed on with a mobile computer from those without a mobile computer
7.28	Ability to specify a primary unit on an assigned incident
7.29	Ability for the system to automatically designate the first unit dispatched to an incident as the primary unit
7.30	Ability to record the primary unit change in the audit trail/incident log
7.31	Ability to display a primary unit indicator on the status monitor
7.32	Ability to require the primary unit to clear with a disposition (configurable by Agency)

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
7.33	Ability to place a unit as a backup to an existing unit regardless of the order that the unit number is entered onto the command line
8.1	**DISPATCHING – GENERAL FEATURES**
8.2	Ability for incident details to be displayed when the incident is selected from the pending queue
8.3	Ability to display an incident using the following means:
8.3.1	Command line
8.3.2	Mouse
8.4	Ability for users to select an incident to view/update via the following methods:
8.4.1	Using a function key to select the oldest/highest priority incident in the pending queue
8.4.2	Entering partial incident number on the command line (E.g., last 4 numbers of the incident)
8.4.3	Entering a unit number assigned to the incident on the command line
8.4.4	Mouse (Point and click on the incident or unit)
8.4.5	Point and click on an incident icon displayed on the map
8.5	Ability to zoom the map to the incident location as it is displayed by the user via the command line
8.6	Ability for cursor to remain on the work area while maps zooms to incident location as it is being displayed by the user
8.7	Ability for priority incidents to alert the user (configurable by Agency) with:
8.7.1	Audible alert
8.7.2	Visual alert
8.8	Ability to display a flag on the dispatcher's screen to indicate any change in the incident (E.g., comments added, location change):
8.8.1	Audible alert
8.8.2	Visual alert
8.9	Ability to sort the pending queue by the following:
8.9.1	Priority
8.9.2	Priority and time received
8.9.3	Time received
8.9.4	Area
8.9.5	Incident Number
8.9.6	Incident Type/Signal
8.10	Ability to display a window listing pending and holding incidents entered from any CAD workstation
8.11	Ability to dispatch units by:
8.11.1	Accepting the proposed recommended units
8.11.2	Selecting and dispatching units other than those recommended by the application
8.11.3	Selecting some, but not all, of the recommended units
8.11.4	Manually entering unit number for dispatch

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
8.12	Ability to present a dispatcher with multiple sources of unit recommendations (E.g., show the response plan recommendation for the closest unit and run card recommendation)
8.13	Ability to log recommendation & overrides in the audit trail/incident log (E.g., log recommended units versus dispatched units)
8.14	Ability for the system to do the following upon dispatch:
8.14.1	Assign the recommended or requested units
8.14.2	Remove the incident from the pending queue
8.14.3	Activate appropriate interfaces (E.g., Fire Station Alerting)
8.14.4	Send the incident to the assigned unit's mobile computer
8.14.5	Start the status timers
8.14.6	Send incident information to the appropriate printer(s) (E.g., rip and run)
8.14.7	Update the unit status (E.g., Dispatched)
8.15	Ability to manage units without a mobile computer
8.16	Ability to dispatch more than one unit at a time to the same incident
8.17	Ability to use a single function key to dispatch the first recommended unit, then hit the same function key to dispatch the next unit in the recommendation (configurable by Agency)
8.18	Ability to assign or add multiple units to an incident with a single command
8.19	Ability to notify the dispatcher that dispatched incidents have not been successfully delivered to the Mobile
8.20	Ability to notify the dispatcher that dispatched incidents have not been successfully delivered to the Smart Device
8.21	Ability to notify the dispatcher that dispatched incidents have not been successfully delivered to the Harris Radio
8.22	Ability to notify the dispatcher that fire station alerting system is reporting that the station has not been notified of the dispatched incident
8.23	Ability to provide a priority flag to the dispatcher upon arrival of the first unit to an incident that involves a multiple Agency response (E.g., PD and FD are responding to a 'Dual Dispatched'/associated incident - FD arrives first, PD receives a priority flag that FD has arrived on the incident - priority flag is also noted within the audit trail/incident log of the incident)
8.24	Ability to provide a priority flag to the dispatcher upon arrival of the first unit to a priority incident that is also noted within the audit trail/incident log of the incident (configurable by Agency)
8.25	Ability to 'free' (release) an incident from all units and have the incident return to the pending queue
8.26	Ability to 'free'(release) a incident from a unit and reassign the unit to a new incident without closing the incident
8.27	Ability for the CAD system to record multiple arrival times associated with different statuses, configurable by Agency (E.g., arrival at a staging area, arrival at the scene)

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
8.28	Ability to exchange an available unit with a unit already assigned to an incident with a single command
8.29	Ability to allow two assigned units to exchange incidents with a single command
8.30	Ability to simultaneously assign a unit to an incident and place them in an arrival status (on-scene)
9.1	**HARRIS RADIO INTEGRATION**
9.2	Ability to interface with the Harris P25 Radio System
9.3	Ability to configure the system, by Agency, to alert the dispatcher when a unit is in an emergency status once the emergency button has been pressed on the unit's radio via the following methods:
9.3.1	Audible tone
9.3.2	Visual distinction (E.g., reverse video)
9.3.3	Acknowledgement notification (E.g., pop-up box, etc.)
9.4	Ability for the Acknowledgement notification pop-up box to contain the following:
9.4.1	Unit ID/Call sign
9.4.2	GPS/Last known location
9.4.3	Alias (MDPD Badge number, MDFR Unit ID)
9.4.4	LID
9.4.5	Distinct color
9.6	Ability to link the CAD LID number table to CAD personnel table which is linked to the Unit ID upon sign on
9.7	Ability to track resources within the CAD, such as a radio's GPS coordinates
9.8	Ability to prioritize the display of GPS data received from multiple resources (E.g., Vehicle vs. Portable radio – Officer leaves the vehicle – portable radio GPS should have priority over vehicle radio GPS, but when the officer is inside the vehicle, vehicle GPS data should be displayed instead)
9.9	Ability to display the prioritized radio on the map
9.10	Ability to send to NICE (audio logging system) incident information including:
9.10.1	Incident numbers
9.10.2	Units assigned to an incident
9.10.3	Time the unit was assigned and released from an incident
9.11	**MOTOROLA RADIO INTEGRATION**
9.12	Ability to interface with the MCC 7500 v7.11 or greater Motorola Radio System
9.13	Ability to generate a two-tone unique to each fire station that will be connected to the pager port on the Voice Processing Module (VPM)
9.14	Ability to generate a two-tone unique to each fire station that will be connected to the pager port on the US Digital Designs interface box
9.15	Ability to send a message to the Motorola system to generate a pager/tone specific to the dispatch group

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
9.16	Ability to send to Verint (audio logging system) incident information including:
9.16.1	Incident numbers
9.16.2	Units assigned to an incident
9.16.3	Time the unit was assigned and released from an incident
9.17	Ability to display radio alias information to the dispatcher
10.1	**GENERAL DISPATCH RESOURCE RECOMMENDATION**
10.2	Ability to automatically provide appropriate resource recommendations based on any combination of the following:
10.2.1	Beat/Location responsibility/Run Card
10.2.2	Equipment
10.2.3	Skill
10.2.4	Capability
10.2.5	Incident type
10.2.6	Pre-defined response plans
10.2.7	Response class
10.2.8	Type of units required
10.2.9	Number of units required
10.2.10	Unit status
10.2.11	AVL/GPS
10.2.12	Augmenting (E.g., Ability to complete assignment accounting for already assigned units)
10.2.13	Utilizing differential dispatch
10.3	Ability to automatically provide appropriate resource recommendations based on AVL/GPS Location (closest unit) taking into consideration any combination of the following (as provided by GIS):
10.3.1	Natural boundaries
10.3.2	Obstacles
10.3.3	Traffic
10.3.4	Speed limits
10.3.5	Street network
10.3.6	Street direction
10.3.7	Street closures
10.3.8	Time of day / day of week
10.4	Ability for each Agency to define 'closest unit' parameters
10.5	Ability for system, upon request, to present an updated unit recommendation if user makes relevant incident information changes (E.g., Incident type/signal, location, alarm level)
10.6	Ability for each dispatched Agency to determine how units will be recommended (E.g., one prefers closest-unit while the other would like station responsibility)
10.7	Ability to alter recommendations for dispatch based upon unit status (E.g., administrative statuses are not recommendable)
10.8	**FIRE DISPATCH – RESOURCE RECOMMENDATION**

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
10.9	Ability to alert the dispatcher when a closer unit becomes available for dispatch during recommendation (E.g., during dispatch, a new unit becomes available)
10.10	Ability to alert the Dispatcher when a closer unit becomes available after the incident has been dispatched. This would be based upon unit capabilities. (E.g., If multiple unit types are dispatched to a call and a Rescue becomes available that is closer than the initially dispatched Rescue, the Dispatcher would be alerted)
10.11	Ability to set parameters to limit a unit recommendation via AVL based on the unit's distance from their original jurisdiction (E.g., if an apparatus is 10 miles from their jurisdiction, they cannot be used for closest-unit dispatching in that region since they are too far from their original jurisdiction) configurable by Agency
10.12	Ability to incorporate automatic unit recommendation parameters when adding more units to a call
10.13	Ability to utilize a rotation for unit recommendation using the following:
10.13.1	Rotation: Recommended next unit based upon next up by time of day - (E.g., Engine is "first up" from 0700-1900 and Rescue is "first up" from 1900 - 0700)
10.13.2	Configurable by Agency
10.13.3	2 or more units in the rotation
10.14	Ability to recommend different assignment levels based upon time of day and day of week
10.15	Ability to recommend different number of units based upon time of day and day of week
10.16	Ability to not recommend a unit for an active incident when that unit has cleared the incident within "X" time (Administrator defined)
10.17	Ability to support a single recommendation of up to 100 units based on response plans. If the system has a limit, document the quantity
10.18	Ability, when upgrading alarm levels, for the system to automatically account for units that are currently assigned to that incident - regardless of the unit being self-assigned to the incident or assigned by Dispatch (E.g., if 1 engine is already on-scene and the upgraded alarm requires 1 engine on-scene, it does not recommend another engine)
10.19	Ability to recommend a minimum of 5 upgraded alarm levels
10.20	Ability to identify apparatus with multiple capabilities (E.g., Ladder also serves as Engine)
10.21	Ability to dispatch an apparatus based on the priority of the capability (E.g., if Vehicle A can serve as both an Engine and a Ladder, when it is dispatched as an Engine, it is unavailable as a Ladder)

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
10.22	Ability to notify dispatcher of resource deficiencies upon recommendation. As the recomendation for dispatch is displayed that does not meet the minimum required capabilities (E.g., Response plan indicates that a Ladder must respond, but an Engine has been assigned)
10.23	Ability to notify the dispatcher of resource deficiencies on incidents with five or more units, prior to the first unit arrival. As the recommendation for dispatch is displayed that does not meet the minimum required capabilities (E.g., Response plan indicates that a Ladder must respond, but an Engine has been assigned)
10.24	Ability to dynamically recommend units on an active incident based upon a predetermined criteria (trigger). This functionality would operate as an algorithm (E.g., 3 rescues are assigned to an incident and so an EMS supervisor needs to be dispatched)
10.25	Ability to notify the dispatcher of a unit recommendation based upon a predetermined criteria (trigger). This functionality would operate as an algorithm (E.g., A dispatcher would be alerted that an EMS supervisor needs to be dispatched if 3 rescues are assigned to an incident)
10.26	Ability to recommend a radio channel based on geography (radio channel coverage area)
10.27	Ability to select/override radio channel into the form prior to dispatching the incident
10.28	Ability to recommend a radio channel based on incident type/signal and geography (radio channel coverage area)
10.29	Ability to recommend a radio channel based on geography and the number of units assigned to the incident (E.g., 5 units or more)
10.30	Ability to dynamically recommend radio channel on an active incident based upon a predetermined criteria
10.31	Ability to penalize units based on their status (E.g., if a unit is available in quarters, they would receive a 60 second response time penalty - status penalties are configurable in seconds for each status)
10.32	Ability to penalize units based on their capability/vehicle type
10.33	Ability to incorporate differential dispatch algorithms in determining recommendation based on incident location, incident type/signal and location of responding resources using the following criteria:
10.33.1	Incident type/signal
10.33.2	Incident severity
10.33.3	Prescribed maximum response time
10.33.4	Defined time differential - If the preferred unit will not arrive prior to the prescribed threshold for the incident, a closer unit of another type will be recommended if the response differential is quick enough to make a difference

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
10.34	Ability to display a single recommendation that is a combination of AVL and runcard. Units that are being recommended by runcard will have a visual indicator denoting the recommendation is not based on AVL
11.1	**FIRE DISPATCH – CREW CROSS STAFFING**
11.2	Ability to automatically identify company personnel capable of staffing multiple resources
11.3	Ability to automatically assign company personnel to the appropriate apparatus depending on the incident type/signal
11.4	Ability to automatically prioritize which apparatus is staffed first based on call type
11.5	Ability to automatically remove an apparatus from service if personnel are not available to staff the apparatus
11.6	Ability to recognize having two units in service based upon staffing for one crew (tendering). When one of the two units are assigned to an incident or unavailable, the other unit automatically becomes non-recommendable. Alternately, when the first unit becomes available, both units will be recommendable (available for dispatch)
11.7	Ability to automatically place an apparatus back in service when personnel are available to staff the apparatus
12.1	**RESPONSE PLANS**
12.2	Ability to configure response plans based on pre-defined conditions (E.g., Fireworks store, recycle warehouse)
12.3	Ability (by Agency) to configure response plans based on:
12.3.1	Area
12.3.2	Address
12.3.3	Time of day
12.3.4	Day of week
12.3.5	Alarm level
12.3.6	Incident type/signal
12.3.7	Pre-fire plan
12.3.8	Resource availability
12.3.9	Station coverage requirements
12.3.10	Responding Agency
12.3.11	Primary capability
12.3.12	Optional capability
12.3.13	First station
12.3.14	Response Class
12.3.14.1	Grid
12.3.14.2	High Rise
12.3.14.3	Geo Fence
12.4	Ability to load a new response plan without stopping or pausing application operations
12.5	Ability to assign a single response plan with multiple incident types/signals

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
12.6	Ability to include multiple agencies in response plans
12.7	Ability to configure by user the permission to update the response plans (E.g., without assistance from technical support or vendor)
12.8	Ability to import run cards using third party file formats:
12.8.1	Excel
12.8.2	CSV
13.1	**FIRE DISPATCH**
13.2	Ability to enter run cards with predefined responses based on grids
13.3	Ability to override the run card recommendation
13.4	Ability to enter run cards specific to an Agency
13.5	Ability to define response areas using polygon/drawing tool
13.6	Ability to have multiple alarm levels for each incident
13.7	Ability to include moved-up units as part of a recommendation
13.8	Ability to perform the following actions regarding run cards:
13.8.1	Print
13.8.2	Modify
13.8.3	Add/create
13.8.4	Delete
13.9	Ability for units within a response plan to have an associated priority (E.g., require the system to search for an Engine first if it has the highest priority)
13.10	Ability to review run order without generating an incident
13.11	Ability to review run order based upon location and signal without generating an incident
14.1	**FIELD INITIATED INCIDENTS**
14.2	Ability for the dispatcher to use the command line to create a field-initiated incident and place the initiating unit on-scene
14.3	Ability for the dispatcher to enter field-initiated incidents with a specific status of Field-Initiated (FI) based on the incident type/signal (E.g., traffic stop)
14.4	Ability for the dispatcher to verify addresses of field-initiated incidents
14.5	Ability for the dispatcher to associate a field-initiated incident to another incident
14.6	Ability for the Agency to configure the order of information to be entered for a field initiated incident (E.g., determine command string order of entry to match officer order of spoken word for traffic stop)
14.7	Ability to add additional units to a field-initiated incident
14.8	Ability to augment a field initiated incident
14.9	Ability to automatically place a backup unit in an arrival status upon dispatch to a field initiated incident (configurable by Agency)
14.10	Ability to have the system automatically query the vehicle license plate entered upon initiation of the traffic stop based on the following criteria:
14.10.1	License plate number

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
14.10.2	State of registration
14.10.3	Vehicle type (E.g., passenger car, motorcyle, truck)
14.11	Ability for the dispatcher to record the following information when a unit is placed in a traffic stop status and the information is available:
14.11.1	Location of the stop
14.11.2	Number of occupants in the vehicle
14.11.3	Vehicle license plate
14.11.4	State of registration
14.11.5	Vehicle identifier (make, model, color)
14.11.6	Driver Information (Name, Race, Sex, DOB etc.)
14.11.7	Ability to set defaults for any of the above criteria (E.g., State for DL or Tag)
14.12	Ability for the system to create a field initiated incident within another Agency's jurisdiction that follows the incident number scheme and attributes for the unit's Agency of origin (E.g., officer initiates an incident outside of their jurisdiction, incident number should be created using the officer's Agency formatting, not the foreign Agency's format)
14.13	Ability to create a specific status for traffic stops
14.14	Ability to record all unit activity – including, but not limited to the following:
14.14.1	Assigned incidents
14.14.2	Location history
14.14.3	Status changes
14.14.4	Time on an incident
14.14.5	Time on a unit status
14.14.6	When a timer expired
14.14.7	When a timer was initiated
14.15	Ability for the CAD system to record multiple units arriving:
14.15.1	Simultaneously
14.15.2	Disparately
14.16	Ability for the dispatcher to manually reset a unit timer once it has timed out
14.17	Ability for the dispatcher to manually reset an incident timer once it has timed out
15.1	**CALL STACKING / INCIDENT PRE-ASSIGNMENT / INCIDENT PRE-EMPTING**
15.2	Ability to pre-assign an incident for a specific unit(s)
15.3	Ability to pre-assign an incident for a specific unit(s) based on incident type (configurable by Agency)
15.4	Ability to pre-empt a unit's current assigned incident and reassign that unit to another incident of a higher priority thus 'stacking' the currently assigned incident (configurable by Agency)
15.5	Ability to automatically dispatch the next incident in a unit's call stack queue when a unit with stacked incidents clears from the current assigned incident
15.6	Ability to hold an incident for any unit type (E.g., able to stack a call for fire, able to stack a call for law enforcement) configurable by Agency

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
15.7	Ability for the dispatcher to hold more than one incident to a given unit or resource (call stacking) configurable by Agency
15.8	Ability to stack calls based on priority and time
15.9	Ability to stack calls based on incident type
15.10	Ability to manually reorder a unit's stacked queue (E.g., allows the dispatcher to manually determine the next dispatched incident within the queue)
15.11	Ability for the Agency to determine the call stack limit (E.g., dispatch can only stack 5 incidents to any unit at a time)
15.12	Ability to allow the unit to override the call stack limit by one (1) field-initiated incident
15.13	Ability to return a stacked incident to the pending dispatch queue from a unit's stacked queue
15.14	Ability to assign an incident in a unit's call stack queue to another unit
15.15	Ability to pre-empt an incident from a unit and reassign the unit to a new incident without closing the incident
15.16	Ability to retain 'arrival' status on a pre-empted incident that is automatically re-dispatched once the unit clears, rather than showing a 'dispatched' status (E.g., unit working off duty at the mall is pre-empted with a shoplifter call. Unit clears and is assigned back to the off duty job that was stacked. Should show 'arrival', not 'dispatched' as status)
15.17	Ability to create separate status monitor for stacked/pre-empted units/incidents
15.18	Ability for an Administrator to turn call stacking on and off by Agency
16.1	**UNIT / INCIDENT STATUS MONITOR**
16.2	Ability to monitor all units assigned/available within the CAD system
16.3	Ability to display only locally relevant units:
16.3.1	PSAP/Agency units
16.3.2	Dispatcher sign-on group units
16.4	Ability to select a unit status from dropdown list (configurable by Agency)
16.5	Ability to display the "role" next to each unit (E.g., IC, RIT, EMS, etc.)
16.6	Ability for each role to be displayed in a unique color as defined by the Agency
16.7	Ability to visually differentiate, through color, text and/or symbol, units in varying status or conditions – configurable by Agency
16.8	Ability to "wrap" units within the display so that the dispatcher does not have to scroll (listing multiple units per line) Agency defined (FD wants multiple units per line, PD does not)
16.9	Ability to list units/incidents based on their status (E.g., stacked versus active)
16.10	Ability to list units/incidents based on assigned area/group
16.11	Ability to sort unit display alphanumerically
16.12	Ability to display all defined unit/incident statuses

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
16.13	Ability to display unit status next to each unit
16.14	Ability to define all field placement within a unit/incident status monitor
16.15	Ability to sort displayed data by any unit information (E.g., station, shift, incident, unit, location, status)
16.16	Ability to use symbols or characters in the unit status display in conjunction with unit status color
16.17	Ability to list the ETA (min:sec) of a dispatched unit next to each unit identifier (configurable by Agency)
16.18	Ability to dynamically update the above unit ETA (dynamic refresh is configurable, every 30, 60, 90 seconds etc.)
16.19	Ability to define unit statuses by:
16.19.1	Unit type
16.19.2	Agency
16.20	Ability to add any location to a unit status
16.21	Ability to associate a default availability with each status (E.g., unit available when in particular status)
16.22	Ability to display all unit statuses
16.23	Ability to restrict a unit from being assigned a role prior to being placed into a defined status (configurable by Agency)
16.24	Ability to display unit/incident information to include, but not limited to the following:
16.24.1	Incident type/signal
16.24.2	Current incident number
16.24.3	Flags
16.24.4	Address
16.24.5	Location
16.24.6	Unit status
16.24.7	Unit location
16.24.8	Unit role/task (E.g., incident command)
16.24.9	Elapsed time in status
16.24.10	Station/Beat
16.24.11	Unit ID/call sign
16.24.12	Case number
16.24.13	Area
16.24.14	Incident initiation time
16.24.15	Unit alias name/Identifier
16.24.16	Timers
16.24.17	All backup units assigned to an incident (E.g., field or drop down box)
16.25	Ability to dynamically update (real-time), refresh and display unit/incident statuses within the unit/incident status monitor

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
16.26	Ability to display real-time ETA, unit status, role in a "smart" field rather than separately on the screen (E.g., En route units show ETA, then ETA shifts to unit status to arrival, then to the assigned role) - **refer to Proposer Information question XXXXX**
16.27	Ability to sort displayed data by any incident information
16.28	Ability to view all active/closed/stacked/held incidents within the CAD system
16.29	Ability to dynamically display incident status data in a summary window (status monitor)
17.1	**INCIDENT UPDATE / AUDIT TRAIL / INCIDENT LOG**
17.2	Ability to update an incident via the form or command line
17.3	Ability to update any field within the form using the form or via a command line
17.4	Ability to update the incident using the unit number via the command line
17.5	Ability to update an incident using command string values that can be entered in any order prefaced by the command identifier on the command line
17.6	Ability to add information to a CAD incident based on permissions
17.7	Ability to display updated incident information within the audit trail/incident log immediately after new information is added to any CAD incident dynamically (configurable by Agency)
17.8	Ability to receive visual and audible alerts to indicate an incident has been updated
17.9	Ability to search the audit trail/incident log (active – during incident)
17.10	Ability to search the audit trail/incident log (closed incident)
17.11	Ability to search audit trail/incident log without needing to open additional dialog box
17.12	Ability to search from active window without needing to open additional dialog box
17.13	Ability to search with free text
17.14	Ability to highlight the searched word
17.15	Ability to distinguish new entries in comments audit trail/incident log:
17.15.1	Bold
17.15.2	Underline
17.15.3	Different color
17.16	Ability for the user to sort comments in ascending or descending order
17.17	Ability to "orphan" the audit trail/incident log as a separate window
17.18	Ability to record all unit activity within the audit trail/incident log, including, but not limited to the following:
17.18.1	Location history
17.18.2	Status changes
17.18.3	When a timer expired

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
17.18.4	When a timer was initiated
17.19	Ability to prioritize the comments base on predefined keywords that can be visually distinguished (E.g., keyword - highlight/bold/different color)
18.1	**PERIMETERS**
18.2	Ability to create perimeter locations by drawing a perimeter on the map
18.3	Ability to create a perimeter by identifying the location and requisite perimeter size (E.g., 300 yards around incident location) and have the perimeter automatically generated on the map
18.4	Ability to set up perimeter around a command post, landing zone, staging area, etc., and have that defined to XX feet/yards/meters around that point or manually assign points and to automatically place a label on the map once entered into CAD
18.5	Ability to display the drawn perimeter on the map and have it displayed for all responding units on their Mobile/Smart Devices
18.6	Ability to dispatch units to perimeter points
18.7	Ability for units to place themselves on designated perimeter points
18.8	Ability for map to dynamically update when a unit has been assigned to a perimeter point
18.9	Ability to temporarily place a pin on the map and create a notation to share
18.10	Ability for a user's annotated map to be shared with other users (E.g., dispatchers, mobiles)
18.11	Ability to push established perimeter to maps to both dispatchers and field units (permissions based by Agency)
18.12	Ability to forward an established perimeter to selected unit's map
19.1	**BOLOS**
19.2	Ability to enter a BOLO via a form or command line using a command string
19.3	Ability to perform the following actions regarding BOLOs:
19.3.1	Create
19.3.2	Modify
19.3.4	Delete
19.3.5	Display
19.3.6	Print
19.3.7	Save a copy of BOLO for electronic distribution
19.4	Ability for printed copy of BOLO to have a watermark (MDPD badge) in the background
19.5	Ability to date and time stamp BOLO initiation
19.6	Ability to restrict the action of deleting a BOLO based on permissions
19.7	Ability to tag data with a BOLO message that is visible to:
19.7.1	CAD
19.7.2	Mobile Computers
19.7.3	Smart Devices
19.8	Ability to auto search and notify a user of any active BOLO that matches a submitted state query

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
19.9	Ability to schedule recurrence of BOLOs (E.g., hourly, daily, each shift)
19.10	Ability to set an automatic purge date
19.11	Ability to change an automatic purge date manually
19.12	Ability to set an expiration date
19.13	Ability to change an expiration date manually
19.14	Ability to reactivate an expired BOLO
19.15	Ability to search BOLOs in any status (E.g., active, closed, scheduled, expired)
19.16	Ability to allow Agency to set limits on BOLO search history (E.g., no more than 60 days old)
19.17	Ability to send BOLOs to the following:
19.17.1	All signed-on users
19.17.2	Specific signed-on users
19.17.3	Area (specified by the dispatcher)
19.17.4	Agency
19.17.5	Dispatch group (grouping of agencies and areas)
19.17.6	A specific console
19.17.7	A group of consoles
19.17.8	Defined printers
19.18	Ability to set the priority level for a BOLO
19.19	Ability to set the priority level for a BOLO based on the incident type
19.20	Ability to allow for dispatcher to close out a BOLO once it is no longer valid with a reason (E.g., vehicle/person was located)
19.21	Ability to include the workstation and user ID in the BOLO message
19.22	Ability to display an active BOLO list
19.23	Ability to sort an active BOLO list based on the following:
19.23.1	Area
19.23.2	Agency
19.23.3	Dispatch Group
19.23.4	Incident Type
19.23.5	Priority
19.23.6	Date/time
19.24	Ability to view a BOLO from the list via the following methods:
19.24.1	Command line
19.24.2	Mouse
19.25	BOLO entries should contain the following fields:
19.25.1	Unit number / Authorizing party
19.25.2	Incident type/signal (nature of the BOLO)
19.25.3	Dispatcher number
19.25.4	Location
19.25.5	Vehicle description
19.25.6	Subject(s) description
19.25.7	Remarks (Narrative)
19.25.8	Case number

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
19.25.9	Area/District/Beat (configurable by Agency)
19.25.10	Address of Subject(s)
19.25.11	Priority
19.25.12	Name
19.26	Ability to schedule when a BOLO will be distributed to users not logged onto the CAD/Mobile/Smart Device
19.27	Ability to attach an image or file to a BOLO
19.28	Ability to set an automatic BOLO expiration based on incident type (E.g., incidents involving a robbery or violence against a PO are kept for 10 days)
19.29	Ability to update/add information to a BOLO
19.30	Ability to automatically redistribute the updated BOLO
19.31	Ability for the dispatcher to define the area/Agency/workstation etc. for BOLO distribution
19.32	Ability to record changes to BOLOs in an audit log that can be attached to the BOLO
20.1	**AUTOMATIC RESOURCE LOCATION / AUTOMATIC VEHICLE LOCATION (AVL)**
20.2	Ability to support the use of a continuous real-time AVL system
20.3	Ability to display resource positions on the CAD workstation map
20.4	Ability to configure AVL polling (in seconds, by Agency) based on the following:
20.4.1	Unit status
20.4.2	Speed
20.4.3	Incident type
20.4.4	Incident priority
20.4.5	Device priority (E.g., radio versus vehicle versus Smart Device)
20.5	Ability to generate an alert when a user's AVL has not polled based on a defined time period (E.g., AVL resource has not polled in 60 seconds, an alert is sent – configurable by Agency – to officer, supervisor, dispatcher, etc.)
20.6	Ability to notify via email when AVL resource has not polled within a defined time frame (configurable by Agency)
20.7	Ability for System Administrator to turn AVL on/off by:
20.7.1	Agency
20.7.2	Unit
20.8	Ability to use AVL for vehicle routing
20.9	Ability to use AVL for dispatch recommendations
20.10	Ability to revert to run card recommendation by unit, when AVL is unavailable (configurable by Agency)
20.11	Ability for dispatchers to "tag" a unit's AVL as not reporting correctly and move the unit on the map to a specific location (configurable by Agency)
20.12	Ability to display speed of vehicle between two points
20.13	Ability to export AVL data in the following formats:
20.13.1	kmz
20.13.2	kml

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
20.13.3	eta
20.13.4	ini
20.13.5	gpx
20.13.6	mps
20.13.7	jpg
20.13.8	png
20.13.9	jpeg
20.13.10	csv
20.13.11	xml
20.13.12	Excel
20.14	Ability to produce a geographical representation replay of a unit's AVL activity to be reviewed on: (AVL Reporting) (permissions based)
20.14.1	Window Media Player
20.14.2	VLC
20.15	Ability to define archive parameters (by Agency) for retention of AVL data
20.16	Ability to search (via permissions) AVL playback by the following:
20.16.1	Unit ID
20.16.2	Personnel Number
20.16.3	Vehicle number
20.16.4	Radio number (Logic ID)
20.16.5	Date/Time range
20.16.6	Latitude/Longitude Coordinates range
20.16.7	Device ID
20.16.8	Incident Number
20.16.9	Speed
20.17	Ability to derive reports from AVL reporting to include, but not limited to the following:
20.17.1	Route
20.17.2	Speed
20.17.3	Heading
20.17.4	Latitude/longitude coordinates
20.17.5	Address
20.17.6	Date/Time
20.17.7	Vehicle number
20.17.8	Unit ID
20.17.9	Unit Status
20.17.10	Incident number
20.17.11	Address
20.17.12	Using wildcards
20.17.13	Units with failed AVL polling
21.1	**CONTRACTOR & SUPPORT EQUIPMENT ROTATION**
21.2	Ability to provide a method for creating and maintaining a list used for rotating external services (E.g., Wreckers, Utilities)
21.3	Ability to create and maintain a list for external services that does not rotate

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
21.4	Ability to support various wrecker rotation functionality for over 40 municipalities/agencies
21.5	Ability to configure a separate rotation method by Agency
21.6	Ability to configure contract rotation based on the following:
21.6.1	Agency
21.6.2	Area
21.6.3	Beat
21.6.4	Type (flatbed, heavy-duty, etc.)
21.6.5	Date/Time parameters
21.7	Ability for system to recommend a contractor based on contractor type and order of rotation
21.8	Ability to allow the call taker to select the contact number of the contractor from the rotation list and call the contracted company via the CAD (Interface dependent)
21.9	Ability for the system to automatically place a contractor at the end of the rotation list after being selected (configurable by Agency)
21.10	Ability to view all the contractor assignments, but have the first-up in rotation display at the top of the list
21.11	Ability to record that a contractor was selected from the rotation list in the audit trail/incident log
21.12	Ability to override a contractor from the rotation list and record the override with the user ID, date/time in the audit trail/incident log
21.13	Ability for the system to automatically assign and record a unique contractor request number in the audit trail/incident log once support equipment has been ordered
21.14	Ability to search support equipment based on a unique contractor request number field
21.15	Ability to categorize support equipment (E.g., Wrecker contractors, Utilities, etc.)
21.16	Ability to display multiple contractors for the same Beat/Grid
21.17	Ability to define rotation periods as follows:
21.17.1	Hourly (E.g., 00:00-23:59)
21.17.2	Daily
21.17.3	Weekly
21.17.4	Monthly
21.18	Ability for the rotation list to sort "next up" by the following:
21.18.1	Time Range
21.18.2	Time of Day
21.18.3	Day of Week
21.18.4	Date Range
21.18.5	Combination of the above (state in remarks which combination)
21.19	Ability to record the following when a vehicle is being towed:
21.19.1	Date/Time
21.19.2	Wrecker Company
21.19.3	Location

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
21.19.4	Associated Incident Number
21.19.5	License plate number
21.19.6	License plate state
21.19.7	Year of vehicle
21.19.8	Make
21.19.9	Model
21.19.10	Color
21.19.11	Vehicle identification number (VIN)
21.19.12	Free text field linked to the vehicle towed
21.19.13	Lien holder
21.19.14	Repossession company and their state license number
21.19.15	User ID of employee requesting contractor
21.19.16	Name of requestor
21.20	Ability to suspend a wrecker company from the rotation (permissions based)
21.21	Ability to schedule a suspension for a specific period of time (E.g., company is suspending from towing for 3 days) (permissions based)
21.22	Ability to reinstate a wrecker company back into rotation (permissions based)
21.23	Ability to define types of tow requests (E.g., Police Request, Investigative, Owner's Request, County vehicle tow, etc.)
21.24	Ability to define contractors with specific types of equipment (E.g., flatbed, heavy-duty wrecker, etc.)
21.25	Ability to time stamp when a wrecker arrives on-scene
21.26	Ability to generate a report of Contractor service by any combination of the following:
21.26.1	Date/Time Range
21.26.2	Contracting Company
21.26.3	Vehicle Information
21.26.4	Location/Address
21.26.5	Unique Request Number
21.27	Ability to queue pending support equipment requests
21.28	Ability to select queued requests and display the request as an assigned task
22.1	**QUERIES**
22.2	Ability to support the following transactions to the Florida Department of Law Enforcement (FDLE), Department of Highway Safety and Motor Vehicles (DHSMV) and FCIC/NCIC data systems:
22.2.1	Vehicle registration
22.2.2	Driver's license
22.2.3	Persons Files (Missing, Wanted)
22.2.4	Articles
22.2.5	Boats
22.2.6	Speed up LoJack
22.2.7	Guns
22.2.8	Vehicle Identification Numbers (VINs)

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
22.3	System meets all applicable requirements as defined in the U.S. Department of Justice Federal Bureau of Investigation Criminal Justice Information Services (CJIS) Security Policy, Version 5.5 06/01/2016, CJISD-ITS-DOC-08140-5.5 and any published update subsequent to this RFP
22.4	Ability to perform a license plate, drivers license, persons, gun, etc. query via the following:
22.4.1	Command Line
22.4.2	Form
22.5	Ability to return the images from an FCIC/NCIC and DAVID query
22.6	Ability to support Single Sign On (SSO) authentication, which is capable of coordinating log-in attributes between CAD log-in and the following:
22.6.1	FCIC/NCIC/III
22.6.2	CJS (local system, county interface)
22.6.3	TIS (local system, county interface)
22.7	Ability to conduct federated queries, of the following systems, including but not limited to:
22.7.1	CAD
22.7.2	FCIC/NCIC
22.7.3	CJS (local system, county interface)
22.7.4	DAVID
22.7.5	LawQuery (local system, county interface)
22.8	Ability to conduct federated queries to customer defined databases (E.g., Crime Data Warehouse (CDW), Sexual Predator, etc.)
22.9	Ability to click on a hyperlink within the query results and retrieve associated data. (E.g., the hyperlink, once selected should display all available results associated to the query)
22.10	Ability to define queries available to users based on role/permissions (configurable by Agency)
22.11	Ability to create stock queries for other users (permissions based) to access
22.12	Ability for the system to segregate query responses in a separate mailbox rather than through a general messaging "inbox"
22.13	Ability to attach/insert queries into an incident
22.14	Ability to attach/insert responses into an incident
22.15	Ability for a query attached to an incident to display in the audit trail/incident log
22.16	Ability for query responses to be attached to the incident to display in the audit trail/incident log
22.17	Ability to print query returns to any defined printer
22.18	Ability to provide a visual alert if a response contains a positive hit (E.g., stolen vehicle, felony warrant)
22.19	Ability to provide an audible alert if a response contains a positive hit (E.g., stolen vehicle, felony warrant)
23.1	**DISPOSITIONS**

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
23.2	Ability to allow for disposition to be entered upon closure of incident
23.3	Ability to define incident disposition codes by:
23.3.1	Agency
23.3.2	Agency type
23.3.3	Incident type
23.4	Ability to support a minimum of 250 disposition codes per Agency (If there is a limit, indicate limit in comments field)
23.5	Ability for either dispatchers or field personnel to enter the disposition code upon incident closure (configurable by Agency)
23.6	Ability to support multiple disposition codes when closing a single incident
23.7	Ability to require a disposition code prior to incident closure based on the incident type/signal (configurable by Agency)
23.8	Ability to restrict the user from entering a disposition code based on the incident type/signal (configurable by Agency)
23.9	Ability to require a disposition code prior to incident closure (configurable by Agency)
23.10	Ability to add or change a disposition code after incident closure based on permissions/role
23.11	Ability to capture User ID, date/time of disposition codes in the audit trail/incident log of the incident
23.12	Ability to require a comment by the user when using certain defined disposition codes (configurable by Agency)
24.1	**INCIDENT CLOSURE / CLEARED UNITS**
24.2	Ability to clear multiple units without closing the incident
24.3	Ability to clear all units from an incident and close the incident
24.4	Ability to clear all units from an incident with the exception of those specified
24.5	Ability to close a pending incident with a disposition code
24.6	Ability, when creating a closed incident, to assign a disposition code
24.7	Ability to create, assign and close an incident with a disposition code and case number (E.g., Need to create an incident after the fact, assign a specific unit and assign a case number with a disposition)
24.8	After closing an incident, ability to update the following, but not limited to: (permissions based)
24.8.1	Incident type/signal
24.8.2	Disposition codes
24.8.3	Case number addition/removal
24.8.4	Address
24.8.5	Location
24.8.6	Apartment number
24.8.7	Building number
24.8.8	Comments
24.8.9	Primary Unit

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
24.8.10	Support Equipment
24.8.11	Modifying Circumstance(PD and FD)
24.8.12	Telephone number
24.9	Ability to retain original incident details and capture any modifications to the above
25.1	**INCIDENT RE-OPEN**
25.2	Ability to open a closed incident (role/permission based by Agency)
25.3	Ability for reopened incidents to return to the pending queue
25.4	Ability for reopened incidents to return to the user defined pending queue
25.5	Ability to document all changes to the incident in the audit trail/incident log
25.6	Ability to retain all time stamps associated with the incident both prior to and after the incident closure/reopen
25.7	Ability to assign units to reopened incidents
26.1	**UNIT HISTORY / INCIDENT RECALL**
26.2	Ability to review unit history to include but not limited to:
26.2.1	Statuses
26.2.2	Incidents number
26.2.3	Location(s)
26.2.4	Case number
26.2.5	Date and time
26.2.6	Unit ID
26.2.7	Unit status
26.2.8	Badge number
26.2.9	Personnel number
26.2.10	Assigned vehicle number
26.2.11	Assigned radio number
26.2.12	Address (incident's latest updated address)
26.3	Ability to query unit history by any combination of the following:
26.3.1	Date and time range (E.g., start and end date and time parameters)
26.3.2	Unit ID
26.3.3	Unit status
26.3.4	Location range
26.3.5	Badge number
26.3.6	Personnel number
26.3.7	Assigned vehicle number
26.3.8	Assigned radio number
26.3.9	Address (incident's latest updated address)
26.3.10	Location
26.3.11	Case number
26.3.12	Incident number
26.4	Ability to select an incident number displayed within a unit's history and have the incident display as an overlay for the dispatcher to view
26.5	Ability to recall historical incident history by using any combination of the following:
26.5.1	Date/time range

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
26.5.2	Time parameters for multiple days (E.g., between 2pm-4pm on Mon,Wed,Fri)
26.5.3	Incident type/signal
26.5.4	Incident number
26.5.5	Location
26.5.6	Partial Address (E.g., SR 826/SR 836 could be displayed in any order or part of)
26.5.7	Address
26.5.8	Proximity to address
26.5.9	Latitude/Longitude
26.5.10	User ID
26.5.11	Workstation
26.5.12	Caller telephone number
26.5.13	Caller's name
26.5.14	Incident telephone number
26.5.15	Case number
26.5.16	License plate number
26.5.17	Victim's name
26.5.18	Personnel number
26.5.19	Unit number
26.5.20	Agency
26.5.21	Area
26.5.22	City
26.5.23	Dispatch Group
26.5.24	District
26.5.25	Beat
26.5.26	Grid
26.5.27	Status of the incident (E.g., closed, open, active, pending, held, etc.)
26.5.28	Disposition
26.5.29	Source (E.g., class of service, officer-initiated, 911, 10-digit)
26.5.30	Primary unit
26.5.31	Support equipment
26.5.32	Attachments (whether or not incident includes attachments)
26.5.33	Modifying circumstance
26.5.34	Priority
26.6	Ability to simultaneously search multiple Agency's incident data by personnel number. Responses will include hyperlinks to view each incident for any activity generated by that personnel number
26.7	Ability to simultaneously search multiple agency's incident data, by workstation. Responses will include hyperlinks to view each incident for any activity generated from that workstation
26.8	Ability to select an incident number displayed within an incident recall (history) and have the incident display as an overlay for the dispatcher to view

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
26.9	Ability to sort columns within incident recall window by clicking on title heading
26.10	Ability to limit history searches to the last 60 days (configurable by Agency)
27.1	**MESSAGING**
27.2	Ability to support a messaging system that can transmit messages to and from Mobile, Smart Devices, desktop workstations and users
27.3	Ability to display the following identifiers within a message:
27.3.1	Sender
27.3.2	Date sent
27.3.3	Time sent
27.3.4	Recipient(s)
27.3.5	Date received
27.3.6	Time received
27.3.7	Subject
27.4	Ability to send messages to a user who is not logged in and cache that message for retrieval when the user logs in
27.5	Ability for message server to notify a sender when a message is undeliverable
27.6	Ability for message server to notify a sender when a message is undeliverable to any recipient within a group
27.7	Ability to assign a priority to a message (E.g., routine, urgent, emergency)
27.8	Ability to store messages for later viewing
27.9	Ability to have a read receipt for messages
27.10	Ability for messages to be sorted by most recent or first received
27.11	Ability to sort messages by priority
27.12	Ability to limit message query history by Agency (E.g., restricted to 60 days back)
27.13	Ability to send messages to a distribution list for users not on the CAD/Mobile/Smart Device client (E.g., in the "to" field, selecting a user that has an associated email as opposed to a Mobile terminal/ID)
27.14	Ability to create and save the following message group(s) (by role/permissions):
27.14.1	Area, Beat, District
27.14.2	Workstation/Terminal ID
27.14.3	Personnel number
27.14.4	Shift
27.14.5	Function
27.14.6	Mobile
27.14.7	Printers
27.14.8	Team
27.14.9	Unit
27.14.10	Dispatch Group
27.15	Ability to modify message group(s) (by role/permissions)

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
27.16	Ability to send messages to a predefined group(s) (E.g., Dispatchers, Call Takers, Supervisors, CAD support, workstations, mobile computers, Agency, hazmat group, Fire Chiefs, Shifts) as determined by Agency
27.17	Ability of users to select any number of recipients as part of a message group with no limitation on the number of people in a group
27.18	Ability to automatically populate the "To" field on the message when selecting recipients
27.19	Ability to spell check messages (toggle on/off)
27.20	Ability to send messages across agencies
27.21	Ability to select a recipient by a single command to create a message (E.g., double click on a logged on user and message form displays)
27.22	Ability to attach files to messages
27.23	Ability to attach photos in messages
27.24	Ability to set County-defined file size limit
27.25	Ability to alert sender when message exceeds a predefined size
27.26	Ability to send a message to all units handling a specific incident
27.27	Ability to reply to the sender of a displayed message without having to reenter the originator's address.
27.28	Ability to transmit a "reply all" message to multiple recipients that were part of the originator's message group
27.29	Ability to forward a message
27.30	Ability to create messages that are retained in the system and sent at pre-specified times (schedule messages)
27.31	Ability to create, store and insert "stock" (pre-canned) messages
27.32	Ability to attach a message to a CAD incident
27.33	Ability for message attached to incident to display in audit trail/incident log
27.34	Ability for the user to receive both an audible/visual alert incoming message (configurable by Agency)
27.35	Ability to prevent incoming messages from interfering with current work (E.g., no pop-up box)
27.36	Ability to display total number of unread messages
27.37	Ability for messages to be queued in an "inbox"
27.38	Ability to query message logs
27.39	Ability to note time opened/read by receiver
27.40	Ability to clear a message from the "inbox"
27.41	Ability to simultaneously clear all messages from the "inbox"
27.42	Ability to retain a message in the queue
27.43	Ability to view other users messages (permissions based)
27.44	Ability to search other users messages using a wildcard (permissions based)
27.45	Ability to search messages using a wildcard
27.46	Ability to archive messages
27.47	Ability to retrieve an archived message (permissions based)
27.48	Ability to generate reports of message transactions by:
27.48.1	User

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
27.48.2	Date and Time Range
27.48.3	Message keyword
27.49	Ability to include or redact text strings within a message (E.g., for a public records request, delete a driver's license number)
27.50	Ability to purge message logs for a pre-determined period of time
27.51	Ability to schedule message purging
27.52	Ability to send messages via a form
27.53	Ability to send message via the command line
27.54	Ability to send messages to a defined printer
27.55	Ability to display available message recipients (to include the Call takers, Dispatchers and Officers) in a 'recipients list'
28.1	**BROWSER BASED CAD**
28.2	Ability to support a browser-based environment (permissions based by Agency and user) to:
28.2.1	View pending incidents
28.2.2	View active incidents
28.2.3	Create an incident
28.2.4	Dispatch units
28.2.5	View Areas
28.2.6	View Dispatch Groups
28.2.7	View the current activity and status of all units
28.2.8	Obtain Unit History information
28.2.9	View incidents and units on an interactive map
28.2.10	Retrieve historical information about individual units and incidents
28.2.11	Schedule non-emergency incidents
28.2.12	Add comments to an incident
28.2.13	Add case numbers to an incident
28.2.14	Send messages to any user on the system, including Mobile units and Smart Devices
28.2.15	Close an incident (with disposition code)
28.2.16	Place a unit in or out of service
28.3	Ability to operate in browser-based environment via the following:
28.3.1	Firefox
28.3.2	Chrome
28.3.3	Safari
28.3.4	Microsoft Internet Explorer (IE)
28.3.5	Microsoft Edge
28.4	Ability for browser-based log-in attempts to be recorded via the following:
28.4.1	User ID
28.4.2	IP Address
28.4.3	Time and Date
28.4.4	Successful/unsuccessful
28.5	Ability to support multi-factor authentication (provide details)

Item #	COMPUTER AIDED DISPATCH (CAD) FUNCTIONAL MATRIX
28.6	Ability to create separate securities for the same attributes (as below) for a CAD workstation versus browser based functionality:
28.6.1	User
28.6.2	Role
28.6.3	Agency
28.7	Ability to provide a CAD Dashboard for Agency specific incidents to include the following, but not limited to:
28.7.1	Pending Calls
28.7.2	Closed Calls
28.7.3	Active Calls
28.7.4	Response Times
28.7.5	Call Processing Times
28.7.6	Ability to display the above variables via:
28.7.6.1	Bar Graphs
28.7.6.2	Mapping
28.7.6.3	Summary Totals
29.1	**OFF-LINE MODE**
29.2	Ability to create incidents in off-line CAD mode
29.3	Ability to view incidents in off-line CAD mode
29.4	Ability to modify incidents in off-line CAD mode
29.5	Ability to retrieve/search for off-line CAD incidents on each workstation
29.6	Ability to notify users that system has lost connectivity
29.7	Ability to provide an off-line prompt for the users to acknowledge whether to work in an off-line mode
29.8	Ability to store off-line work on the individual workstation
29.9	Ability to upload incidents created in off-line mode once connectivity has been restored to the CAD server
29.10	Ability to print incidents while in off-line mode to a defined printer
29.11	Ability to utilize the CAD map in an off-line mode

Mobile System Functional Matrix

Item #	Mobile Computer Unit Functional Matrix
1.1	**GENERAL MOBILE FEATURES**
1.2	Ability to receive dispatches on MCU
1.3	Ability to support multiple Agencies
1.4	Ability to select from multiple districts within an Agency
1.5	Ability to receive new information without manually refreshing the screen
1.6	Ability for Multi-Unit Display on map (by permissions/role/user):
1.6.1	Patrol area
1.6.2	District
1.6.3	Multiple districts
1.6.4	County wide
1.7	Ability to display selected AVL equipped unit(s) (based on permissions) until unselected
1.8	Ability for units to see other responding units on the map: (configurable by Agency)
1.8.1	Priority/Emergency
1.8.2	Pre-defined geographic area
1.8.3	All units assigned to same incident
1.9	Ability to comply with the following IT security requirements:
1.9.1	NIST
1.9.2	CJIS/FBI (including data encryption requirements per FIPS 140-2)
1.9.3	FDLE
1.10	Ability to attach the following to an incident using an MCU:

Item #	Mobile Computer Unit Functional Matrix
1.10.1	Video
1.10.2	Images
1.10.3	Links
1.10.4	Attachments
1.11	Ability to attach the following to a message using an MCU:
1.11.1	Video
1.11.2	Images
1.11.3	Links
1.11.4	Attachments
1.12	Ability to receive the following via a MCU:
1.12.1	Video
1.12.2	Images
1.12.3	Links
1.12.4	Attachments
1.13	Ability to send the following from a MCU:
1.13.1	Video
1.13.2	Images
1.13.3	Links
1.13.4	Attachments
1.14	Ability to change unit status - configurable permissions by Agency and role
1.15	Ability to utilize and present predictive unit status choices (E.g., arrival would be the next displayed option for a unit in enroute status)
1.16	Ability to keep the initial incident dialog box on top until the unit
1.17	Ability to have incident updates (new information) highlighted until the update screen/tab/section is viewed
1.18	Ability to manually refresh information
1.19	Ability to alert MCU users any time new information is added to an incident via:
1.19.1	Audible alert
1.19.2	Visual alert
1.20	Ability to receive from CAD, on the MCU screen, only information that has changed, without requiring an entire incident refresh
1.21	Ability to display a list based upon distance and capabilities that are definable by Agency for the following on the MCU:
1.21.1	Hospitals
1.21.2	Points of Interest (E.g., landing zone)
1.22	Ability to log all MCU activities (E.g., chats, queries, uploads/downloads of field reports) with the following information:
1.22.1	Agency
1.22.2	Date and time of transmission
1.22.3	IP address
1.22.4	MAC address
1.22.5	User ID
1.22.6	Vehicle ID

Item #	Mobile Computer Unit Functional Matrix
1.23	Ability to provide a visual alert if mobile has lost conectivity from CAD (E.g., icon with red circle and line through it)
1.24	Ability to provide a visual alert if mobile has lost connectivity from GPS (E.g., icon with red circle and line through it)
1.25	Ability to notify the dispatcher when a message or incident sent to a mobile is not received by the device
1.26	Ability for the mobile application to automatically reconnect to CAD once connectivity has been reestablished
1.27	Ability to push updates to the mobile computer
1.28	Ability to push updates to the mobile computer when the unit is in a predefined status (E.g., not on an incident)
1.29	Ability to push updates to the mobile computer based upon the time of day (E.g., 3AM)
1.30	Ability to push updates to the mobile computer based upon connectivity type (E.g., WIFI vs LTE)
1.31	Ability to alert mobile units that a traffic stop has been initiated within a given proximity (AVL) to their present location (configurable by Agency)
1.32	Ability to operate all mobile applications without requiring local administrative rights on the hardware
1.33	Ability to intergrate with VPN software to utilize a static IP address
1.34	Ability to intergrate with NetMotion to utilize a static IP address
1.35	Ability to print from the MCU to any defined network printer configurable by:
1.35.1	Agency
1.35.2	Area
1.35.3	Group
1.35.4	District
1.36	Ability to log all print jobs
1.37	Ability to print the print log
2.1	**MOBILE CONFIGURATON**
2.2	Ability to create a unique mobile configuration based on the following:
2.2.1	Agency type (E.g., Law vs Fire)
2.2.2	Agency
2.2.3	Specific User
2.2.4	Role (HazMat, Engine, Chief, Rescue, etc.)
2.3	Ability to configure custom fields for sign-in to be determined by Agency, to include but not limited to the following:
2.3.1	Equipment
2.3.2	User ID
2.3.3	Password
2.3.4	Radio ID(s)
2.3.5	Unit ID
2.3.6	Vehicle number
2.3.7	Area

Item #	Mobile Computer Unit Functional Matrix
2.3.8	Additional Rider Information
2.3.9	Mileage
2.3.10	Special skills
2.4	Ability to recognize if a personnel number being assigned is one that is already on duty and should prompt the user with an error message
2.5	Ability to temporarily modify unit's available equipment (E.g., jaws of life are inoperable) - configurable by Agency
2.6	Ability to set a time out value for any temporary equipment modifications received via any MCU user - configurable by Agency
2.7	Ability to save data entered into user sign-on fields, that remain the same from session to session (E.g., all information other than password is saved on the sign-on screen)
2.8	Ability to configure mobile screens "in-house" using a standard language
2.9	Ability for each Agency to determine which fields from CAD are displayed
2.10	Ability to create/configure "shortcut" buttons on the Mobile display by:
2.10.1	Agency
2.10.2	Agency type (E.g., Law vs Fire)
2.11	Ability for above "shortcut" buttons to point to:
2.11.1	Internal URL
2.11.2	External URL
2.12	Ability to have a minimum of 10 configuarble "shortcut" buttons (non-status changing). Provide limit in comments
2.13	Ability for Agency to modify mobile display layout without vendor intervention
2.14	Ability to display a split screen with map and incident information concurrently
2.15	Ability to toggle between only a map display or incident information display
2.16	Ability to display all assigned incidents since a specific time
2.17	Ability to require both user identification and password to sign-on
2.18	Ability to allow for multi-factor authentication to sign-on
2.19	Ability to set the time a mobile can remain inactive before automatically signing-out the user
2.20	Ability to support generic sign-ins (E.g., for fire apparatus)
2.21	Ability to have unit status code table specific to:
2.21.1	Agency type (E.g., Law vs Fire)
2.21.2	Agency
2.22	Ability for each unit status to be displayed in a unique color with the incident window
2.23	Ability for incident information to be read to the user (text to speech) configurable by Agency
2.24	Ability for message information to be read to the user (text to speech) configurable by Agency

Item #	Mobile Computer Unit Functional Matrix
3.1	**CAD / MOBILE INTEGRATION**
3.2	Ability to support a real-time data transmission between the CAD system and MCU
3.3	Ability to define the default unit status upon sign-on (configurable by Agency)
3.4	Ability to view incident information available in CAD on the MCU by:
3.4.1	Agency
3.4.2	District
3.4.3	Battalion
3.4.4	Area
3.4.5	Status (pending, assigned)
3.5	Ability to restrict the view of incident information by Agency
3.6	Ability to restrict the view of incident information by role
3.7	Ability to display incident timers generated from CAD
3.8	Ability to display unit status timers generated from CAD
3.9	Ability for flags/alerts created in CAD to be displayed on the MCU
3.10	Ability to access multiple applications (E.g., field reporting) with dispatch operations having precedence
3.11	Ability to query CAD information from the MCU
3.12	Ability for MCU's to have shared code tables with CAD, permissions based, to include but not limited to the following:
3.12.1	Unit Status
3.12.2	Hospitals
3.12.3	Disposition
4.1	**MOBILE APPLICATION USER INTERFACE**
4.2	Ability for user to toggle among applications on the MCU
4.3	Ability to support touch-screen functionality
4.4	Ability to accept input from but not limited to:
4.4.1	Barcode reader
4.4.2	Card Swipe device
4.4.3	Function keys (one touch keys)
4.4.4	Mouse
4.4.5	Shortcut buttons (E.g., click to show en route, arrival and to display queries form for tags/DLs)
4.5.6	RFID reader
4.6	Ability for users to modify their own mobile displays (profile specific, not workstation specific), including but not limited to the following features: (configurable by Agency)
4.6.1	Font color
4.6.2	Font size
4.6.3	Day/Night mode
4.6.4	Audible alerts
4.6.5	Ability to turn audible alerts on/off
4.7	Ability to store/retain a user's display profile preferences upon application sign-on (roaming profile)

Item #	Mobile Computer Unit Functional Matrix
4.8	Ability to store/retain a user's display profile preferences upon application sign-on (maintaining settings on local device)
5.1	**UNIT STATUS AND INCIDENT INFORMATION**
5.2	Ability to display the following information on the screen:
5.2.1	Current unit
5.2.2	Current unit status
5.2.3	Case number
5.2.4	CAD Date and Time
5.2.5	Full Incident number
5.2.6	Incident status
5.2.7	Message information
5.2.8	Unit ID
5.2.9	Wireless connectivity availability
5.2.10	GPS connectivity
5.2.11	Grid number (should display when viewing the incident)
5.2.12	Pending Calls
5.2.13	Active Calls
5.2.14	District
5.2.15	Area
5.2.16	Comments/Remarks
5.3	Ability to display all units assigned to an incident by sort order by status (E.g., unit arrivals display first then all units en route)
5.4	Ability to display all units assigned to an incident by sort order by ETA
5.5	Ability to view incidents (active, pending, closed) to display dispatch data, units and audit trail/incident log
5.6	Ability to view multiple incidents simultaneously
5.7	Ability to add comments to a specific incident while multiple incidents are displayed
5.8	Ability for MCU users to update open or closed incidents with the following: (Configurable by Agency based on permissions)
5.8.1	Incident Type/Signal
5.8.2	Disposition
5.8.3	Comments
5.9	Ability for a user (permissions based) to self-assign to an incident (E.g., select an incident from the pending calls list)
5.10	Ability for each Agency to restrict an individual from assigning themselves to an incident
5.11	Ability to display incident status based on incident priority
5.12	Ability to identify other units assigned to the same incident
5.13	Ability for supervisors to see units on their squad (based on sign-on area/district)
5.14	Ability for supervisors to add timers (E.g., units, incidents, etc.)
6.1	**MOBILE MAPPING AND NAVIGATION**

Item #	Mobile Computer Unit Functional Matrix
6.2	Ability to provide users with the following map navigation functionality:
6.2.1	Pan from given area to adjacent area
6.2.2	Return back to previous view
6.2.3	Zoom in on area for enhanced detail
6.2.4	Zoom out of an area
6.2.5	Move up and down
6.2.6	Move left and right
6.2.7	Current location
6.3	Ability for user to update/modify map displays (based on permissions). (E.g., preset default zoom levels and views)
6.4	Ability to support Internet mapping services from within the application (E.g., Google Maps)
6.5	Ability to provide an overlay of Internet mapping services
6.6	Ability to utilize color, text, and/or symbols to distinguish status of unit
6.7	Ability to center map display on:
6.7.1	CAD Incident location
6.7.2	Specified geographic area
6.7.3	Specified vehicle/unit
6.7.4	MCU activating emergency button
6.7.5	Smart Device activating emergency button
6.7.6	Radio activating emergency button
6.8	Ability to zoom to relevant map location by searching on available predefined list (E.g., Hospitals, landing zones, etc.)
6.9	Ability for map to automatically zoom into area as vehicle approaches destination
6.10	Ability to view units only assigned to the same incident via the map
6.11	Ability to cache map layers to minimize the amount of data transmitted wirelessly
6.12	Ability for map to function while disconnected from CAD
6.13	Ability for user to select map layers for display
6.14	Ability for a user to manually select a point (drop a pin) on the map that propogates to other MCUs (E.g., staging areas, points of interest identified by the dispatcher)
6.15	Ability to select from the map, a location, to display information associated with that location (E.g., pre-plan, grid)
6.16	Ability to select an incident from the incident queue and have it displayed on the map
6.17	Ability to select a unit and have it displayed on the map
6.18	Ability to throttle bandwidth for mobile map updates
6.19	Ability to restrict mobile map updates to Wi-fi connectivity
6.20	Ability to search for previous incidents via the map

Item #	Mobile Computer Unit Functional Matrix
6.21	Ability to support context awareness (E.g., as the patrol car moves through an assigned area, interactive mapping displays incidents that occurred within the last 24 hours, registered sex predators or offenders, subjects on parole/probation, or areas of directed patrol)
6.22	Ability to access available cameras via the map with the capability of viewing live streaming video
6.23	Ability to control video cameras, from viewing window with pan, tilt, zoom controls
6.24	Ability to stream multiple live videos simultaneously in separate windows
6.25	Ability to view oblique imagery (E.g., Pictometry)
7.1	**AUTOMATIC VEHICLE LOCATION (AVL) INTEGRATION**
7.2	Ability to support AVL/GPS functionality
7.3	Ability for other users, based on permissions, to display vehicle location on a map and view progress toward incident
7.4	Ability to assign an "Arrival" status based on AVL/GPS devices with predetermined criteria such as unit movement and proximity to the incident
7.5	Ability to assign an "In-Quarters" status based on AVL/GPS devices with predetermined criteria such as unit movement and proximity to the fire station
7.6	Ability to prevent individual units from turning off AVL
8.1	**MCU ROUTING**
8.2	Ability to automatically display turn-by-turn directions from user's current location to dispatched location
8.3	Ability to provide graphics based turn-by-turn directions (E.g., left/right turn arrows)
8.4	Ability for user to use voice to enter an address for routing
8.5	Ability to provide audible turn-by-turn directions
8.6	Ability to provide routing directions when requested:
8.6.1	Two selected points on the map
8.6.2	Common Place
8.6.3	Address
8.6.4	Streets
8.6.5	Unassigned incident
8.7	Ability to toggle on or off routing/turn-by-turn directions
8.8	Ability to support quickest-time routing for all dispatches
8.9	Ability to display updated directions to incident/specified location on the fly
8.10	Ability to provide audible routing information
8.11	Ability to toggle on/off audible routing information
8.12	Ability to provide text-based routing information
8.13	Ability to provide closest cross streets to incident
8.14	Ability to highlight on the map the recommended route from current location to a dispatched incident
8.15	Ability to provide estimated travel time

Item #	Mobile Computer Unit Functional Matrix
8.16	Ability to automatically orient map so vehicle is always moving with the direction of travel
8.17	Ability to have the map fixed North
8.18	Ability to toggle between map views (E.g., street view versus Air photo/satellite view)
8.19	Ability to display routing information without covering the map
9.1	**MCU EMERGENCY KEY FUNCTIONALITY**
9.2	Ability to initiate an emergency message transmission from a touch screen button or "hot key"
9.3	Ability to automatically transmit the following information in an emergency situation:
9.3.1	Last known location (via AVL)
9.3.2	Last known location based on latest incident assignment
9.3.3	Unit ID
9.3.4	User Name
9.4	Ability for the following to be notified upon emergency key activation: (configurable by Agency)
9.4.1	Units within pre-defined proximity
9.4.2	Agency associated units
9.4.3	All units
9.4.4	Units within a specific dispatch group or area
9.4.5	Dispatch/Communications
9.5	Ability for dispatcher to reset/clear the emergency
10.1	**MCU DISPATCH RECEIPT**
10.2	Ability for incidents to open automatically upon dispatch on MCU
10.3	Ability to alert MCU users that a new incident has been assigned to that unit:
10.3.1	Audible alert
10.3.2	Visual alert
10.4	Ability for units, on the same incident, to receive notifcation when other units (assigned to the same incident), update their status or location
10.5	Ability to disable notifications for all units dispatched to an incident as units assigned to the incident update their status or location
10.6	Ability to access and read all associated incident comments
10.7	Ability to display the following information in separate fields upon receipt of dispatch: (configurable by Agency)
10.7.1	Assigned unit(s)
10.7.2	Comments/narrative
10.7.3	Date and time incident created
10.7.4	Incident location
10.7.5	Incident number
10.7.6	Incident priority
10.7.7	Incident type/signal
10.7.8	Case number
10.7.9	Caution Notes/Hazard Information

Item #	Mobile Computer Unit Functional Matrix
10.7.10	Pre-plan information
10.7.11	Reporting party information
10.7.12	Subject information
10.7.13	Premise information
10.7.14	Grid
10.7.15	District
10.7.16	Area
10.8	Ability to directly access previous incident information related to the address of the incident (E.g., via hyperlink)
11.1	**INCIDENT UPDATES**
11.2	Ability to display most current incident data and comments at the top of the screen
11.3	Ability to receive additional incident information (E.g., location, subject, pictures, vehicle information) without interrupting or overlaying current screen
11.4	Ability to receive notification when additional incident information is received:
11.4.1	Audible
11.4.2	Visual
11.5	Ability for additional information to be visually distinct from information previously received on MCU (E.g., separate font color, bold, highlighted)
12.1	**PREMISE / HAZARD INFORMATION**
12.2	Ability to alert user of availability of information associated with a location (E.g., gate codes, hazards, premise history, pre-plans)
12.3	Ability to indicate type of information that is attached to a incident (E.g., gate code, hazard)
12.4	Ability for MCU users to have the option of displaying premise/hazard information
12.5	Ability to select a hyperlink in premise history to view information regarding incidents, persons, vehicles, etc.
12.6	Ability to include simple address and premise search functionality that does not require exact address matching (allowing the use of wildcards is preferable)
12.7	Ability to configure a "shortcut" button specifically for LEO Alerts that include BOLO information and image files for LEO Alert subjects as well as links to an internal webpage
12.8	Ability to include previous incident search (history search) capability based on the following:
12.8.1	Incident number
12.8.2	Address
12.8.3	Case number
12.8.4	Traffic stop
12.8.5	Subject stop
12.8.6	Administrative activity (E.g. training, field inspections)
12.8.7	Other Agency defined call types

Item #	Mobile Computer Unit Functional Matrix
12.8.8	Ability to allow premise/hazard sort order that determines how premise information is displayed
12.9	Ability to support an audible/visual notification for priority premise/hazard alerts
12.10	Ability to time stamp the audit trail/incident log when premise information is viewed
13.1	**PERIMETERS AND STAGING AREAS**
13.2	Ability to receive suggested perimeter positions from dispatch
13.3	Ability for suggested perimeter positions to appear on MCU map upon receipt
13.4	Ability for user to drop pins/graphics on the map
13.5	Ability for field generated perimeters/staging areas to be pushed to:
13.5.1	Other users in the area (pre-defined radius)
13.5.2	Dispatcher(s)
13.5.3	Users assigned to the same incident
13.6	Ability to annotate the map
13.7	Ability for an MCU user's annotated map to be shared with:
13.7.1	Other users in the area (pre-defined radius)
13.7.2	Dispatcher(s)
13.7.3	Specific User
13.8	Ability to push established perimeters/staging areas to maps of both dispatchers and field units (permissions based by Agency)
13.9	Ability for an MCU user's annotations to be cleared from the map:
13.9.1	Upon closure of the incident
13.9.2	Manually by the unit/dispatcher
14.1	**DISPOSITION CODES**
14.2	Ability to clear incidents from the MCU (configurable by Agency)
14.3	Ability to require a disposition prior to clearing an incident from the MCU
14.4	Ability to provide a drop down menu for disposition codes
14.5	Ability to only display disposition codes relevant to the Agency within the drop down menu
14.6	Ability to only display disposition codes relevant to the incident type/signal within the drop down menu (configurable by Agency)
14.7	Ability to change the original incident type/signal from the MCU (configurable by Agency)
14.8	Ability to maintain the history of original incident type/signal for all incidents where the incident type/signal was changed
15.1	**BE-ON-THE-LOOKOUT (BOLO)**
15.2	Ability to view BOLOs on the MCU
15.3	Ability for MCU users to generate BOLOs
15.4	Ability for the system to check outstanding BOLOs when a name or plate is queried
16.1	**MESSAGING**

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16.2	Ability to support a messaging system that can transmit messages to and from MCU and desktop workstations
16.3	Ability to display the following identifiers within a message:
16.3.1	Sender
16.3.2	Date sent
16.3.3	Time sent
16.3.4	Recipient(s)
16.3.5	Date received
16.3.6	Time received
16.3.7	Subject
16.4	Ability to send messages to a user who is not signed-in and cache that message for retrieval when the user signs-on
16.5	Ability to notify a sender when a message is undeliverable
16.6	Ability for user to retrieve cached messages upon sign-on
16.7	Ability to assign a priority to a message (E.g., routine, urgent, emergency)
16.8	Ability to retain messages for later viewing
16.9	Ability for messages to be sorted by most recent or first received
17.1	**SENDING MESSAGES**
17.2	Ability to create and save message groups
17.3	Ability to select any number of recipients as part of a message group (if there is a limitation on the number of recipients, indicate the maximum in the comments)
17.4	Ability to enter narrative with wrap-around text (if characters are limited, indicate the maximum character count in the comments)
17.5	Ability to select a recipient by a single action to create a message (E.g., double click on a signed-on user and a message form displays)
17.6	Ability to display available message recipients (to include the dispatcher(s)) in a "recipients list"
17.7	Ability to restrict users, by role, from sending messages
17.8	Ability to restrict users, by role, from receiving messages
17.9	Ability to allow users to send/receive external emails
17.10	Ability to restrict users, by role, from sending/receiving external emails
17.11	Ability to restrict users, by role, from sending emails
17.12	Ability to restrict users, by role, from receiving emails
17.13	Ability for the MCU to send messages to a console/workstation
17.14	Ability to send a message to units assigned to a specific incident
17.15	Ability to transmit a reply message to the originator of a currently displayed message without having to reenter the originator's address
17.16	Ability to transmit a "reply all" message to multiple recipients that were part of the originator's message group
17.17	Ability to forward a message

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17.18	Ability to create messages that are retained in the system and sent at pre-specified times
17.19	Ability to provide a notification for delivery of messages to the device
17.20	Ability to notify a user sending a message to a console/workstation if the console/workstation is logged-out
18.1	**RECEIVING MESSAGES**
18.2	Ability to notify receiver via an audible and /or visual flag that a new message has arrived in mailbox
18.3	Ability to prevent incoming messages from blocking the current view
18.4	Ability to notify receiver of total number of unread messages
18.5	Ability for messages to be queued in an "inbox" for later viewing
18.6	Ability to query message logs by Agency-defined criteria (E.g., date/time range, sender, recipient, device)
18.7	Ability to note time opened/read by receiver
18.8	Ability to clear a message from the queue
18.9	Ability to retain a message in the queue
18.10	Ability to restrict an individual from reviewing/monitoring messages by Agency (E.g., MDPD can only see MDPD associated messages)
18.11	Ability to archive messages
18.12	Ability to auto-archive messages after pre-determined period of time
19.1	**QUERIES**
19.2	Ability to set search parameters for queries that limit the impact on performance (E.g., queries are limited to 60 days)
19.3	Ability to query incident and unit history data by the following:
19.3.1	Date and time range
19.3.2	Unit number
19.3.3	Incident number
19.4	Ability to conduct federated queries, of the following systems, including but not limited to:
19.4.1	CAD
19.4.2	FCIC/NCIC
19.4.3	CJS (local system, county interface)
19.4.4	DAVID
19.4.5	LawQuery (local system, county interface)
19.5	Ability to conduct federated queries to customer defined databases (E.g., Crime Data Warehouse (CDW), Sexual Predator, etc.)
19.6	Ability to select a hyperlink within the query results and retrieve associated data. (E.g., the hyperlink, once selected should display all available results associated to the query)
19.7	Ability for the system to segregate query responses in a separate mailbox rather than through a general messaging "inbox"
19.8	Ability to attach/insert query responses into an incident

Item #	Mobile Computer Unit Functional Matrix
19.9	Ability to provide an alert if a response contains a positive hit: (E.g., stolen vehicle, felony warrant)
19.9.1	Visual
19.9.2	Audible
19.10	Ability to provide an audible alert if a response contains a positive hit (E.g., stolen vehicle, felony warrant)
19.11	Ability to query and retrieve premise information for an address not associated with an incident
19.12	Ability to query a location to access pre-plans:
19.12.1	From a query field
19.12.2	From the map
19.13	Ability to use predefined data entry forms/screens (masks) to minimize data transmitted during queries
19.14	Ability for the County to create standard query screen formats
19.15	Ability to use a wildcard in a query
19.16	Ability to query based upon a Soundex (based on functionality provided by the source)
19.17	Ability to display historical queried info by another user within specific time parameters to include a hyperlink to the information (E.g., another officer has queried the same subject, user would be notified)
19.18	Ability for authorized users to enter vehicle stops and simultaneously run the license plate against local and state databases
19.19	Ability to restrict users in the field to enter vehicle stops
19.20	Ability for authorized users to conduct multiple license plate searches simultaneously
19.21	Ability to save previous license plate searches until user clears data within an Agency definable time parameter
19.22	Ability to save query returns until user clears data within an Agency definable time parameter
19.23	Ability to save stored query returns after sign-off (E.g., returns are still there the next time user logs onto the system)
19.24	Ability to sort query results on selectable return fields
19.25	Ability to provide a form from which officers can run common queries
19.26	Ability to notify user of a failed query (E.g., access to a database is unavailable)
19.27	Ability for the MCU user to query an incident by the case number
19.28	Ability for MCU user to query unit statuses by the following:
19.28.1	Battalion
19.28.2	District
19.28.3	Area
19.28.4	Beat

Item #	Mobile Computer Unit Functional Matrix
20.1	**FIELD INITIATED INCIDENTS**
20.2	Ability to initiate an incident from an MCU (Configurable by Agency)
20.3	Ability to generate a case number for field initiated incidents
20.4	Ability to capture via AVL/GPS incident location when initiating an incident from an MCU
20.5	Ability to modify the captured AVL/GPS incident location when initiating an incident from an MCU
20.6	Ability to restrict users from creating a field initiated incident based on permissions
20.7	Ability for MCU users to geo-validate field initiated incident location

Mobile System Functional Matrix

Item #	Mobile Computer Unit Functional Matrix
1.1	**GENERAL SMART DEVICE FEATURES**
1.2	Ability to receive dispatches on Smart Device using purpose built application:
1.2.1	Smart phones (iOS **and** Android) - Smart Device
1.2.2	Tablets (iOS **and** Android) - Smart Device
1.3	Ability to support multiple Agencies
1.4	Ability to select from multiple districts within an Agency
1.5	Ability to receive new information without manually refreshing the screen
1.6	Ability for Multi-Unit Display on map (by permissions/role/user):
1.6.1	Patrol area
1.6.2	District
1.6.3	Multiple districts
1.6.4	County wide
1.7	Ability to display selected AVL equipped unit(s) (based on permissions) until unselected
1.8	Ability for units to see other responding units on the map:(configurable by Agency)
1.8.1	Priority/Emergency
1.8.2	Pre-defined geographic area
1.8.3	All units assigned to same incident

Item #	Mobile Computer Unit Functional Matrix
1.9	Ability to comply with the following IT security requirements:
1.9.1	NIST
1.9.2	CJIS/FBI
1.9.3	FDLE
1.10	Ability to attach the following to an incident using a Smart Device:
1.10.1	Video
1.10.2	Images
1.10.3	Links
1.10.4	Attachments
1.11	Ability to attach the following to a message using a Smart Device:
1.11.1	Video
1.11.2	Images
1.11.3	Links
1.11.4	Attachments
1.12	Ability to receive the following via a Smart Device:
1.12.1	Video
1.12.2	Images
1.12.3	Links
1.12.4	Attachments
1.13	Ability to send the following from a Smart Device:
1.13.1	Video
1.13.2	Images
1.13.3	Links
1.13.4	Attachments
1.14	Ability to change unit status - configurable permissions by Agency and role
1.15	Ability to utilize and present predictive unit status choices (E.g., arrival would be the next displayed option for a unit in enroute status)
1.16	Ability to keep the initial incident dialog box on top until the unit acknowledges (If only supported on Tablet or phone, explain in comments)
1.17	Ability to have incident updates (new information) highlighted until the update screen/tab/section is viewed
1.18	Ability to force manual refresh of information
1.19	Ability to alert Smart Device users any time new information is added to a call via:
1.19.1	Audible alert
1.19.2	Visual alert
1.19.3	Vibration alert
1.20	Ability to receive from CAD on the Smart Device only information that has changed, without requiring an entire incident refresh
1.21	Ability to display a list based upon distance and capabilities that are definable by Agency for the following on the Smart Device:
1.21.1	Hospitals
1.21.2	Points of Interest (E.g., landing zone)

Item #	Mobile Computer Unit Functional Matrix
1.22	Ability to log all Smart Device activities (E.g., chats, queries, uploads/downloads of field reports) with the following information:
1.22.1	Agency
1.22.2	Date and time of transmission
1.22.3	IP address
1.22.4	MAC address
1.22.5	User ID
1.22.6	Vehicle ID
1.23	Ability to provide a visual alert if Smart Device has lost conectivity from CAD (E.g., icon with red circle and line through it)
1.24	Ability to provide a visual alert if Smart Device has lost connectivity from GPS (E.g., icon with red circle and line through it)
1.25	Ability to notify the dispatcher when a message or incident sent to a Smart Device is not received by the device
1.26	Ability for the Smart Device application to automatically reconnect to CAD once connectivity has been reestablished
1.27	Ability to push application updates to the Smart Device
1.28	Ability to prevent auto updating of application to the Smart Device
1.29	Ability for the Smart Device application to work with AirWatch (VMware)
1.30	Ability to alert Smart Device units that a traffic stop has been initiated within a given proximity (AVL) to their present location (configurable by Agency)
1.31	Ability to intergrate with VPN software (such as NetMotion) to obtain a static IP address
1.32	Ability to intergrate with NetMotion to obtain a static IP address
1.33	Ability to print from a Smart Device to any defined network printer configurable by:
1.33.1	Agency
1.33.2	Area
1.33.3	Group
1.33.4	District
1.34	Ability to log all print jobs and print the print log
2.1	**SMART DEVICE USER INTERFACE**
2.2	Ability for the Android app to load as a service
2.3	Ability for Smart Device users with a dedicated App to:
2.3.1	Display logged-in unit on the map
2.3.2	Display assigned incident on the map
2.3.3	Maintain the unit centered on the map (as the unit moves)
2.3.4	To move the map so the user is able to view the area around the unit
2.3.5	To pinch and zoom the map
2.3.6	Provides the radio channel assigned to the incident
2.3.7	Display incidents by proximity on the map (permission based)
2.3.8	Display units by proximity on the map (permission based)
2.3.9	Display units on map by:
2.3.9.1	Agency

Item #	Mobile Computer Unit Functional Matrix
2.3.9.2	Area
2.3.9.3	Group
2.3.9.4	District
2.3.10	Filter events on map by incident status
2.3.11	Filter events on map by unit status
2.3.12	Ability for split screen so map can always be displayed
2.3.13	Update status to enroute
2.3.14	Update status to arrival
2.3.15	Update status to arrival at hospital
2.3.16	Update status to acknowledge incident
2.3.17	Update status to in quarters
2.3.18	Update status to patient transfer
2.3.19	Update status to available on portable radio (not in vehicle)
2.3.20	Initiate query for vehicle
2.3.21	Initiate query for drivers license by name
2.3.22	Initiate query for drivers license by number
2.3.23	Initiate query for article
2.3.24	Initiate query for gun
2.3.25	Initiate query for boat
2.3.26	Initiate query for a person (wanted)
2.3.27	Compose messages
2.3.28	Send messages to:
2.3.28.1	Users
2.3.28.2	Groups
2.3.28.3	Dispatch position
2.3.29	Flag critical messages
2.3.30	Incident information to be read to the user (text to speech) configurable by Agency
2.3.31	Message information to be read to the user (text to speech) configurable by Agency
2.3.32	Ability for users to enable/disable day/night mode
2.3.33	Ability to initiate an emergency status and notify the dispatcher
2.3.34	Ability for the initiated emergency to send location to the dispatcher
2.3.35	Ability to display unit history
3.1	**SMART DEVICE INTEGRATION**
3.2	Ability to support a real-time data transmission between the CAD system and Smart Device
3.3	Ability to define the default unit status upon sign-on (configurable by Agency)
3.4	Ability to view incident information available in CAD on the Smart Device by:
3.4.1	Agency
3.4.2	District
3.4.3	Battalion
3.4.4	Area

Item #	Mobile Computer Unit Functional Matrix
3.4.5	Status
3.5	Ability to restrict the view of incident information by Agency
3.6	Ability to restrict the view of incident information by role
3.7	Ability to display incident timers generated from CAD
3.8	Ability to display unit status timers generated from CAD
3.9	Ability for flags/alerts created in CAD to be displayed on the Smart Device
3.10	Ability to access multiple applications (E.g., field reporting) with dispatch operations having precedence
3.11	Ability for MCU's to have shared code tables with CAD, permissions based, to include but not limited to the following:
3.11.1	Unit Status
3.11.2	Hospitals
3.11.3	Disposition
4.1	**SMART DEVICE APPLICATION USER INTERFACE**
4.2	Ability for user to toggle among applications on the Smart Device
4.3	Ability to support touch-screen functionality
4.4	Ability to accept input from but not limited to:
4.4.1	Barcode reader
4.4.2	Card Swipe device
4.4.3	RFID reader
4.5	Ability to store/retain a user's display profile preferences upon application sign-on
5.1	**UNIT STATUS AND INCIDENT INFORMATION**
5.2	Ability to display the following information on the screen during normal operations:
5.2.1	Current unit
5.2.2	Current unit status
5.2.3	Case number
5.2.4	CAD Date and Time
5.2.5	Full Incident number
5.2.6	Incident status
5.2.7	Message information
5.2.8	Unit ID
5.2.9	Wireless connectivity availability
5.2.10	GPS connectivity
5.2.11	Grid number (should display when viewing the incident)
5.2.12	Pending Calls
5.2.13	Active Calls
5.2.14	District
5.2.15	Area
5.2.16	Comments/Remarks
5.3	Ability to display all units assigned to an incident by sort order by status (E.g., unit arrivals display first then all units en route)

Item #	Mobile Computer Unit Functional Matrix
5.4	Ability to display all units assigned to an incident by sort order by ETA
5.5	Ability to view incidents (active, pending, closed), to display dispatch data, units and audit trail/incident log
5.6	Ability to view multiple calls simultaneously (In comments section state if tablet or phone specific)
5.7	Ability to add comments to a specific incident while multiple incidents are displayed (In comments section state if tablet or phone specific)
5.8	Ability for Smart Device user to update open or closed incidents with the following: (Configurable by Agency based on permissions)
5.8.1	Incident Type/Signal
5.8.2	Disposition
5.8.3	Comments
5.9	Ability for user (permissions based) to self-assign to an incident (E.g., select an incident from the pending calls list)
5.10	Ability for each Agency to restrict an individual from assigning themselves to an incident
5.11	Ability to display incident status based on incident priority
5.12	Ability to identify other units assigned to same incident
5.13	Ability for supervisors to see units on their squad (based on sign-on area/district)
5.14	Ability for supervisors to add timers (E.g., units, incidents, etc.)
6.1	**SMART DEVICE MAPPING AND NAVIGATION**
6.2	Ability to provide users with a "Go To Current Location" functionality/button
6.3	Ability to support Internet mapping services from within the application (E.g., Google Maps)
6.4	Ability to provide an overlay of Internet mapping services
6.5	Ability to utilize color, text, and/or symbols to distinguish status of unit
6.6	Ability to center map display on:
6.6.1	CAD Incident location
6.6.2	Specified geographic area
6.6.3	Specified vehicle/unit
6.6.4	MCU activating emergency button
6.6.5	Smart Device activating emergency button
6.6.6	Radio activating emergency button
6.7	Ability to zoom to relevant map location by searching on available predefined list (E.g., Hospitals, landing zones, etc.)
6.8	Ability for map to automatically zoom into area as vehicle approaches destination
6.9	Ability to view units only assigned to the same incident via the map
6.10	Ability to cache map layers to minimize the amount of data transmitted wirelessly
6.11	Ability for map to function without wireless connectivity

Item #	Mobile Computer Unit Functional Matrix
6.12	Ability for user to select map layers for display
6.13	Ability for the map to automatically receive updates with:
6.13.1	Incident locations
6.13.2	Staging area
6.13.3	Points of interest identified by dispatcher
6.14	Ability to select on a location to display information associated with that location (E.g., pre-plan, grid)
6.15	Ability to select an incident and have it displayed on the map
6.16	Ability to select on a unit and have it displayed on the map
6.17	Ability to support search for previous incidents via the map
6.18	Ability to support context awareness (E.g., as the patrol car moves through an assigned area, interactive mapping displays incidents that occurred within the last 24 hours, registered sex predators or offenders, subjects on parole/probation, or areas of directed patrol)
6.19	Ability to access available cameras via the map with the capability of viewing live streaming video
6.20	Ability to control video cameras with pan, tilt, zoom controls
6.21	Ability to stream multiple live videos simultaneously in separate windows
6.22	Ability to view oblique imagery (E.g., Pictometry)
7.1	**GPS INTEGRATION**
7.2	Ability to support GPS functionality
7.3	Ability for other users based on permissions, to display Smart Device location on a map and view progress toward incident
7.4	Ability to assign an "Arrival" status based on GPS devices with predetermined criteria such as unit movement and proximity to the incident
7.5	Ability to assign an "In-Quarters" status based on GPS devices with predetermined criteria such as unit movement and proximity to the fire station
8.1	**SMART DEVICE ROUTING**
8.2	Ability to automatically display turn-by-turn directions from user's current location to dispatched location
8.3	Ability to provide graphics based turn-by-turn directions (E.g., left/right turn arrows)
8.4	Ability for user to use voice to enter an address for routing
8.5	Ability to provide audible turn-by-turn directions
8.6	Ability to provide routing directions when requested:
8.6.1	Two selected points on the map
8.6.2	Common Place
8.6.3	Address
8.6.4	Streets
8.6.5	Unassigned incident
8.7	Ability to toggle on/off routing/turn-by-turn directions
8.8	Ability to support quickest-time routing for all dispatches
8.9	Ability to display updated directions to incident/specified location on the fly

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8.10	Ability to provide audible routing information
8.11	Ability to toggle on/off audible routing information
8.12	Ability to provide text-based routing information
8.13	Ability to provide closest cross streets to incident
8.14	Ability to highlight on the map the recommended route from current location to a dispatched incident
8.15	Ability to provide estimated travel time
8.16	Ability to automatically orient map so vehicle is always moving with the direction of travel
8.17	Ability to have the map fixed North
8.18	Ability to toggle between map views (E.g., street view versus Air photo/satellite view)
8.19	Ability to display routing information without covering the map
9.1	**SMART DEVICE EMERGENCY FUNCTIONALITY**
9.2	Ability to initiate an emergency message transmission from a touch screen button or hot key
9.3	Ability to automatically transmit the following information in an emergency situation:
9.3.1	Last known location (via GPS)
9.3.2	Last known location based on latest incident assignment
9.3.3	Unit ID
9.3.4	User Name
9.4	Ability for the following to be notified upon emergency key activation: (configurable by Agency)
9.4.1	Units within predefined proximity
9.4.2	Agency associated units
9.4.3	All units
9.4.4	Units within a specific dispatch group or area
9.4.5	Dispatch/Communications
9.5	Ability for dispatcher to reset or clear the emergency
10.1	**SMART DEVICE DISPATCH RECEIPT**
10.2	Ability for dispatches to open automatically on Smart Device
10.3	Ability to alert Smart Device users that a new incident has been assigned to that unit:
10.3.1	Audible alert
10.3.2	Visual alert
10.4	Ability for units on the same incident to receive notification when other units assigned to the same incident update their status or location
10.5	Ability to disable notifications for all units dispatched to an incident as units assigned to the incident update their unit status or location
10.6	Ability to access and read all associated incident comments
10.7	Ability to display the following information upon receipt of dispatch: (configurable by Agency)

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10.7.1	Assigned unit(s)
10.7.2	Comments/narrative
10.7.3	Date and time incident entered
10.7.4	Incident location
10.7.5	Incident number
10.7.6	Incident priority
10.7.7	Incident type
10.7.8	Case number
10.7.9	Caution Notes/Hazard Information
10.7.10	Pre-plan information
10.7.11	Reporting party information
10.7.12	Subject information
10.7.13	Premise information
10.7.14	Grid
10.7.15	District
10.7.16	Area
10.8	Ability to directly access previous incident information related to the address of the incident (E.g., via hyperlink)
11.1	**INCIDENT UPDATES**
11.2	Ability to display most current incident data and comments
11.3	Ability to receive additional incident information (E.g., location, suspect, pictures, vehicle information) without interrupting or overlaying current screen
11.4	Ability to receive notification when additional incident information is received:
11.4.1	Audible
11.4.2	Visual
11.5	Ability for additional information to be visually distinct from information previously received by Smart Device (E.g., separate font color, bold, highlighted)
12.1	**PREMISE / HAZARD INFORMATION**
12.2	Ability to alert user of availability of information associated with a location (E.g., gate codes, hazards, premise history, pre-plans)
12.3	Ability to indicate type of information that is attached to a incident (E.g., gate code, hazard)
12.4	Ability for Smart Device users to have the option of displaying premise/hazard information
12.5	Ability to select a hyperlink in premise history to view information regarding incidents, persons, vehicles, etc.
12.6	Ability to include simple address and premise search functionality that does not require exact address matching (allowing the use of wildcards is preferable)
12.7	Ability to include previous incident search (history search) capability based on the following:

Item #	Mobile Computer Unit Functional Matrix
12.7.1	Incident number
12.7.2	Address
12.7.3	Case number
12.7.4	Traffic stop
12.7.5	Subject stop
12.7.6	Administrative activity (E.g. training, field inspections)
12.7.7	Other Agency defined call types
12.7.8	Ability to allow premise/hazard sort order that determines how premise information is displayed
12.8	Ability to support an audible/visual notification for priority premise/hazard alerts
12.9	Ability to time stamp the audit trail/incident log when premise information is viewed
13.1	**PERIMETERS AND STAGING AREAS**
13.2	Ability to receive suggested perimeter positions from dispatch
13.3	Ability for suggested perimeter positions to appear on Smart Device map upon receipt
13.4	Ability for user to drop pins/graphics on the map
13.5	Ability for field generated perimeters/staging areas to be pushed to:
13.5.1	Other users in the area (pre-defined radius)
13.5.2	Dispatcher(s)
13.5.3	Users assigned to the same incident
13.6	Ability to annotate the map
13.7	Ability for a Smart Device user's annotated map to be shared with:
13.7.1	Other users in the area (pre-defined radius)
13.7.2	Dispatcher(s)
13.7.3	Specific User
13.8	Ability to push established perimeters/staging areas to maps of both dispatchers and field units (permissions based by Agency)
13.9	Ability for a Smart Device user's annotations to be cleared from the map:
13.9.1	Upon closure of the incident
13.9.2	Manually by the unit/dispatcher
14.1	**DISPOSITION CODES**
14.2	Ability to clear incidents from the Smart Device (configurable by Agency)
14.3	Ability to require a disposition prior to clearing an incident from the Smart Device
14.4	Ability to provide a menu for disposition codes
14.5	Ability to only display disposition codes relevant to the Agency within the menu
14.6	Ability to only display disposition codes relevant to the incident type/signal within a menu (configurable by Agency)
14.7	Ability to change the original incident type/signal from the Smart Device (configurable by Agency)

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14.8	Ability to maintain history of original incident type/signal for all incidents where the incident type/signal was changed
15.1	**BE-ON-THE-LOOKOUT (BOLO)**
15.2	Ability to view BOLOs on a Smart Device
15.3	Ability for Smart Device users to generate BOLOs
15.4	Ability for the Smart Device to check outstanding BOLOS when a name or plate is queried
16.1	**MESSAGING**
16.2	Ability to support a messaging system that can transmit messages from a Smart Device
16.3	Ability to display the following identifiers within a message:
16.3.1	Sender
16.3.2	Date sent
16.3.3	Time sent
16.3.4	Recipient(s)
16.3.5	Date received
16.3.6	Time received
16.3.7	Subject
16.4	Ability to send messages to a user who is not signed-in to CAD and cache that message for retrieval when the user signs-on
16.5	Ability to notify a sender when a message is undeliverable
16.6	Ability for user to retrieve cached messages upon sign-on
16.7	Ability to assign a priority to a message (E.g., routine, urgent, emergency)
16.8	Ability to retain messages for later viewing
16.9	Ability for messages to be sorted by most recent or first received
17.1	**SENDING MESSAGES**
17.2	Ability to create and save message groups
17.3	Ability to select any number of recipients as part of a message group (if there is a limitation on the number of recipients, indicate the maximum in the comments)
17.4	Ability to enter narrative with wrap-around text (if characters are limited, indicate the maximum character count in the comments)
17.5	Ability to select a recipient by a single action to create a message (E.g., double click on a signed-on user and a message form displays)
17.6	Ability to display available message recipients (to include the dispatcher(s)) in a "recipients list"
17.7	Ability to restrict users, by role, from sending messages
17.8	Ability to restrict users, by role, from receiving messages
17.9	Ability to allow users to send/receive external emails
17.10	Ability to restrict users, by role, from sending/receiving external emails
17.11	Ability to restrict users, by role, from sending emails
17.12	Ability to restrict users, by role, from receiving emails

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17.13	Ability for the Smart Device to send messages to a console/workstation
17.14	Ability to send a message to units assigned to a specific incident
17.15	Ability to transmit a reply message to the originator of a currently displayed message without having to reenter the originator's address
17.16	Ability to transmit a "reply all" message to multiple recipients that were part of the originator's message group
17.17	Ability to forward a message
17.18	Ability to create messages that are retained in the system and sent at pre-specified times
17.19	Ability to provide a notification for delivery of messages to the device
17.20	Ability to notify a user sending a message to a console/workstation if the console/workstation is logged-out
18.1	**RECEIVING MESSAGES**
18.2	Ability to notify receiver via an audible and /or visual flag that a new message has arrived in inbox
18.3	Ability to prevent incoming messages from blocking the current view
18.4	Ability to notify receiver of total number of unread messages
18.5	Ability for messages to be queued in an "inbox" for later viewing
18.6	Ability to query message logs by Agency-defined criteria (E.g., date/time range, sender, recipient, device)
18.7	Ability to note time opened/read by receiver
18.8	Ability to clear a message from the queue
18.9	Ability to retain a message in the queue
18.10	Ability to restrict an individual from reviewing/monitoring messages by Agency (E.g., MDPD can only see MDPD associated messages)
18.11	Ability to archive messages
18.12	Ability to auto-archive messages after pre-determined period of time
19.1	**QUERIES**
19.2	Ability to set search parameters for queries that limit the impact on performance (E.g., queries are limited to 60 days)
19.3	Ability to query incident and unit history data by the following:
19.3.1	Date and time range
19.3.2	Unit number
19.3.3	Incident number
19.4	Ability to conduct federated queries, of the following systems, including but not limited to:
19.4.1	CAD
19.4.2	FCIC/NCIC
19.4.3	CJS (local system, county interface)
19.4.4	DAVID

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19.4.5	LawQuery (local system, county interface)
19.5	Ability to conduct federated queries to customer defined databases (E.g., Crime Data Warehouse (CDW), Sexual Predator, etc.)
19.6	Ability to select a hyperlink within the query results and retrieve associated data. (E.g., the hyperlink, once selected should display all available results associated to the query)
19.7	Ability for the system to segregate query responses in a separate mailbox rather than through a general messaging "inbox"
19.8	Ability to attach/insert query responses into an incident
19.9	Ability for query responses to be attached to the incident to display in the audit trail/incident log
19.10	Ability to provide an alert if a response contains a positive hit: (E.g., stolen vehicle, felony warrant)
19.10.1	Visual
19.10.2	Audible
19.11	Ability to query and retrieve premise information for an address not associated with an incident
19.12	Ability to query a location to access pre-plans:
19.12.1	From a query field
19.12.2	From the map
19.13	Ability to use predefined data entry forms/screens (masks) to minimize data transmitted during queries
19.14	Ability to use a wildcard in a query
19.15	Ability to query based upon a Soundex (based on functionality provided by the source)
19.16	Ability to display historical queried info by another user within specific time parameters to include a hyperlink to the information (E.g., another officer has queried the same subject, user would be notified)
19.17	Ability for authorized users to enter vehicle stops and simultaneously run the license plate against local and state databases
19.18	Ability to restrict users in the field to enter vehicle stops
19.19	Ability for authorized users to conduct multiple license plate searches simultaneously
19.20	Ability to save previous license plate searches until user clears data within an Agency definable time parameter
19.21	Ability to save query returns until user clears data within an Agency definable time parameter
19.22	Ability to save stored query returns after sign-off (E.g., returns are still there the next time user logs onto the system)
19.23	Ability to sort query results on selectable return fields
19.24	Ability to provide a form from which officers can run common queries

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19.25	Ability to notify user of a failed query (E.g., access to a database is unavailable)
19.26	Ability for the Smart Device user to query an incident by the case number
19.27	Ability for Smart Device user to query unit statuses by the following:
19.27.1	Battalion
19.27.2	District
19.27.3	Area
19.27.4	Beat
20.1	**FIELD INITIATED INCIDENTS**
20.2	Ability to initiate an incident from an MCU (Configurable by Agency)
20.3	Ability to generate a case number for field initiated incidents
20.4	Ability to capture via AVL/GPS incident location when initiating an incident from an MCU
20.5	Ability to modify the captured AVL/GPS incident location when initiating an incident from an MCU
20.6	Ability to restrict users from creating a field initiated incident based on permissions
20.7	Ability for MCU users to geo-validate field initiated incident location