Dane County Contract Addendum Cover Sheet

Revised 04/2021

Res 037
Significant

Contract #	10607P

Dept./Division	Public Safety Communications	**Vendor Name**	L3Harris
Brief Addendum Title/Description	Design changes to SR10A.7 system upgrade	**Vendor MUNIS #**	3164
		Addendum Term	through 12/31/2022
		Amount	$ 72,188.07

Department Contact Information		**Vendor Contact Information**	
Contact	Rich McVicar	**Contact**	Rodney Philgren
Phone #	608-283-2911	**Phone #**	630-270-2368
Email	mcvicar@countyofdane.com	**Email**	Rodney.Philgren@L3Harris.com
Purchasing Officer	Carolyn Clow	**Send completed contract to vendor?**	☐ Yes ☒ No

Purchase Order – Maintenance or New PO

☒	**PO Maintenance Needed** PO# 20210493	**Org:** CPPUBSAF	**Obj:** 58161	**Proj:**	
		Org:	**Obj:**	**Proj:**	
☐	**No PO Maintenance Needed –** *this addendum does not change the dollar amount of the contract.*				
☐	**New PO / Req. Submitted** Req#	**Org:**	**Obj:**	**Proj:**	
		Org:	**Obj:**	**Proj:**	

Budget Amendment

☐ A Budget Amendment has been requested via a Funds Transfer or Resolution. Upon addendum approval and budget amendment completion, the department shall update the requisition in MUNIS accordingly.

Total Contract Amount

List Original Contract info, then subsequent addenda including this new addendum

A resolution is required for every $100,000 contracted

Addendum #	Term	Amount	Resolution	
Original	1/11-4/5/17	$ 14,871,375.00	☐ None	Res# 2010 RES-229
10607A-O	4/6/17-12/31/22	$ 15,342,933.04	☐ None	Res#
10607-P	6/1/21 - 12/31/22	$ 72,188.07	☐ None	Res# 2021 Res-037
			☐ None	Res#
			☐ None	Res#
			☐ None	Res#
Total Contracted Amount		$ 30,286,496.11		

Contract Language Pre-Approval – prior to internal routing, this contract has been reviewed/approved by:

☐ Corporation Counsel: ☐ Risk Management: ☒ No Pre-Approval

APPROVAL – Department

Dept. Head / Authorized Designee	McVicar, Rich — Digitally signed by McVicar, Rich Date: 2021.05.05 15:35:50 -05'00'

APPROVAL – Contracts Exceeding $100,000

Director of Administration		**Corporation Counsel**	

APPROVAL – Internal Contract Review – Routed Electronically – Approvals To Be Attached

DOA:	**Date In:** 5/19/21 **Date Out:** _____	☒ Controller, Purchasing, Corp Counsel & Risk Management

Goldade, Michelle

From: Goldade, Michelle
Sent: Thursday, May 20, 2021 9:17 AM
To: Hicklin, Charles; Clow, Carolyn; Gault, David; Lowndes, Daniel
Cc: Stavn, Stephanie; Oby, Joe
Subject: Contract #10607P
Attachments: 10607P.pdf

Tracking:

Recipient	Read	Response
Hicklin, Charles	Read: 5/20/2021 9:40 AM	Approve: 5/20/2021 9:40 AM
Clow, Carolyn		Approve: 5/20/2021 9:18 AM
Gault, David	Read: 5/20/2021 9:22 AM	Approve: 5/20/2021 9:24 AM
Lowndes, Daniel	Read: 5/20/2021 9:26 AM	Approve: 5/20/2021 9:49 AM
Stavn, Stephanie		
Oby, Joe		

Contract #10607P
Department: Public Safety Communications
Vendor: L3Harris
Contract Description: Design changes to SR10A.7 System Upgrade (Res 037)
Contract Term: 6/1/21 – 12/31/22
Contract Amount: $115,117.43

Please review the contract and indicate using the vote button above if you approve or disapprove of this contract.

Thanks much,
Michelle

Michelle Goldade
Administrative Manager
Dane County Department of Administration
Room 425, City-County Building
210 Martin Luther King, Jr. Boulevard
Madison, WI 53703
PH: 608/266-4941
Fax: 608/266-4425
TDD: Call WI Relay 711

Please Note: I currently have a modified work schedule...I am in the office Mondays and Wednesdays and working remotely Tuesdays, Thursdays and Fridays in accordance with COVID 19 response guidelines.

2021 RES-037

AUTHORIZING AMENDMENT WITH L3HARRIS CORPORATION FOR DANECOM RADIO SYSTEM UPGRADE

2010 RES-229 authorized Agreement #10607 with L3Harris Corporation to furnish an interoperable voice radio communications system, which went live in November of 2016. 2020 RES-287 authorized an upgrade via Agreement #10607O.

The County and L3Harris completed a design review for this upgrade, and have determined necessary changes netting an increase of $115,117.43. Funds for the cost are available in the CPPUBSAF5161 Radio System Replacement account.

NOW, THEREFORE BE IT RESOLVED that the Dane County Clerk and the County Executive are hereby authorized to execute this amendment.

L3HARRIS™

AMENDMENT 13 TO SYSTEM PURCHASE AGREEMENT BETWEEN HARRIS CORPORATION AND THE COUNTY OF DANE, WISCONSIN

THIS AMENDMENT 13 TO SYSTEM PURCHASE AGREEMENT (hereinafter "Amendment") is made and entered by and between **THE COUNTY OF DANE, WISCONSIN** ("County") and **HARRIS CORPORATION** ("Harris") now **L3HARRIS TECHNOLOGIES, INC.** ("L3Harris"), a Delaware Corporation acting through its Communication Systems Segment, with its principal place of business located at 221 Jefferson Ridge Parkway, Lynchburg, VA 24501.

WHEREAS, the County and L3Harris previously entered into that certain System Purchase Agreement dated February 7, 2011, ("Original Agreement") for the provision of the System by L3Harris to the County; and

WHEREAS, the Parties previously executed Amendment No. 01 through Amendment No. 12 (the Original Agreement and Amendments No 01 through No 12 are collectively the "Agreement"); and

WHEREAS, Amendment No 12 supplemented the Agreement to provide for the terms and conditions regarding certain purchases of software, hardware, firmware, and services relating to installation of an upgrade of the System; and

WHEREAS, the County and L3Harris have completed a Detailed Design Review regarding the upgrade of the System and, through that process, have mutually agreed to changes to Statement of Work, System Diagrams, Implementation Plan, Project Schedule, and Pricing Summary for that upgrade; and

WHEREAS, the County and L3Harris now seek to record those changes in this Amendment;

NOW THEREFORE, for and in consideration of the mutual promises of the Parties and other good and valuable consideration, the receipt of which is hereby acknowledged, County and Provider agree as follows:

1. **Amendment 13 Changes.** Through execution of this Amendment 13, the Parties agree to the following changes to Amendment 12:
    a. The Statement of Work (pages 1-22) shall be replaced in their entirety with Exhibit A, Amendment 13 Statement of Work, attached to this Amendment.
    b. The System Diagrams (sheets 1-7) shall be replaced in their entirety with Exhibit B, Amendment 13 System Diagrams, attached to this Amendment.
    c. The Implementation Plan (pages 1-9) shall be replaced in their entirety with Exhibit C, Amendment 13 Implementation Plan, attached to this Amendment.
    d. The Project Schedule (pages 1-6) shall be replaced in their entirety with Exhibit D, Amendment 13 Project Schedule, attached to this Amendment.
    e. The Pricing Summary (pages 1-5) shall be replaced in their entirety with Exhibit E, Amendment 13 Pricing Summary, attached to this Amendment.
2. Provider shall provide the goods and services necessary to upgrade the System. The obligations and rights of each Party and the details of the upgrade are further described and defined in the Upgrade Statement of Work ("System Upgrade"), which is attached hereto and incorporated herein as **Exhibit A**. Project shall begin on January 4, 2021.

3. **System Upgrade Price.** The price shall increase the total price for the System Upgrade by **$72,188.07 ("Amendment 13 Price"),** as originally defined in Amendment 12 as $1,266,919.84, to **$1,339,107.91** ("Amended System Upgrade Price").

4. **Payment Terms.** "Payment Terms. Invoicing and payment of the Amendment 13 Price shall distributed in equal quantities against the shipping and installation payment milestones. The Amendment 12 payment amounts are left unchanged save for the shipping and installation milestones and the revised milestone schedule is included herein in the Pricing Summary. The Provider shall invoice, and the County shall pay net 30 days, the amounts listed in that milestone schedule upon completion of the associated milestone tasks."

5. **Relationship to the Agreement.** The terms and conditions of the Agreement, except as amended and/or supplemented by this Amendment, remain in full force and effect and shall be applicable to this Amendment. Any ambiguity between the provisions of this document and the Agreement shall be interpreted in favor of fulfilling the meaning given to the provisions of the Agreement.

6. **Counterparts.** This instrument may be executed in one or more identical counterparts. Documents signed and transmitted electronically shall be deemed original and binding documents.

[*Signatures Follow*]

Intending to be bound hereby, the Parties hereto have caused this Amendment to be executed, as of the latest date below, by the Parties' duly authorized representatives.

L3HARRIS TECHNOLOGIES, INC.

By: Harriet B. Jefferson

Name: Harriet Jefferson

Title: Principle, Contracts

Date: May 19, 2021

THE COUNTY OF DANE, WISCONSIN

By: _____

Name: _____

Title: _____

Date: _____

EXHIBIT A
AMENDMENNT 13 STATEMENT OF WORK

EXHIBIT B
AMENDMENNT 13 SYSTEM DIAGRAMS

EXHIBIT C
AMENDMENNT 13 IMPLEMENTATION PLAN

EXHIBIT D
AMENDMENNT 13 PROJECT SCHEDULE

EXHIBIT E
AMENDMENNT 13 PRICING SUMMARY

AMENDMENT 13 TABLE OF CONTENTS

STATEMENT OF WORK

Overview

DaneCom provides mission critical communications to first responders serving the people of Dane County. Vital to these services is the L3Harris P25 VHF system. The system also interfaces with three local agencies, Sun Prairie, Middleton, and Fitchburg. The primary and secondary VIDA cores are located at City County Building (CCB) and Madison Community (UW) Tower.

Due to several sub systems, from many different manufacturers, approaching or already in a state of end of life/end of support (EOL/EOS), the system is critically in need of update. In order to reliably operate the system, and ensure essential operational performance, DaneCom must migrate their current SR10A.1 platform to SR10A.7. Along with the L3Harris platform release update, several subsystems need an upgrade/replacement. New features such as ISSI roaming, DFSI interface, and Unitrends system backup will also be realized during this update.

This proposal includes the equipment and services required to upgrade the following:

- Primary and secondary Network Switching Center (NSC) replacements at City County Building (CCB) and EDC.
- Backhaul MPLS router replacement (Qty 10) (Due to end of life)
- Network refresh at sites and dispatch center (Due to end of life; details and quantities follow)
- Site upgrade (Qty – 11)
  - Site software upgrade
  - VIDA Edge (Replacement of Network Sentry)

include cabling, cross connect panel or other hardware paraphernalia.

  - MME replacement (Qty 2)
  - SpectraCom GPS receiver replacement
    - Site Ru netclocks - Qty 12
    - Core non-Ru netclocks – Qty 4
- Network First Gateways – software upgrade to SR10A.7
  - Dane – (Qty 3), Agencies – (Qty 4)
- Dispatch Symphony console upgrade (Qty 42)
  - Dane County OS upgrade to Windows 10 followed by software upgrade (Qty 36)
  - Agencies Windows 10 upgrade followed by software upgrade (Qty 6)
  - Agencies V^{IP} console upgrades (Qty 4 – see conditions below)
- ISSI redundancy
- Encompass gateway to support DFSI interface with 10 talkpaths

- Unitrend backup servers (2 Qty to support redundancy)

System Features

BASELINE UPGRADE SOLUTION

SR10A.7 HA-NSC VIDA CORE

Figure 1 represents Dane County's SR10A.7 system.

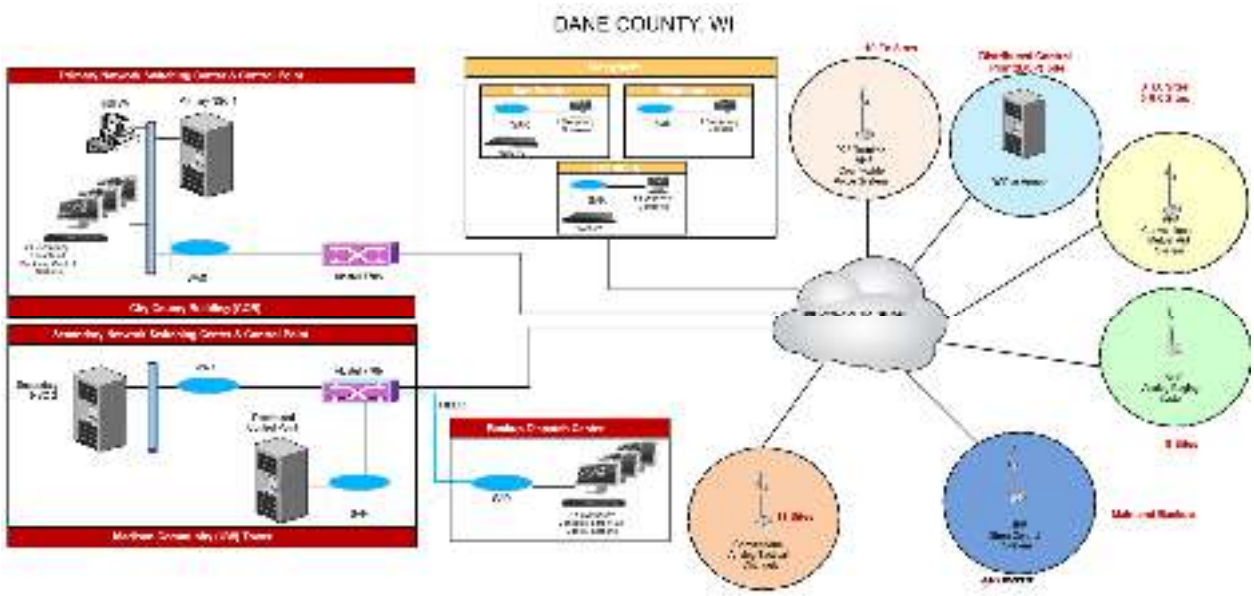


Figure 1. Dane County SR10A.7 System Diagram

The SR10A.7 VIDA core performs all the mission critical services required for a public safety LMR communication environment. The core resides on the VIDA Application Server (VAS) configured using the VMware vSphere hypervisor. VMware vSphere allows a single server to simultaneously run multiple operating systems (OS), each in an independent environment called a virtual machine (VM). The VAS automatically allocates the appropriate; RAM (memory), storage, and networking resources for each VM.

The hypervisor allows virtual machines residing on the VAS to operate with a degree of independence from the underlying physical hardware. Since virtual machines are decoupled from a specific set of physical hardware, virtualization allows for consolidation of physical computing resources (such as CPUs, memory, storage, and networking) into pools of resources that can be dynamically allocated to the VMs it supports.

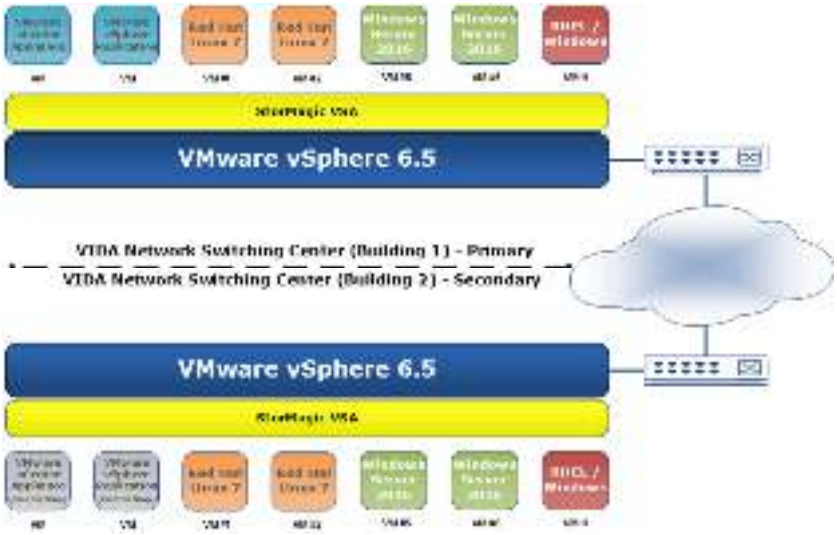
Geographically-Separated Location HA provides a backup NSC that can be geographically separated from the main NSC. It provides for hardware and geographic redundancy. Location HA ensures network operation continues even if an entire building housing the primary NSC is compromised.

The VIDA cores are configured based on the following concept:

- Critical services perform automatic failover to standby VMs.

> Non-critical services require manual failover.

Figure 2. Typical VIDA Premier VAS with Geo-Separated Location HA



L3Harris VIDA Premier NSC with Geographically Split-High Availability Redundancy

The VIDA solution provides full service high availability failover. For critical services on the primary core, the secondary core takes over in failover. VIDA provides robust performance without compromise; therefore, failover does not mean failure. VIDA networks employ the means to meet mission critical reliability, availability, and maintainability requirements, utilizing centralized services that can include geographically split redundant servers. When operating at distinctly separate geographic and judiciously separated locations (yet fully network interconnected), the system will provide automatic failover capability if a network switch becomes dysfunctional because a server, network, or physical location no longer functions. The High-Availability service on the VIDA core ensures expeditious failover of call routing, ensuring that communications continue with minimal impact to users.

The new VIDA SR10A.7 NSC solution incorporates the use of virtual machines (VM) in the server core. The system block diagram illustrates how virtual machines are arranged to support multiple applications at the same time.

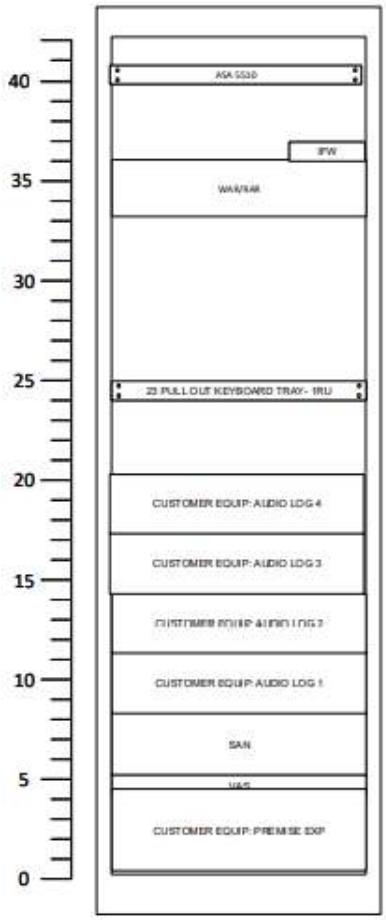
The virtualized servers automatically allocate the appropriate processing, memory and networking resources for each application. The virtualized servers within the VIDA core perform all of the mission critical services required, while reducing hardware, increasing efficiency, and making the most out of the resources for the network.

Virtual servers provide the flexibility and control to manage resources more effectively, reduce costly down time, and provide that extra level of system resilience with key services to keep mission critical users operational. Additionally, a virtual server environment has a number of IT-centric benefits that fully support operations expected in an IT environment, including server redundancy, services monitoring, backup/restore capability and installation/upgrade processes.

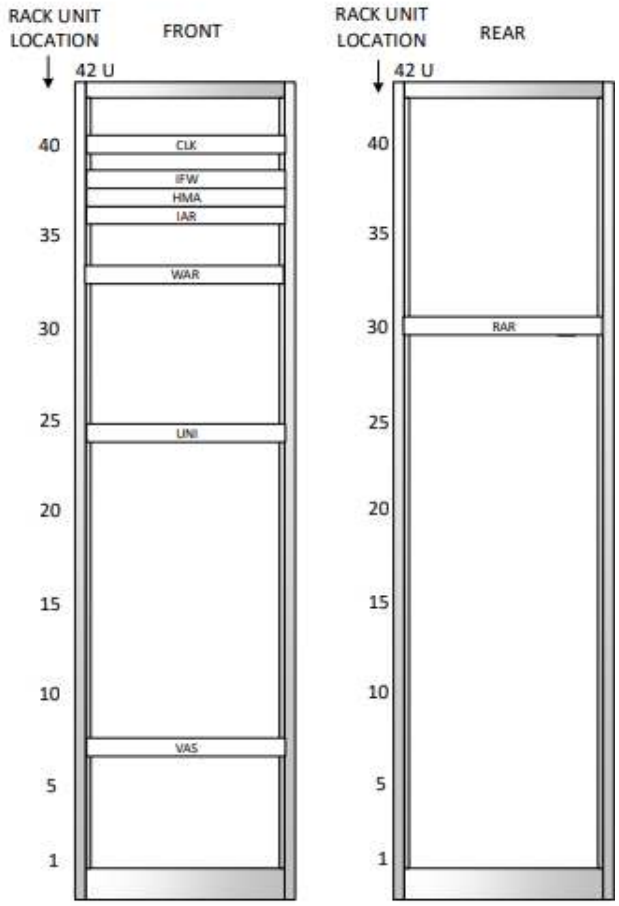
The following services are bundled into the standard SR10A.7 VIDA core offering:

- Voice Network Controller (VNIC) – Voice packet switching application
- Unified Administration Server (UAS) – System administration and provisioning
- Regional Network Manager (RNM) – Network Alarm management
- Active Directory – Network security (access control and group profiles)
- Transcoder – Translates between varying vocoders in the digital domain (ADPCM for legacy systems, full rate AMBE, half rate AMBE and BeOn)
- BeOn Foundation – Interfaces radio systems to commercial 3G and 4G carriers
- SUMS 2.0 – Network security (patch management)
- Device Manager – Software configuration for infrastructure
- Activity Warehouse (AW)

Current Rackup



Proposed Rackup



BASELINE VIDA CYBERSECURITY

The upgraded Dane County system will include security services natively incorporated in the new SR10A.7 system, plus upgraded versions of services found in the legacy system. These include:

- Active Directory (AD)
- Certificate Authority
- McAfee® Endpoint Security and ePolicy Orchestrator (ePO)
- Security Update Management Service (SUMS)
- Firewalls

Active Directory

Microsoft Active Directory (AD) controls access to Dane County network, authenticating users and devices to restrict unauthorized network access. AD authentication is extended to UNIX servers with the integration of One Identity Authentication Services Unix agents, and to networking devices (i.e. Cisco) through the remote authentication dial-in user service (RADIUS). Active Directory is hosted on redundant virtual servers on the VIDA Application Server (VAS) in the VIDA Core to ensure service availability. Active Directory Group Policy Objects (GPOs) implement security policies, allowing centralized management of baseline security controls in accordance with generally accepted industry standards. The GPOs incorporated in the SR10A.7 release improve the security posture of the system over that of the legacy system.

Certificate Authority

The Windows Certificate Authority (CA) is used in the Dane County Core to provide mutual authentication for web services, and Kerberos authentications for users and systems. The CA is integrated with the AD server to leverage capability, reduce costs, and reduce maintenance of hardware and software.

Anti-Malware and Host Intrusion Detection

The Dane County network will be protected from viruses, malware and zero-day threats by McAfee Endpoint Security. It replaces the VirusScan Enterprise solution used in the legacy system. McAfee Endpoint Security provides both anti-virus and host intrusion detection system (HIDS) functionality and will be installed on all workstation and server operating systems used in the network.

McAfee Endpoint Security monitoring and distribution functions are centrally managed and automated through the use of McAfee's ePolicy Orchestrator (ePO). The ePO server is a virtual machine running on the VIDA Application Server in each Core. The ePO secure web-based console is accessible by any authenticated administrator from any Dane County System Management Terminal.

Patch Management – Software Update Management Service (SUMS)

The Software Update Management Service (SUMS) is L3Harris' solution for managing and implementing system software changes to remediate vulnerabilities. SUMS is a component of the legacy system and will continue to be provided with the system upgrade. Since many malware attacks and exploits target known software defects (bugs), it will be important to regularly patch the Dane County network to prevent exploitation of those vulnerabilities. Patching, however, can negatively affect the operational performance of critical communications LMR systems. To reduce this risk, L3Harris tests patches in a controlled verification and validation laboratory environment prior to production rollout. SUMS provide automated network distribution of the updates.

Firewalls

Cisco FPR 1010 appliances provide boundary firewall services and VPN access between the Dane County network and external networks. DaneCom's two existing firewalls will be upgraded by L3Harris to include two-factor authentication. OneIdentity Defender hardware tokens are integrated with Active Directory, taking advantage of the user directory already in place. The tokens are included in the offer price. User token assignment is simply an additional attribute to a user's properties within Active Directory. L3Harris will configure and install a C1111-8P in FPR1010 environment while commissioning the DaneComm ISSI.

ADDITIONAL FEATURES

Additional NSC Servers, Services & Functionality

ENTERPRISE NETWORK MANAGER (ENM)

The L3Harris Enterprise Network Manager (ENM) is an all-in-one network management monitoring platform suited for the entire enterprise; including servers, operating systems, network appliances, database applications and more. It informs and alerts users regarding the state of the network, applications, and hardware through a single web browser interface. The ENM configures for redundancy, operating on both VIDA Cores.

ENM uses the Centerity Monitor Standard software application developed by Centerity Systems. The software installs as a Virtual Machine (VM) on the L3Harris VIDA Application Server (VAS), located at the VIDA Premier Core. The ENM provides extensive server management tools and redundancy for managing the VIDA network. The ENM provides direct management of third-party devices and interfaces directly with the L3Harris Regional Network Manager (RNM) for a unified management system.

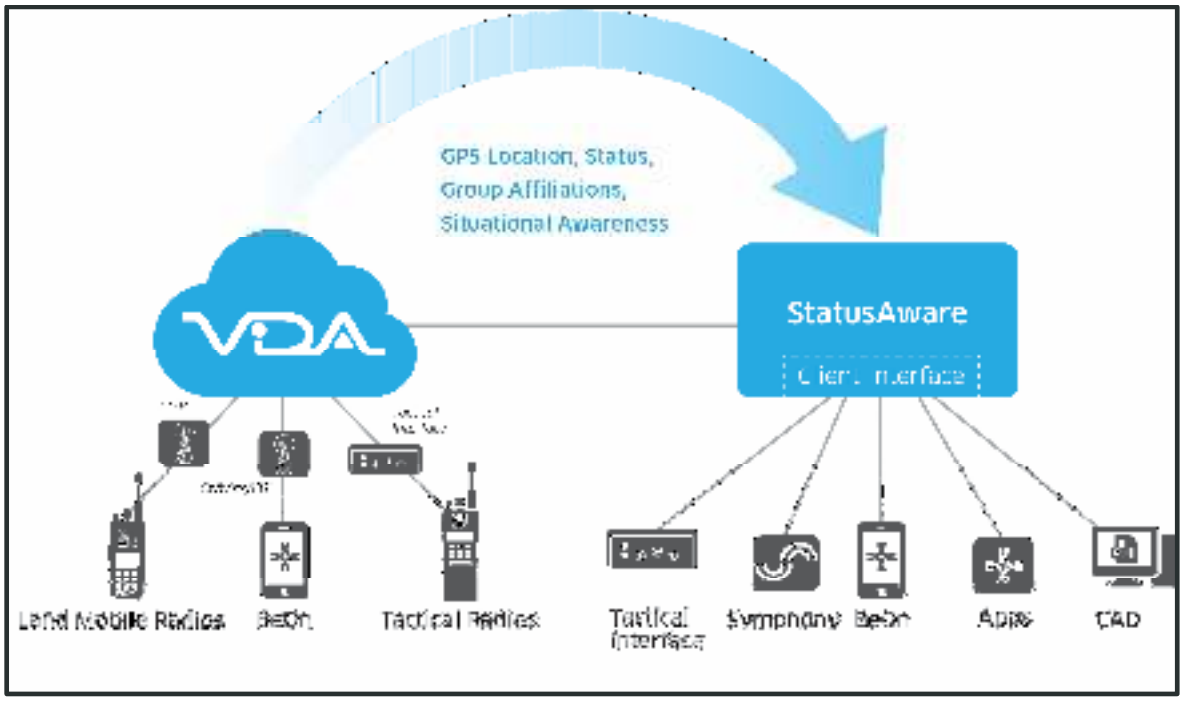
STATUSAWARE

L3Harris StatusAware is a centralized service hosted on the VAS server that collects GPS location information from various communication devices called ‘presentities’, stores it into a central presence service database and notifies the updates to the subscribed applications called ‘watchers’. Previously, CAD/AVL vendors were responsible for providing the Location Service Host System (LSHS) function that contacted each radio, initiated location updates, received the updates and then forwarded to the mapping function. The StatusAware service (SA-Svc) takes over the LSHS function removing the need to develop and maintain an interface to each radio type in the VIDA system.

SA-Svc provides a single-entry point which reports presence information of various presentities such as P25 radios, BeOn Clients, and Symphony consoles to the subscribed watchers. Applications such as Automatic Vehicle Location (AVL) applications, Computer Aided Dispatch (CAD) systems, or even presentities can subscribe to the SA-Svc to get status updates. The presence service collects information regarding locations, unit availability, permissions, capabilities, and affiliations (e.g., talk group, site, etc.). It is capable of maintaining GPS location updates and other presence data of up to 32,000 unique LMR radio IDs, up to 5,100 simultaneous client connections, 5,000 BeOn clients, and 100 L3Harris clients. Up to 1,000 presentities may be in each watcher’s subscription list at any given time. Figure 3 illustrates the Status Aware interface to the VIDA network.

Figure 3. L3Harris StatusAware

A convergence of customizable GPS location updates and Situational Awareness that results in user efficiency and safety.



GPS Updates from P25 Radios

SA-Svc can support Tier 2 operation on P-25 radios complying to TIA/EIA Project 25 standards. In this approach, SA-Svc manually polls the end devices for GPS information on a pre-programmed cadence interval. As a response, the end devices send out data packets with GPS information adding data load to the system. Data-intense operations require careful bandwidth and capacity planning as they add a substantial amount of load on the network. L3Harris MASTR V base stations can now support high-velocity Autonomous Data Channel (ADC) feature that can allocate up to six (6) dedicated FDMA channels exclusively for data communications keeping the voice communication intact.

Alternatively, L3Harris has a unique and innovative proprietary solution called In-Band GPS. This feature allows the radios to push GPS updates during the voice calls by embedding extra data in the active working channel. In-band GPS is unique to L3Harris radios, and allows the system to operate much more efficiently than by utilizing the Tier 2 GPS location update standard.

Scope of Work

L3Harris will provide the scope of services detailed below to upgrade the DaneCom system to SR10A.7 hardware and software:

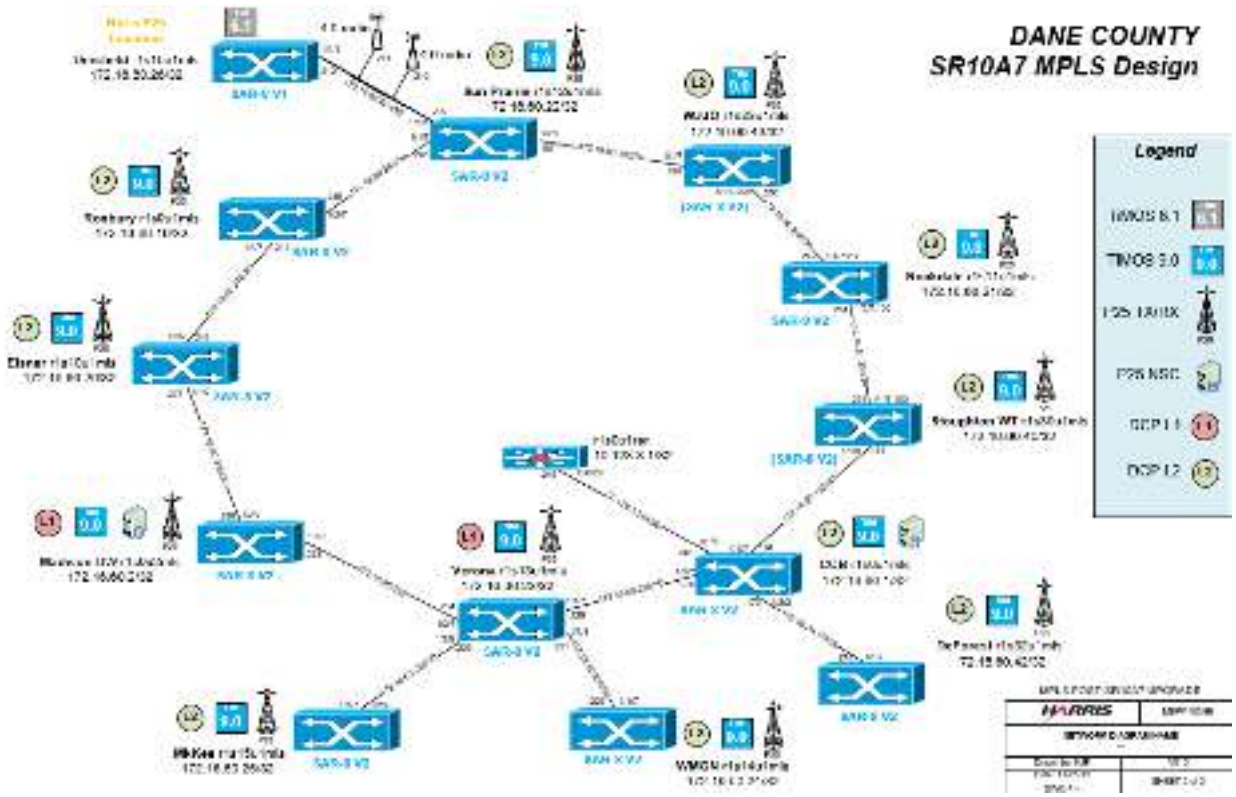
- System Engineering
- Project Management
- Installation Services
- Training (SR10A.7 maintenance)
- Staging & Shipping

Upon order, L3Harris will build and configure the new NSCs, Vida Network Sentries and CISCO gear to standard L3Harris configuration. After successful staging and testing, L3Harris will ship the equipment to the customer site for installation into the designated equipment rooms.

The L3Harris team will power up the new equipment and perform a system health audit to verify proper installation and function of the new equipment. The L3Harris Team will then configure the new VIDA cores and prepare the system for cutover and acceptance testing.

BACKHAUL UPGRADE

- L3Harris will conduct an audit of the existing MPLS configuration.
- L3Harris will document the recommended changes from SR10A.1 to SR10A.7 based on results from the network audit.
- L3Harris will replace the Ten (10) MPLS V1 routers that are end of life with MPLS V2s running TiMOS version 9.
- The two sites, WJJO and Stoughton already have V2 chassis. The ethernet cards (2 Qty) on these routers are approaching end of life and will be replaced. The firmware on the two V2 routers will be upgraded to TiMOS Version 9.



The table below shows what is currently scoped vs. proposed/sold. All sites but Deerfield Site are covered under this contract; however, the A12 price page left one 8P GE card off the price page.

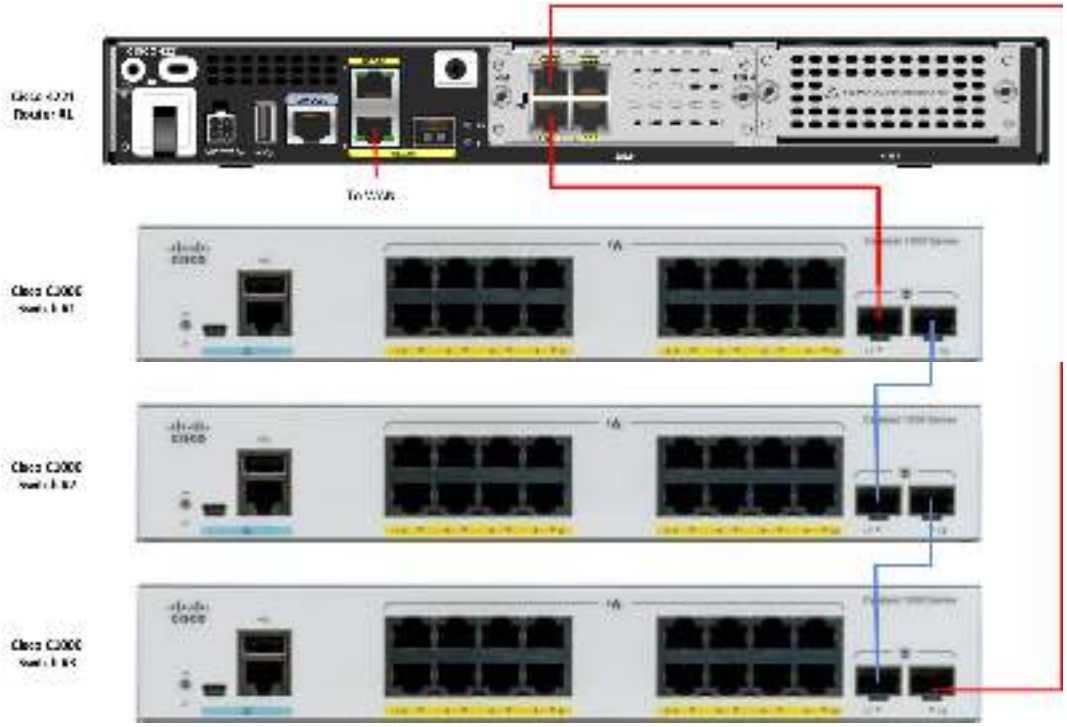
Site	7705 SAR8 V2	8P GE Card	T1/E1 SAR 16	RJ45 SFP
Deforest (spur)	1	0	1	4
Eisner	1	1	1	4
Madison	1	1	1	6
Roxbury	1	1	1	4
Rockdale	1	1	1	4
Sun Prairie	1	1	1	6
Verona	1	1	1	5
WMGN (spur)	1	0	1	4
McKee (spur)	1	0	1	4
Stoughton WT	0	2	0	3
WJJO	0	2	0	4
CCB	1	1	1	7
PLANNED SCOPE	**10**	**11**	**10**	**55**
AS-SOLD AND 13 CHANGE TO MEET ABOVE SCOPE				
AS-SOLD (A12)	**10**	**10**	**10**	**55**
A13 CHANGE	**0**	**1**	**0**	**0**
TOTAL	**10**	**11**	**10**	**55**

NETWORK UPGRADE

- L3Harris will conduct an audit of the existing NSC network configurations, WAN configurations, IP Plan and existing NSC drawings.
- L3Harris will document the recommended changes from SR10A.1 to SR10A.7 based on results from the network audit.
- L3Harris will develop factory network equipment configurations for the new core and validate these configurations during staging including implementing the existing WAN side of the WARs.
- L3Harris will provide standard VIDA NSC network equipment and configure new NSC WAR Routers to provide backward compatibility with existing site network equipment.
- The network gear at the sites and the dispatch center are approaching end of life in May 2021. L3Harris will provide a network refresh at all the 11 RF sites and 2 dispatch centers for Dane, and 3 dispatch centers for the local agencies.
- Network refresh to Dane and local agencies
- The networking equipment will be the following part numbers which have been identified by L3Harris to be non-End-of-Life:
  - FPR1010
  - C1111-4P
  - C921
  - ISR4331-DC/K9, SEC
  - ISR4331 AX APP &SEC LIC
  - ISR4221
  - C9200L-24T-4X-A
  - C100016T-E-2G-L
  - C1000FE-24T-4G-L
  - The following table highlights how the new components will be deployed in the SR10A.7 upgrade.

Site	FPR1010	C1111-4P	C921	ISR4331	ISR4221	C9200L-24T-4X-A	C100016T-E-2G-L	C1000FE-24T-4G-L
NSC-1/NSC-2	2	2	2	2	-	2	-	-
Dispatch	-	7	-	-	-	-	-	8
ISSI		1						
RF Sites	-	-	-	2	9	-	33	-
Spares	1 *1 (NSC)* - -	2 *1 (NSC)* *1 (DSP)* -`	1 *1 (NSC)* - -	2 *1 (NSC)* - *1 (RFS)*	1 - - *1 (RFS)*	1 *1 (NSC)* - -	2 - - *2 (RFS)*	1 - *1 (DSP)* -
TOTALS	**3**	**12**	**3**	**6**	**10**	**3**	**35**	**9**

This equipment provides a built in redundancy should an individual switch fail in the new architecture. The figure below shows a 10-channel switch loop configuration allowing for a subset of the RF channels to remain online in the event one C1000 unit fails. The single point of failure in this architecture is now only the router (where in previous configurations the SAS and the SAR were both single points of failure).



CORE UPGRADE

L3Harris will replace existing CCB and Madison UW Tower NSC cores with new SR10A.7 primary and secondary NSC cores, respectively. These are VIDA Premier NSC cores with location High Availability (HA). The NSC will be comprised of multiple Virtual Servers running in a VM-Ware environment on a single VAS Server. The new SR10A.7 NSCs will include the routers and firewalls to provide network interface to the system backhaul.

L3Harris will leverage the existing network infrastructure, site equipment and reuse valid L3Harris licenses across the system.

Engineering services are included in the Dane County Facility for Power-Up, Final Configuration, Equipment Transition, and Functional Test (FATP) of new SR10A.7 HA-NSC

This SR10A.7 NSC includes Virtual Servers and applications that replicate the same level of functionality as the current legacy system.

Real-Time Applications and Services

- Voice Network Interface Controller (VNIC)
- Transcoding (XCDR)
- Inter System Integration (ISSI)
- BeOn Foundation (BeOn)

Administration and Management Applications and Services

- Unified Administration System (UAS)
- Regional Network Manager (RNM)
- Regional System Manager (RSMPro)

Baseline Cybersecurity Services

- Active Directory (AD)
- McAfee® ePolicy Orchestrator (ePO)
- Security Update Management Service (SUMS)

BeOn Foundation

DaneCom already has L3Harris BeOn Premier licenses capable of supporting up to 500 users. This proposal includes BeOn functionality and will reuse existing BeOn licenses.

ISSI Redundancy (New)

This proposal includes necessary product, equipment and services to support ISSI redundancy

L3Harris will leverage the existing licensing for ISSI software and two (2) external connections.

Necessary services for configuring Dane's side of primary and redundant ISSI is included in the pricing. However, the equipment and services required for the external entities are not part of this contract.

The De-Mark point for the secondary ISSI is the IFW interface ports. Dane County is responsible for connectivity to the external systems.

StatusAware (New)

This proposal includes Status Aware offering with Software and licensing to support 100 devices.

StatusAware software and license to monitor the presence information of any 100 end points (P25 radios, BeOn mobile clients) at the external CAD/AVL applications. This contract does not include integration and testing services that is required to interface with external CAD/ AVL applications. When the County is ready to integrate StatusAware with CAD services, the necessary details shall be worked and priced accordingly between the County and the L3Harris Team.

This contract includes server and core components configuration to enable location monitoring of P25 radios (Tier 2 GPS updates) and BeOn mobile clients on BeOn windows User-Interface (UI) and/or Symphony consoles. L3Harris supports Tier 2 and In-Band GPS for GPS location monitoring of P25 radios on StatusAware. Only five to ten radios will be configured to test the setup and not the whole fleet.

Subscriber programming or In-Band GPS configuration is not part of this procurement.

Enterprise Network Manager (ENM) (NEW)

This proposal includes Enhanced Enterprise Network Management offering with Software and licensing to support 1,532 checks (250 of which were included in Amendment 12 and 1,282 are additional) in DaneCom's high availability configuration where the documented cover both the Primary and Secondary NSCs.

L3Harris has presented the following plan for the use of these quantities of ENM checks:

Device	Device	Total (System)	Notes:
Premier core - base	215	215	Required
IFW	5	10	Suggested
StatusAware	5	5	Suggested
NIDS	5	10	Suggested
Unitrends	5	10	Suggested
MPLS Routers	6	72	Optional
Site Routers	6	108	Optional
Site Switches	5	246	Optional
P25 Channels	2	20	Optional
P25 Sites	3	33	Optional
NWS	6	78	Optional
MME	2	4	Optional
UAC Cards	2	36	Optional
Symphony	10	430	Optional
System Checks		**1,277**	
Spares	20%	255	Optional
Dane County ENM License Check Count		**1,532**	
Scoped Checks on Contract (A12)		-250	
ENM Count Net Change from Amendment 12		**1,282**	**Optional**

Digital Fixed Station Interface (New)

This proposal includes DFSI software and license to support ten talkpaths.

The DFSI interface and required configuration, design and pricing for the new Tait conventional system to be installed at Middleton are not included in this scope and shall be obtained once the local agency is ready for the upgrade.

Unitrend Backup Server (New)

This proposal includes two Unitrend information backing servers as part of the VIDA core.

Logging Recorder/Other Third-Party Interfaces

The scope of this proposal does not include equipment, software or services for logging recorders or other third-party interfaces. Verint V15.2 logging recorder interface has been validated against the L3Harris interface for SR10A.7. The existing core and talkgroup licenses for the two (2) Verint recorders are transferable at no additional cost.

CyberSecurity

> L3Harris will establish standard VIDA baseline cybersecurity as described by Active Directory, McAfee Anti-Virus, and SUMS services in System Description.

> Existing Active Directory user accounts will be migrated to the new system during the upgrade.

> Existing Active Directory Domain and Certificate Authority will be migrated to the new system during the upgrade.

CONTROL POINT AND SIMULCAST CELL UPGRADE

> Verona RF site upgrade to become a Distributed Control Point (DCP), leveraging license from City County Building (CCB).

> Install & Configure new MME Data Mobility Exchange at Verona RF site.

> Install & Configure new network equipment at Verona.

> Madison UW RF site upgrade to become a Distributed Control Point (DCP,) leveraging license from Madison Community (UW) Tower.

> Install & Configure new MME Data Mobility Exchange at Madison UW RF site.

> Install & Configure new network equipment at Madison UW RF site.

> Decommission CCB Control Point (CP) after upgrade.

> Decommission Madison Community (UW) tower CP site after upgrade.

SITE UPGRADE

> Replacement for a subset of the existing end of life SpectraCom GPS receivers is included in this proposal

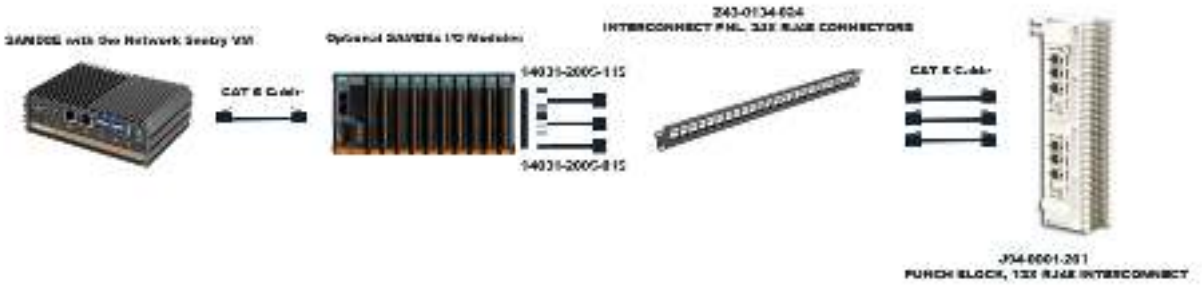
- Site Ru netclocks – Qty 12
  - One of the two netclocks at all the eleven simulcast sites will be replaced (Qty 11)
  - One (1) Ru netclock is available as a spare
- Core non-Ru netclocks – Qty 4
  - Two (2) non-Ru netclocks will be replaced as part of the Vida Cores
  - Two (2) non-Ru netclocks are included as spares

> Station code will be upgraded to latest version.

> VIDA Edge (replacement of NetSentry Workstation)

- L3Harris will replace all NetSentry Workstation (NWS) equipment and buy-back current units in production.
- All NWS units and punchdown blocks will be removed and dispositioned.
- L3Harris will arrange installation and scheduling with a qualified installation technician to commission the equipment.
- For the Dane County SR10A.7 upgrade project, the proposed modules will support current I/O requirements currently performed by the active NWS units in production.
- A total of 13 Site Managers will be provided with the following quantities modules:

VIDA Edge Hardware	QTY
Module, Digital Input (16) Active High	16
Module, Digital Output Synch (16)	9
Module, Digital Input (16) Active Low	29
Module, I/O Controller Module	14



- L3Harris is currently forecasting VIDA Edge equipment to minimize project schedule slips from a material availability perspective. Installation labor will add some additional time at the sites to decommission the NWS units currently in production and install the new virtual site equipment. The schedule reflects the VIDA Edge installations and decommissioning of the current Network Sentry units currently in production at Dane County.

> Dispatch Upgrade

- A total of 42 Symphony consoles will be reimaged to Windows 10 and upgraded to SR10A.7 software;
  - CCB (Qty 21),
  - EDC (Qty 14),
  - Test Consoles (Qty 1)
  - Local Agencies (Qty 6)
    - Sun Prairie (Qty 2)
    - Middleton (Qty 1)
    - Fitchburg (Qty 3)
- Further, L3Harris will provide a quantity of four (4) VIP console upgrades at no additional expense while extending this contract credit to remain flexible should the customer desire to upgrade the qty (4) VIP consoles at a later date but not later than September 30, 2021. This VIP upgrade mentioned herein only covers the Windows-10 LTSB image, the VIP software, and the labor to upgrade the unit. SR10A.7 is not compatible with Windows-7 or Windows-8 for the VIP consoles.

> UAC Card

- Dane County currently has four sites utilizing an Interoperability Gateway: CCB, EDC, Madison UW, and WMGN. Of these 4 sites, CCB is the only site that has card slot availability to introduce a new UAC. L3Harris will provide one additional UAC card to double the CCB audio channel interface count from four (4) talk paths to eight (8) talk paths. This UAC card does not include labor services – only equipment. L3Harris can quote installation if Dane County desires.

Acceptance Testing

L3Harris will perform system acceptance testing per the attached functional acceptance test plan (FATP).

Prior to initiation of any Acceptance Testing, L3Harris and Dane County shall review the preliminary Acceptance Test Plans (ATPs) included below and shall make mutually-agreeable modifications to ensure the ATP's test: i.) any system existing functionalities, features, or operations that may be impacted or altered by the upgrade and ii.)
any new functionalities, features, or operations that are incorporated into the system as part of this upgrade that the County purchased previously or has purchased as part of this upgrade.
Any such revisions or additions shall be able to be completed as part of the FATP in a reasonable timeframe and with available test methods and tools. The Factory ATP does not represent the entire ATP but only L3Harris tests that are appropriate for a pre-system checks prior to shipping.

The L3Harris Upgrade Team notifies the Dane County when installation and upgrade are complete, and the system is ready for acceptance testing.

System Documentation

L3Harris will provide typical as-built documentation for system upgrades which include:

- Rack configuration drawings,
- Revised network schematics,
- S/W Audit
- Configuration Files
- Technical Manuals and Users Guides for the new components

Migration Strategy

UPGRADE TO SR10A.7 – METHODOLOGY

The following methodology is preliminary. L3Harris and Dane County will mutually develop and confirm a plan prior to initiation of the upgrade and migration/cutover.

The procedure for system upgrade usually consists of four main phases:

- Upgrade Preparation and Planning
- Core Infrastructure Replacement
- Network Updates
- Sites and Dispatch Upgrades

Each phase is completed and the system evaluate for stability before proceeding to the next phase. A summary of tasks required to provide trouble free migration is as follows:

Backhaul Upgrade – Through Replacement and Patching

MPLS routers with V1 chassis will be replaced with V2 chassis.

1. Review current MPLS configuration, capacity and hardware.
2. Identify current network equipment and design
3. Determine what network equipment can be re-used (if any) and what must be replaced
4. Replace any necessary hardware
5. Upgrade any hardware being re-used
6. Reconfigure network as required to support the upgrade path
7. Test and Burn-In new configuration to prove stability

Core Upgrade – Through Replacement

A core replacement will provide the quickest and most seamless upgrade. This method will allow off-site staging & testing to be performed and will ensure the core works as expected before delivery to site. Then, installing the new equipment rack in close proximity to the existing rack allows for straight forward network cable moves to put the new system into service.

The core replacement method of upgrade typically consists of the following basic steps:

1. Ensure current system HA capability is functioning properly
2. Migrate existing databases.
3. Split cores (NSC1 is Active)
4. Cutover NSC2
5. Failover to new NSC2
6. Preliminary Functional Testing
7. Burn-in period to prove stability
8. Cutover NSC1
9. Preliminary Functional Testing
10. Heath Check
11. Test and Burn-In new configuration to prove stability
12. Perform Functional Plan

Active Directory integration: For small to medium size upgrades the engineer will unjoin & rejoin peripherals (NWS's, consoles, SMT's) to the VIDA Active Directory domain. This is done to reduce service interruption while the cores are being replaced. Large systems with a large number of peripherals will require a different approach. In this case, special procedures are followed to migrate the existing Active Directory to the new cores.

Network – Review Current Network Configuration, Capacity and Hardware

Typical network upgrades follow the basic steps below:

1. Identify current network equipment and design
2. Determine what network equipment can be re-used (if any) and what must be replaced
3. Replace any necessary hardware
4. Upgrade any hardware being re-used
5. Reconfigure network as required to support the upgrade path
6. Test and Burn-In new configuration to prove stability

Simulcast Cell Upgrades

Each Simulcast cell must be upgraded (i.e. not site-by-site) If the cell has by-pass capability it is recommended to go into bypass to reduce service interruption. The basic order of upgrade is the same as for Multi-Site with some modifications:

1. Read out NWS, MME and Base station personalities for all sites
2. Upgrade Personalities to the desired version
3. Cross-Reference original and upgraded personalities for errors and/or required changes
4. Switch to Bypass and disconnect Bypass site from network
5. Upgrade All Base stations simultaneously
6. Write Upgraded Personality simultaneously
7. Upgrade MME’s
8. Write Upgraded Personality
9. Upgrade NWS’s
10. Write Upgraded Personality
11. Switch out of bypass
12. Confirm Functionality
13. Upgrade Bypass site while disconnected
14. Reconnect Bypass sit
15. Test Control Point Failover
16. Confirm Functionality

Simulcast cells should not experience differing behavior between upgraded vs. non-upgraded sites as they will be all be simultaneously upgraded to the same version of code. But there could still be issues when roaming between the simulcast cell and other older version sites

DANE COUNTY, WI

Primary Network Switching Center & Control Point

ISSI VM

Primary NSC

21 Symphony Consoles & Back-up Control Stations

WAR

Alcatel 7705

City County Building (CCB)

Secondary Network Switching Center & Control Point

Secondary NSC

WAR

Alcatel 7705

Distributed Control Point

SAR

Madison Community (UW) Tower

FIBER

Subsystem

Sun Prairie

SAR

2 Symphony Consoles

NWS V2

Middleton

SAR

1 Symphony Console

Fitchburg

SAR

3 Symphony Consoles

NWS V3

Backup Dispatch Center

SAR

14 Symphony Consoles & Back-up Control Stations

11 Tx Sites

P25 Trunked VHF Countywide Voice System

Stand-Alone Distributed Control Point (DCP) Sites

Stand-Alone DCP at CCB & Madison UW

3 TX Sites
5 RX Sites

VHF Conventional Mutual Aid System

MICROWAVE BACKHAUL
*
**

VHF Analog Paging System

9 Sites

UHF Siren Control System

Main and Backup

11 Sites

Conventional Analog Tactical Channels

* Brigham T1 Connectivity
** DeForest Fiber Connectivity
NOTE: 1 spare Symphony Console located in storage

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Dane County Current System	**Dane County, WI SR10A.7 P25 Upgrade Project**
DATE: 5/19/2021	
PREPARED BY: MFB	
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DANE COUNTY
As-Built MPLS

Not a P25 Location

Deerfield r1s16u1mls
172.16.60.26/32

SAR-8 V1

4.9 radio

4.9 radio

172.16.60.208/30

Sun Prairie r1s12u1mls
172.16.60.22/32

SAR-8 V1

WJJO r1s33u1mls
172.16.60.43/32

(SAR-8 V2)

172.16.60.196/30

Roxbury r1s9u1mls
172.16.60.19/32

SAR-8 V1

172.16.60.244/30

Rockdale r1s11u1mls
172.16.60.21/32

SAR-8 V1

172.16.60.248/30

Eisner r1s10u1mls
172.16.60.20/32

SAR-8 V1

172.16.60.240/30

172.16.60.252/30

Stoughton WT r1s30u1mls
172.16.60.40/32

(SAR-8 V2)

172.16.60.236/30

r1s0u1rar
10.128.3.1/32

10.128.3.244/30

172.16.60.192/30

Madison UW r1s0u2mls
172.16.60.2/32

SAR-8 V1

172.16.60.232

Verona r1s13u1mls
172.16.60.23/32

SAR-8 V1

172.16.60.228/30

CCB r1s0u1mls
172.16.60.1/32

SAR-8 V1

172.16.60.172/30

DeForest r1s32u1mls
172.16.60.42/32

SAR-M

172.16.60.224/30

172.16.60.220/30

MkKee r1s15u1mls
172.16.60.25/32

SAR-8 V1

SAR-8 V1

WMGN r1s14u1mls
172.16.60.24/32

Legend

- TiMOS 6.1
- TiMOS 9.0
- P25 TX/RX
- P25 NSC
- DCP L1
- DCP L2

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Dane County MPLS Block Upgrade Plan	Dane County, WI SR10A.7 P25 Upgrade Project
DATE: 5/19/2021	
PREPARED BY: MFB	
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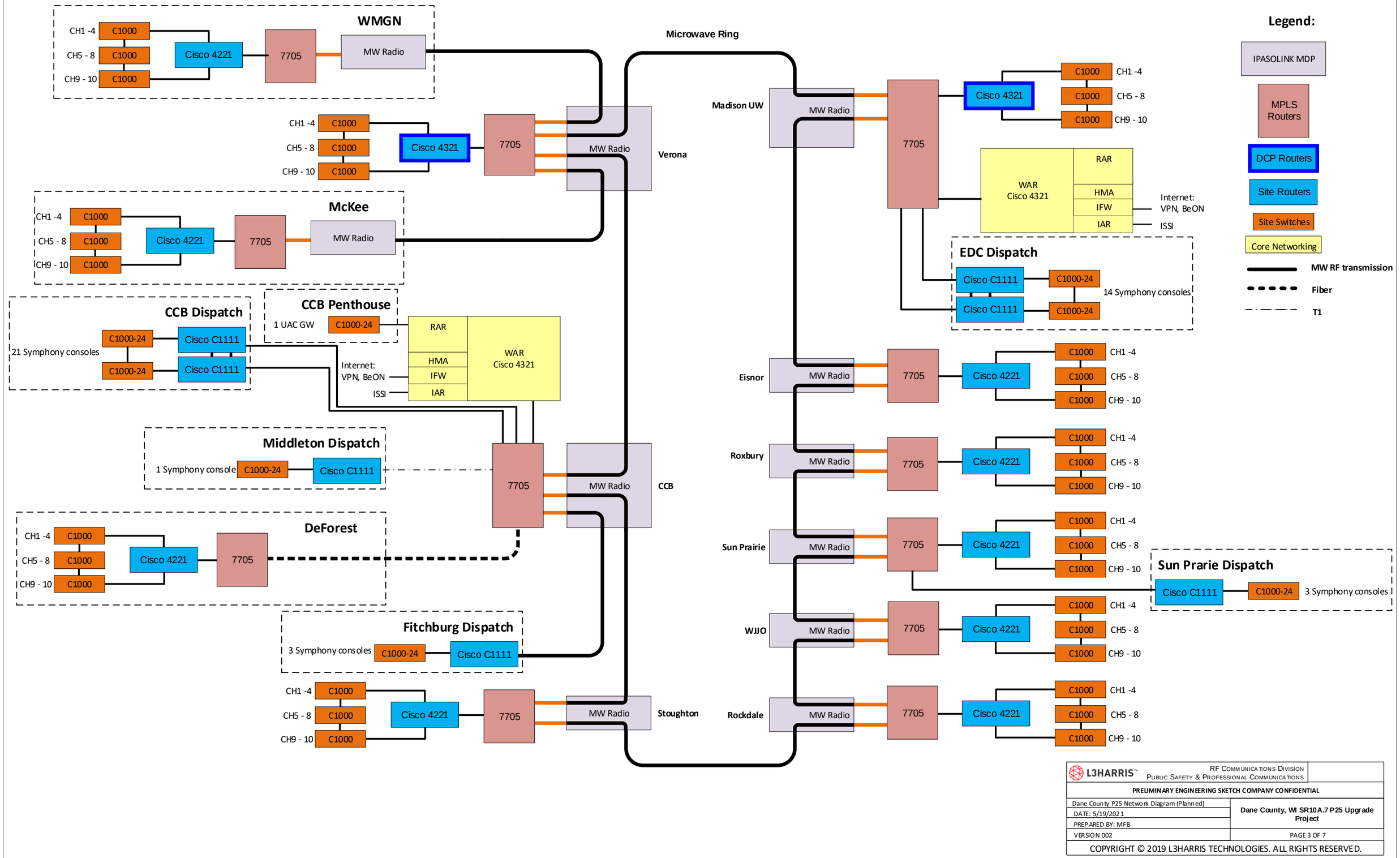

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Dane County P25 Network Diagram (Planned)	Dane County, WI SR10A.7 P25 Upgrade Project
DATE: 5/19/2021	
PREPARED BY: MFB	
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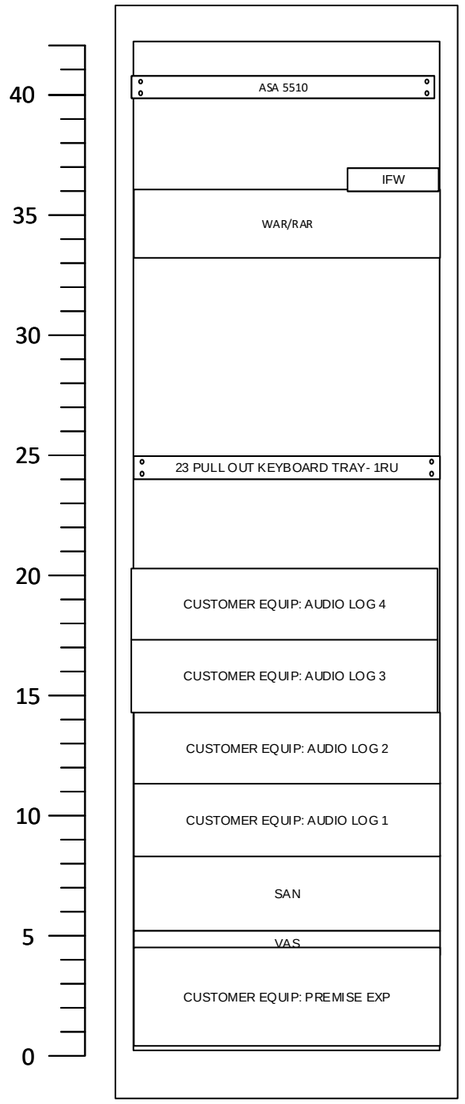
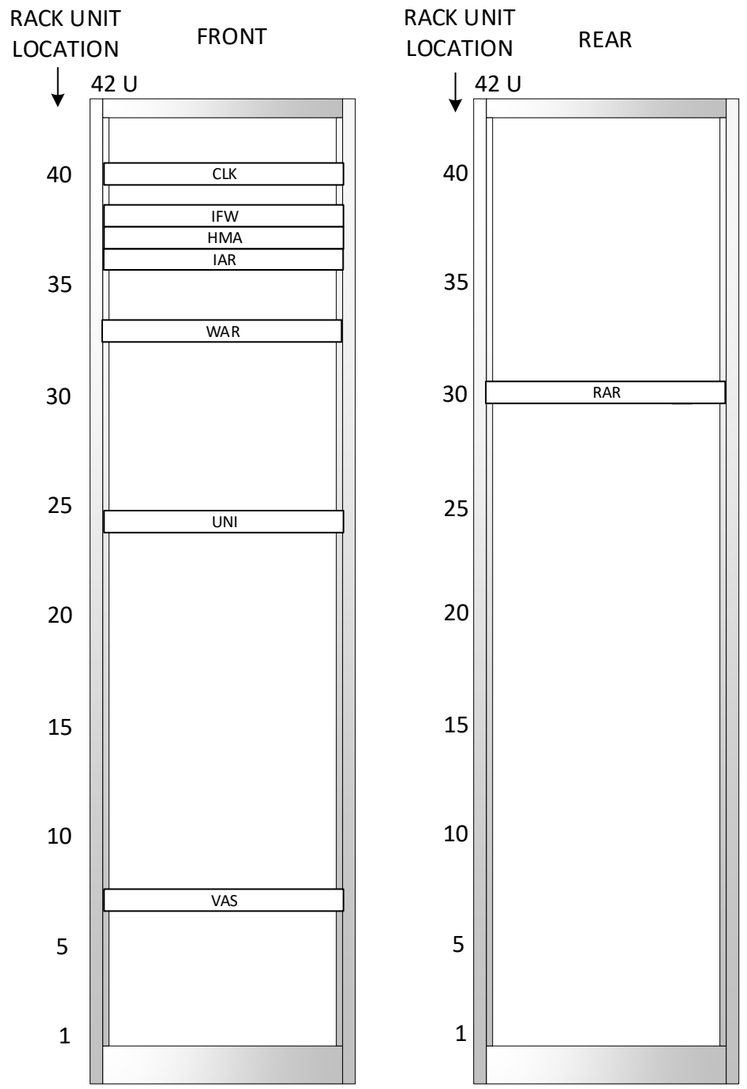
Current Rackup



PRIMARY NSC RACK #1
HEIGHT: 83";
WIDTH: 24";
DEPTH: 40"

Proposed Rackup



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Dane County NSC1 Rackup	**Dane County, WI SR10A.7 P25 Upgrade Project**
DATE: 5/19/2021	
PREPARED BY: MFB	
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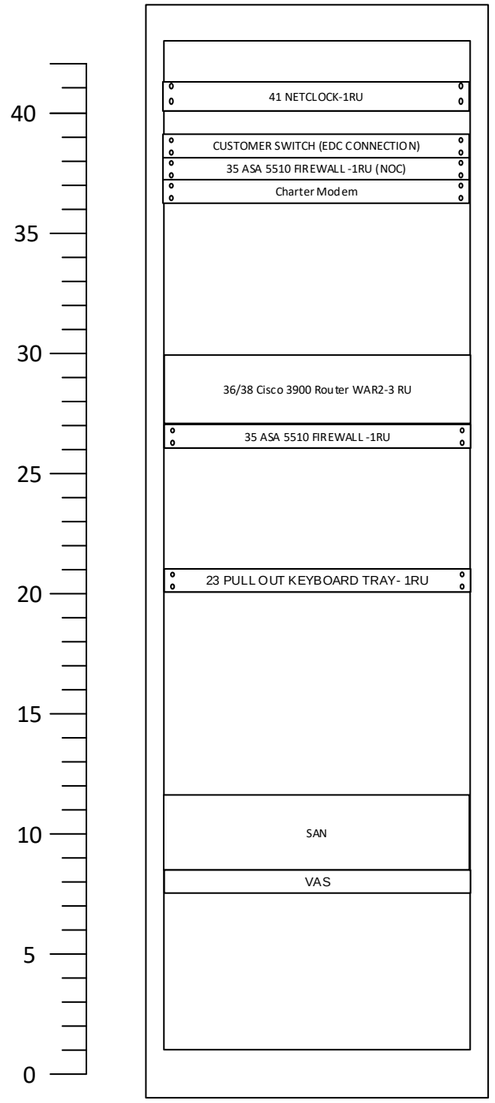
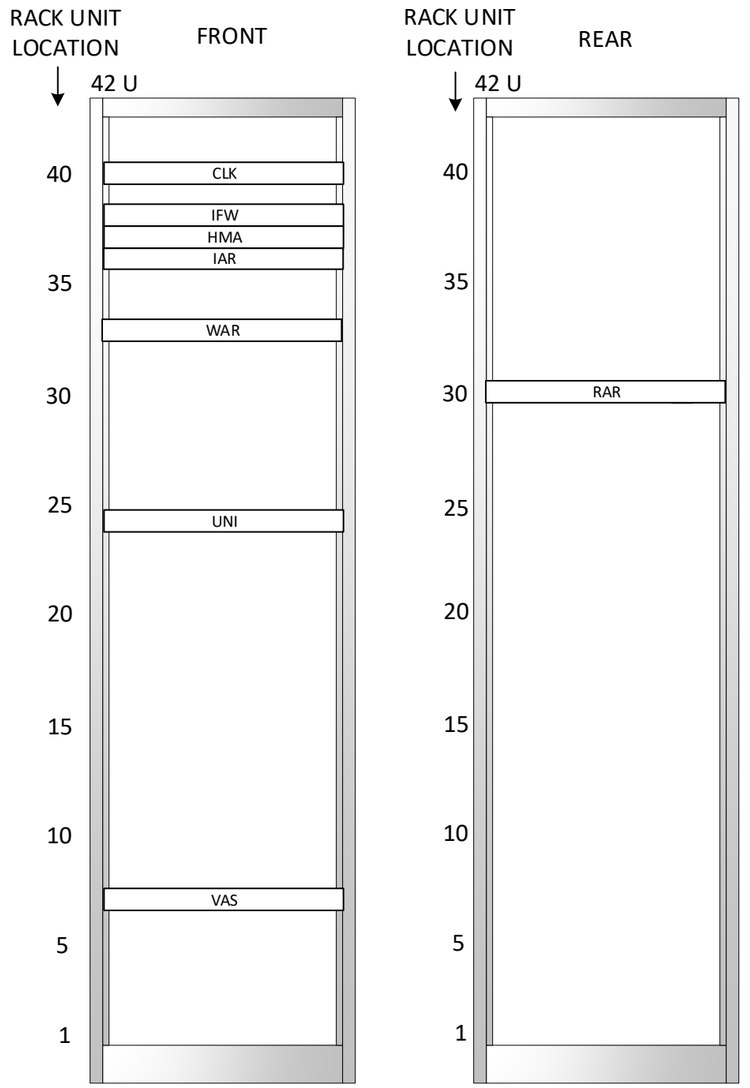
Current Rackup



Proposed Rackup



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Dane County NSC2 Rackup	**Dane County, WI SR10A.7 P25 Upgrade Project**
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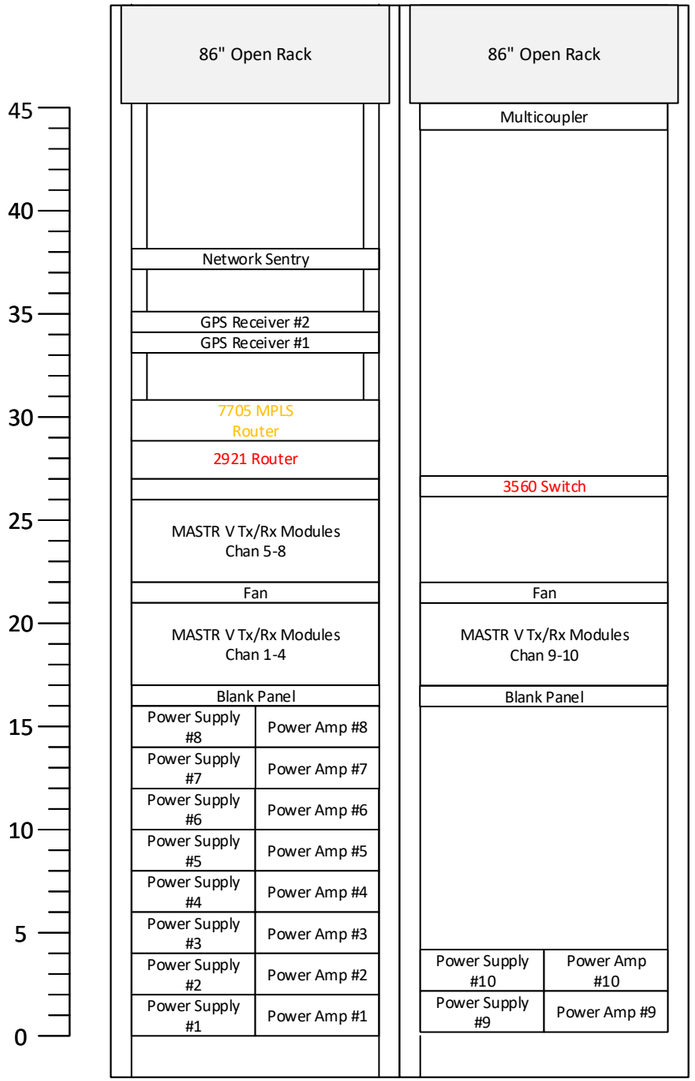
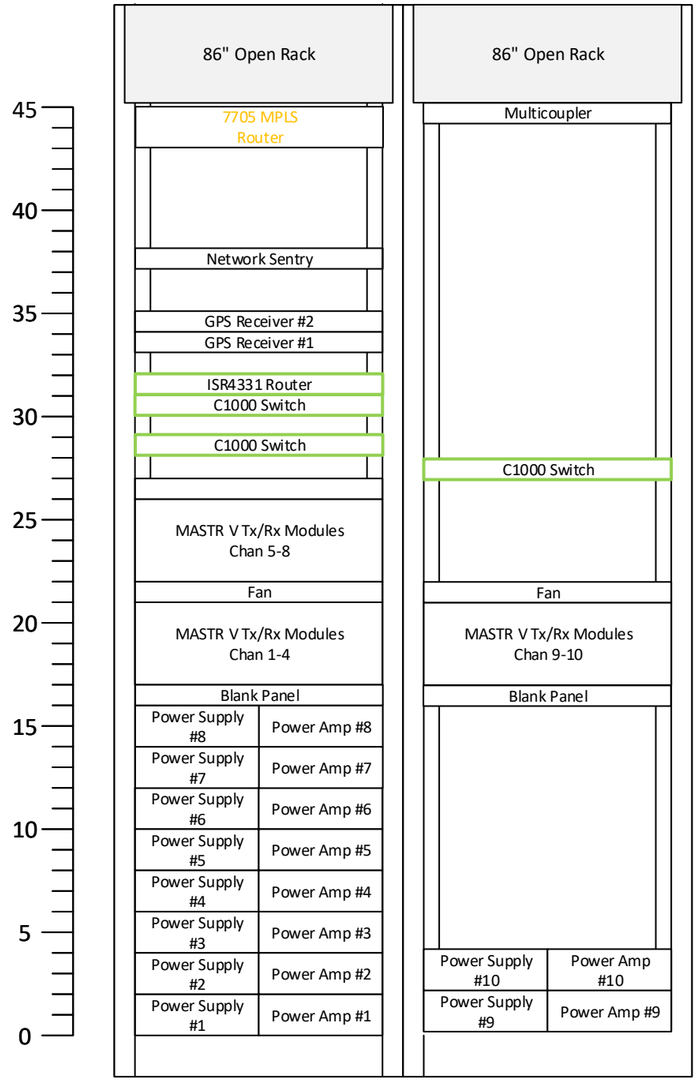
Current Rackup



Proposed Rackup



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Dane County DCP Site Rackup	**Dane County, WI SR10A.7 P25 Upgrade Project**
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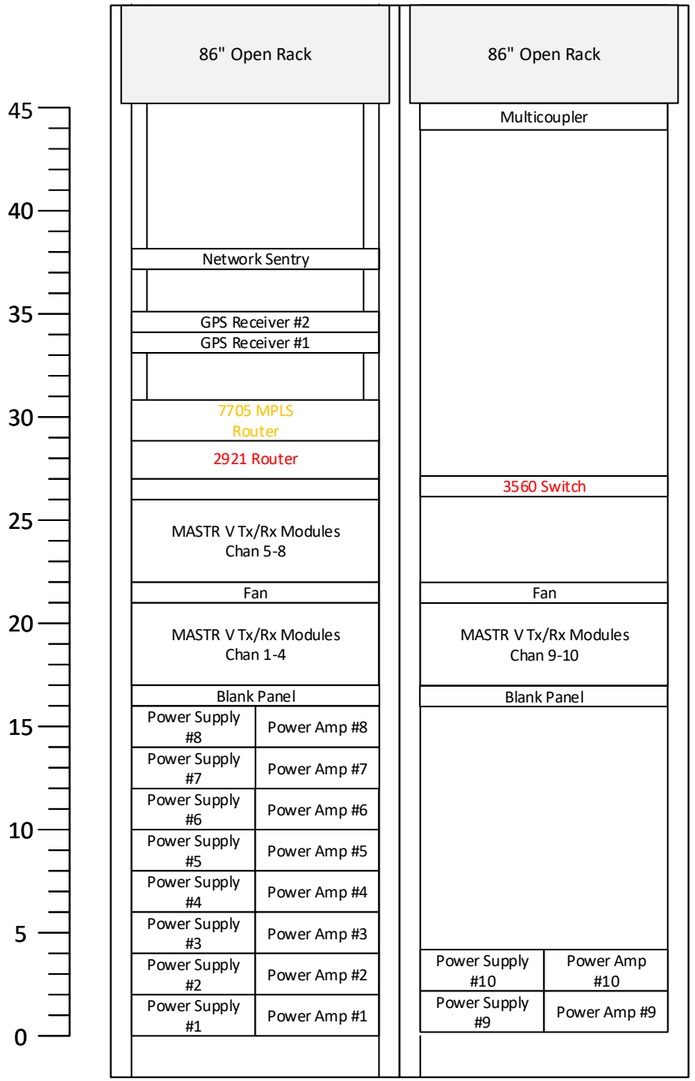
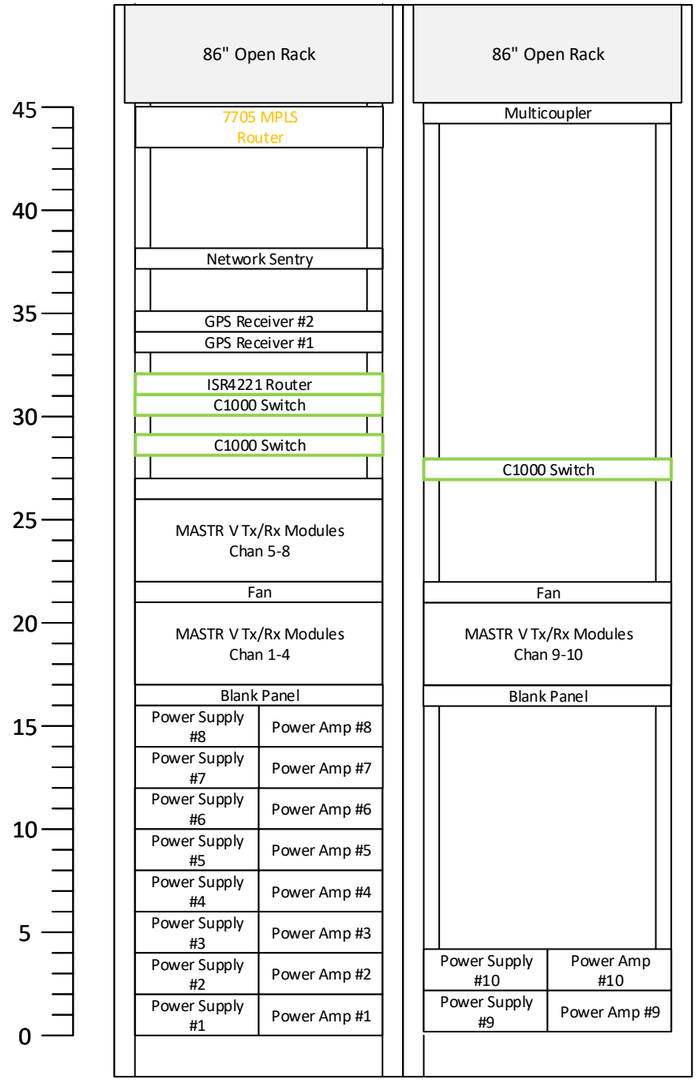
Current Rackup



Proposed Rackup



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PRELIMINARY ENGINEERING SKETCH COMPANY CONFIDENTIAL

Dane County non-DCP Site Rackup	**Dane County, WI SR10A.7 P25 Upgrade Project**
DATE: 5/19/2021	
PREPARED BY: MFB	
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IMPLEMENTATION PLAN

Project Management Team

The L3Harris Team has implemented over 500 large-scale radio communications systems throughout the world. These systems include many of the largest networks for public-safety, utility, and transit customers in the industry. Given this decade long success, The L3Harris Team has a reputation for building strong, cohesive project teams

THE L3HARRIS TEAM

The below details describe The L3Harris Team assigned to the project. It also reflects the various support and management functions that will provide critical program and technical assistance throughout the course of the project. Following is a brief description of the key team members and the roles that they will perform.

Project Manager

This manager's primary responsibility is the successful implementation, integration, optimization, and acceptance of the project. The project manager will manage all phases of the project from the beginning through acceptance. He or she is responsible for ensuring the progress and quality of work, managing overall project cost, and processing any contract changes. All official communications regarding the project will be held between the project manager and Dane County.

Once the contract is signed, the project manager and the implementation team will work to prepare for the upcoming installation. The project manager will determine when site surveys are required and will assign a site survey team to begin work. Through the support of L3Harris' procurement, manufacturing, and order logistics functions, the project manager will ensure the ordering and shipping of materials and equipment. In addition, he or she will ensure that services are coordinated in support of the project schedule.

The project manager's responsibilities include but are not limited to the following:

- Managing all aspects of the project
- Setting up and managing the project team
- Conducting project activities according to the contract and within scope, quality, time, and cost constraints
- Developing a formal project schedule and updating it as necessary
- Reviewing, approving, and distributing all plan changes
- Managing risks
- Project Communications, team progress meetings, and issue resolution

System Engineer

The system engineer will have full technical responsibility for the technical implementation of the proposed system solution. He or she will be responsible for integrating standard L3Harris products as well as vendor products (agreed to in the system purchase contract). The system engineer will also participate in all technical review meetings and provide technical support to the project manager.

The system engineer will oversee the system acceptance test defined by the contract as the Acceptance Test Plan (ATP). In addition, the system engineer will provide technical support to the Technical Publications department for provision of as-built drawings and other technical documentation deliverables.

- Create an upgrade & transition plan to accomplish the desire system upgrade
- Order, stage, configure and test replacement equipment
- Oversee installation and power up of replacement equipment
- Perform network and core upgrades, transition new equipment in to service
- Provide instruction for site and dispatch upgrades as defined by the scope of work

PROJECT EXECUTION

Design Reviews

Kickoff Meeting and Preliminary Planning Review

The project manager will initiate the project with a Project Kick-off Meeting followed by a Preliminary Upgrade Planning Review.

The objectives of the meeting include:

- Introduction of all project participants
- Review of the roles of the project participants
- Review of the overall project scope and objectives
- Review of the current site status
- Review planned post-upgrade system configuration
- Review migration strategy and functional test plans
- Review of the project schedule

Figure 1. Upgrade/Implementation Review Responsibility Matrix

TASKS	L3HARRIS	DANE COUNTY	COMMENTS
Review SR10A.7 Upgrade Contract Requirements	X	X	
Identify Resources	X	X	
Prepare an SR10A.7 Core Design Document detailing the hardware, OS software and applications which will be provided	X		
Provide a System Upgrade Plan which includes Project Team roles, responsibilities, structures and tasks and delineating L3Harris and Dane county responsibilities	X		
Provide a Project Schedule	X		
Prepare SR10A.7 Test Plan	X		
Conduct Implementation Plan Review Meeting	X	X	
Approve* the SR10A.7 Design Document		X	
Approve* the System Upgrade Plan		X	
Approve* the Project Schedule. Project will not proceed without County approval, L3Harris will work with the County to secure an approved Project Schedule		X	

Manufacturing and Staging

The project team will procure material and schedule manufacturing using its Enterprise Resource Planning system. The factory will receive orders to manufacture the equipment. In addition, vendor/subcontractor items will be ordered. Factory specifications will define the test for each individual rack of equipment.

After manufacturing and test, factory technicians and system engineers will assemble the equipment in the factory staging facility. The system engineers will work with staging technicians to make all intra-rack connections for each site's equipment. Ethernet cable connections will simulate transmission networks and ensure the demo site equipment connects to the network switches and consoles. Technicians will set the IP addresses and verify operation of the network. Consoles will be set up to demonstrate dispatch operation. System levels will be verified, and all features will be tested to signify the system is ready for shipping.

Figure 2. Manufacturing Responsibility Matrix

TASKS	L3HARRIS	DANE COUNTY	COMMENTS
Place orders with the factory	X		
Place orders with key suppliers/vendors	X		
Manufacture all infrastructure equipment	X		

TASKS	L3HARRIS	DANE COUNTY	COMMENTS
Assemble, configure & test equipment in Lynchburg staging area	X		
Break down equipment and ship	X		
Receive equipment & provide temporary storage near NSC locations	X		

Shipping, Warehousing and Inventory

At the end of staging, the equipment will be prepared for delivery to Dane County. Each rack will be crated to ensure safe transportation. L3Harris arranges to ship equipment and materials to a customer-provided storage area near the point of installation where it will be received. At the storage area, the equipment is inventoried, and the material is collected for delivery to the installation sites.

Figure 3. Shipping, Warehouse & Inventory Responsibility Matrix

TASKS	L3HARRIS	DANE COUNTY	COMMENTS
Break down equipment and ship to storage area	X		
Provide temporary storage prior to installation	X		
Inventory equipment	X		
Validate L3Harris equipment inventory		X	
Collect all equipment on a per site basis, ready for the installation teams.	X		

System Installation, Upgrade and Transition

Upon completion of the upgrade planning reviews, the project team's first installation priority will be to work with the Dane County to coordinate the installation and upgrade activities.

The installation team will install the new equipment at the locations disclosed in the system design and integrate the proposed subsystems as described in the Scope of Work to provide an end-to-end network solution.

Systems for hardware replacement and installation include:

- Core Network Switching Center upgrade

Systems requiring software only upgrade include:

- P25 radio system/sites upgrade
- Dispatch consoles upgrade

The installation plans will be developed during the detailed planning phase of the project. The installation plan will coordinate all activities of the project team, minimizing conflicts and ensuring that system implementation proceeds efficiently. Where currently operational communications equipment

co-exists with the installation of new equipment, the project team will take great care to ensure that there is little or no disruption in service.

Disposition of Removed Equipment

All equipment currently owned by the County, which may be removed or replaced due to the system upgrade or for any other reason, shall remain the sole property of the County. As such, the County may disposition the equipment at the County's sole discretion.

Figure 4. System Upgrade Tasks

TASKS	L3HARRIS	DANE COUNTY	COMMENTS
Backup all the UAS, KMF, & RNM Databases	X		
Backup all the NSS (VNIC & HA), RSMPro (SMS, DM Repository, AW), & ISSI Personality/Configuration files	X		
Archive AW data	X		
Verify that all database backups are completed	X		
Ship equipment to NSC locations	X		
Provide install space adjacent to legacy NSC Cabinets		X	
Install new Servers in Racks/Cabinets	X		
Failover to Secondary NSC's	X		
Connect primary NSC's to Network	X		
Failover back to primary NSCs	X		
Confirm call processing with new primary NSCs	X	X	
Restart the UAS VM and ensure provisioning is working between devices within the primary NSC	X		
Complete post upgrade Tests and Burn-in for minimum 24 hours	X	X	
Conduct post Primary NSC upgrade meeting – proceed decision point.	X	X	
Upgrade secondary NSCs & Test	X		
Return decommissioned equipment to the customer	X		
Dispose decommissioned equipment		X	

Site & Dispatch Installation, Upgrade and Transition

Upon installation of new Network Core System, the system engineer will work with the on-site system support specialists to upgrade the sites and consoles in preparation for acceptance testing.

Figure 5. Sites & Consoles Upgrade Tasks

TASKS	L3HARRIS	DANE COUNTY	COMMENTS
P25 Radio Sites			
Upgrade 11 P25 Sites:			
> Channel Site Pro's	X		
> Network Sentry	X		L3H to deinstall all Network Sentries and take possession of qty (4) NSW G4 units
> VIDA Edge	X		
> MME	X		
> Upgrade (2) P25 sites to DCP sites	X		
Perform Site High Level Functional Test	X		
Upgrade remaining P25 Radio Sites	X		
Dispatch Console			
> Upgrade Test Console Application Software	X		
> Perform Console High Level Functional Tests	X		
> Upgrade remaining Dispatch Consoles	X		

Figure 6. System Optimization Matrix

TASKS	L3HARRIS	DANE COUNTY	COMMENTS
Verify P25 system levels and parameters are set	X		
Verify system database is installed and operating correctly	X		
Verify proper dispatch operation	X		
Verify proper P25 system functional operation	X		
Verify proper network switching operation	X		

Acceptance Testing

L3Harris has provided a Functional Acceptance Test Plan as a preliminary document. Prior to initiation of any Acceptance Testing, L3Harris and Dane County shall review this preliminary Acceptance Test Plans (ATP') and shall make mutually-agreeable modifications to ensure the ATP's test: i.) any system existing functionalities, features, or operations that may be impacted or altered by the upgrade and ii.) any new functionalities, features, or operations that are incorporated into the system as part of this upgrade that the County purchased previously or has purchased as part of this upgrade.

Any such revisions or additions shall be able to be completed as part of the FATP in a reasonable timeframe and with available test methods and tools.

We will perform systems acceptance testing per the agreed upon acceptance test plan (ATP). The L3Harris Team notifies Dane County when installation and optimization are complete, and the system is ready for acceptance testing.

The system engineer provides documentation defining each of the test areas. The ATP procedures contain a short description, test methodology, and a record form for logging results and acceptance signatures for each test. We use a punch list to document any issues found, so the team can quickly resolve them. Follow-up documents will show the correction of open items. Upon satisfactory completion of each testing phase, the project manager will present the system acceptance documentation to Dane County's project manager(s). With Dane County's approval, the project team, and Dane County, can proceed with cutover.

Figure 7 provides a detailed listing of those acceptance testing activities performed by L3Harris, and those activities to be performed by Dane County.

Figure 7. Acceptance Testing Responsibility Matrix

TASKS	L3HARRIS	DANE COUNTY
Provide appropriate team members to participate in acceptance tests		X
Inspect NSC site, noting discrepancies on the punch list	X	
Submit site inspection results	X	
Approve or reject site inspection results within 5 business days. L3Harris will work with county to remedy any issues regarding inspections as they relate to the acceptance test plan		X
Perform functional ATP	X	
Submit functional ATP results	X	
Verify Functional Acceptance Test Results		X

Final Acceptance

Upon the completion of acceptance test plan (ATP) tests, cutover, and submission of the final drawing package, the project manager submits the final system acceptance letter for Dane County to sign. With the final acceptance, the project manager arranges a meeting with the field service team to review maintenance support during the warranty period. The L3Harris Team provides the contact information and procedures used to obtain service during the warranty period.

Figure 8. Final Acceptance Responsibility Matrix

TASKS	L3HARRIS	DANE COUNTY
Removal of decommissioned legacy network, console, or site infrastructure equipment	X	
Submit final drawing package	X	
Submit letter of final system acceptance	X	
Provide warranty and contact information	X	
Meet with L3Harris to review warranty contact procedures		X
Meet with L3Harris to outline system support and services requirements		X
Accept final drawing package (within 5 business days)		X
Sign letter of final system acceptance (within 5 business days)		X

Major Tasks and Deliverables

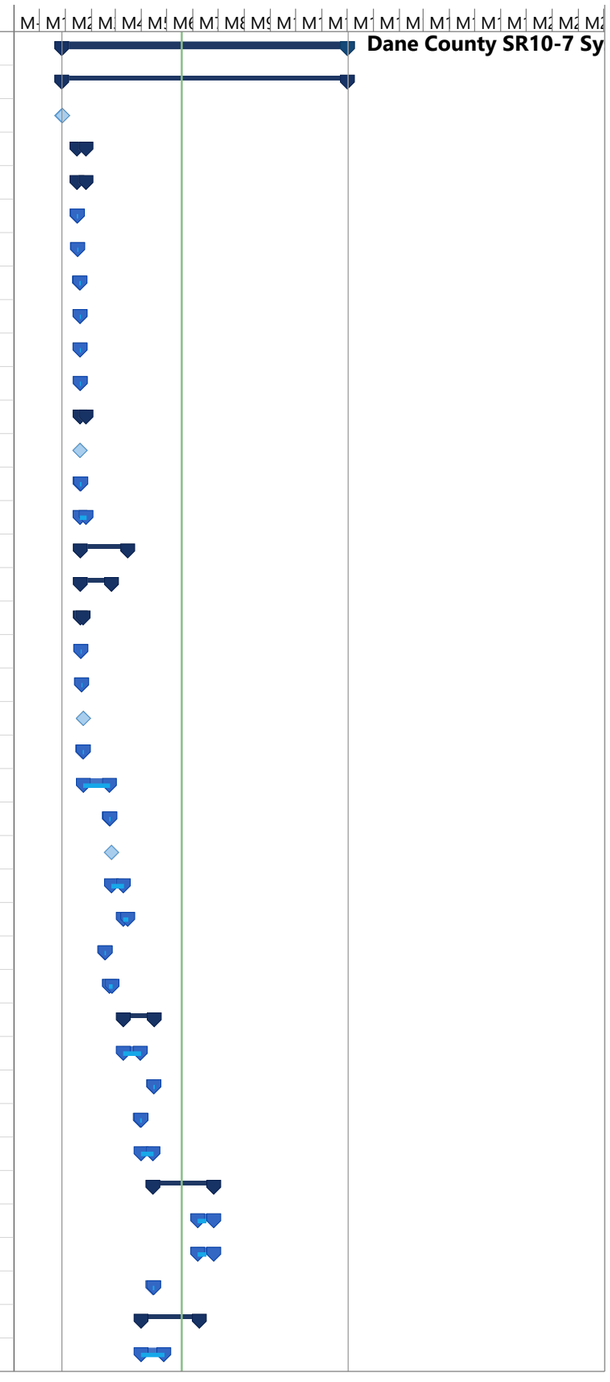
The High-Level tasks and Contractor deliverables will be as follows:

- Provide a detailed System Upgrade Plan which outlines the major upgrade steps delineating roles and responsibilities
- Provide Backout and Contingency Plans outlining alternative measures if upgrade(s) fail
- Provide a Project Schedule
- Prepare Upgrade Test Plan
- Conduct an Upgrade Implementation Plan Review Meeting
- Conduct regular progress meetings
- Audit and document current system hardware & software versions to ensure they are consistent with existing system information
- Backup system configurations & databases
- Supply new SR10A.7 Servers & Equipment per contracted scope of work
- Upgrade NSC Cores
- Support Upgrade and Test of Radio Sites (2)

- Support Upgrade and Test of Dispatch Consoles (1)
- Execute Functional Acceptance Test Procedures on System with Upgraded Software
- Resolve any Acceptance Test Issues
- Provide updated documentation

** (1), (2) – As defined by Scope of Work*

ID	Task Name	% Complete	Duration	Start	Finish	Predecessors
0	**Dane County SR10-7 System Upgrade**	**31%**	**242.75 days**	**Mon 12/28/20**	**Wed 12/1/21**	
1	**Program Work Flow**	**31%**	**242.75 days**	**Mon 12/28/20**	**Wed 12/1/21**	
2	Contract Sign	100%	1 day	Mon 12/28/20	Mon 12/28/20	
3	**L3Harris Internal Contract Set-up**	**100%**	**6.75 days**	**Fri 1/15/21**	**Mon 1/25/21**	
4	**Contract & Technical Hand-Off**	**100%**	**6.75 days**	**Fri 1/15/21**	**Mon 1/25/21**	
5	Prepare for Kick-off Meeting	100%	0.5 days	Fri 1/15/21	Fri 1/15/21	2FS+13 days
6	Update Technical Rev & Risk Assessment Form (DCPSE101-f01)	100%	0.5 days	Fri 1/15/21	Fri 1/15/21	5
7	Update Project records (DCPSE105-f01) form and folder	100%	0.5 days	Mon 1/18/21	Mon 1/18/21	6
8	Conduct Kick-Off & Technical Hand-Off Meeting	100%	0.25 days	Mon 1/18/21	Mon 1/18/21	7
9	Implementation Kick-off (Contract Hand-Off) Review Form (DCPPM003-f01)- Approvec	100%	0.13 days	Mon 1/18/21	Mon 1/18/21	8
10	Technical Design Handoff Review Form (DCPSE101-f06) Approved	100%	0.13 days	Mon 1/18/21	Mon 1/18/21	8,9
11	**Perform System Audit & Health Check**	**100%**	**5 days**	**Mon 1/18/21**	**Mon 1/25/21**	**8**
12	Request network access from customer	100%	0 days	Mon 1/18/21	Mon 1/18/21	5SS
13	install updated DM	100%	0.5 days	Mon 1/18/21	Tue 1/19/21	
14	F2F Auditor performs Audit / Health Check	100%	5 days	Mon 1/18/21	Mon 1/25/21	
15	**Kick-off Meeting / Upgrade Plan Review**	**100%**	**40 days**	**Tue 1/19/21**	**Mon 3/15/21**	
16	**Internal Upgrade Plan Review (UPR)**	**100%**	**27 days**	**Tue 1/19/21**	**Wed 2/24/21**	
17	**Material Planning**	**100%**	**3.25 days**	**Tue 1/19/21**	**Fri 1/22/21**	
18	Prepare Long-Lead Order or drive material planning	100%	0.5 days	Tue 1/19/21	Tue 1/19/21	10
19	Long-Lead Order Placed for Materials and Subcontractor Services	100%	1.75 days	Wed 1/20/21	Fri 1/22/21	31
20	Networking / Cyber Security Design Support (Update hours with quote from NPS)	100%	0 days	Fri 1/22/21	Fri 1/22/21	21
21	Finalize Implementation Schedule	100%	2 days	Wed 1/20/21	Fri 1/22/21	19
22	Prepare UPR Material	100%	21 days	Fri 1/22/21	Mon 2/22/21	21
23	Conduct Internal Upgrade Plan Review Meeting and close out of any outstanding issue	100%	0.5 days	Mon 2/22/21	Mon 2/22/21	22
24	UPR Form (DCPSE102-f06) Completed and Approved	100%	0 days	Wed 2/24/21	Wed 2/24/21	23FS+2 days
25	System Architecture, Site Requirements, & Documentation Final	100%	10 days	Thu 2/25/21	Wed 3/10/21	24
26	Prepare for and finalize UPR documentation	100%	3 days	Thu 3/11/21	Mon 3/15/21	25
27	Conduct Kick-off Meeting / Upgrade Plan Review (UPR)	100%	0.5 days	Wed 2/17/21	Wed 2/17/21	
28	Complete Action Items (Form DCPSE102-f03) identified in UPR	100%	3 days	Mon 2/22/21	Thu 2/25/21	22
29	**Customer Design Review (CDR)**	**100%**	**26.75 days**	**Thu 3/11/21**	**Fri 4/16/21**	
30	Prepare CDR Materials // Finalize Plan	100%	14 days	Thu 3/11/21	Tue 3/30/21	
31	Prepare / update SOWs for Subcontractor Services	100%	2.75 days	Wed 4/14/21	Fri 4/16/21	30FS+10 days
32	Host CDR Meeting with Customer	100%	1 day	Wed 3/31/21	Wed 3/31/21	31SS
33	CDR Approved by Customer - Billing Milestone	100%	10 days	Thu 4/1/21	Wed 4/14/21	20,28FS+2 days,32
34	**Cutover planning**	**63%**	**52 days**	**Thu 4/15/21**	**Fri 6/25/21**	
35	Develop a formal user cutover plan in conjunction with customer	50%	15 days	Mon 6/7/21	Fri 6/25/21	33
36	Formalize ATP for system	50%	15 days	Mon 6/7/21	Fri 6/25/21	33
37	Prepare SMENs	100%	10 days	Thu 4/15/21	Wed 4/28/21	33
38	**Change Order Activities**	**48%**	**49 days**	**Thu 4/1/21**	**Tue 6/8/21**	
39	Complete scope update file	100%	19 days	Thu 4/1/21	Tue 4/27/21	32



ID	Task Name	% Complete	Duration	Start	Finish	Predecessors
40	Negotiate Change Order	100%	4 days	Wed 4/28/21	Mon 5/3/21	39
41	Funding approval	0%	24 days	Tue 5/4/21	Fri 6/4/21	40
42	Updated PO issued	0%	0 days	Fri 6/4/21	Fri 6/4/21	41
43	**Place Orders**	**42%**	**17 days**	**Mon 5/17/21**	**Tue 6/8/21**	
44	Place Equipment Orders for System	100%	2 days	Mon 6/7/21	Tue 6/8/21	41
45	Place Orders for Installation Services	25%	2 days	Mon 5/17/21	Tue 5/18/21	33FS+22 days
46	Place Change Order 1.2 Material Order with Factory in SAP	0%	2 days	Mon 6/7/21	Tue 6/8/21	42
47	**Manufacturing and Staging**	**0%**	**43 days**	**Mon 6/7/21**	**Wed 8/4/21**	
48	**System Production**	**0%**	**38 days**	**Mon 6/7/21**	**Wed 7/28/21**	
49	Prepare Production Readiness Review (PRR) (DCPSE102-f07) checklist	0%	0.5 days	Tue 6/8/21	Tue 6/8/21	50FF
50	Update SMENs as needed	100%	0 days	Tue 6/8/21	Tue 6/8/21	33,44
51	Conduct PRR #1	0%	0.5 days	Wed 6/9/21	Wed 6/9/21	50
52	Submit approved Network Engineering / Configuration Plan to EFF	0%	0.5 days	Wed 6/9/21	Wed 6/9/21	51
53	Complete PRR Action Items list	0%	0.5 days	Thu 6/10/21	Thu 6/10/21	52
54	**LMR Manufacturing**	**0%**	**25 days**	**Mon 6/7/21**	**Fri 7/9/21**	
55	Material Acquisition for standard materials complete	0%	4 wks	Mon 6/7/21	Fri 7/2/21	41
56	Material Picked at Harris Factory	0%	5 days	Mon 7/5/21	Fri 7/9/21	55
57	All Equipment Delivered to EFF as required for Staging	0%	0 days	Fri 7/9/21	Fri 7/9/21	56
58	**LMR System Assembly and Staging**	**0%**	**13 days**	**Mon 7/12/21**	**Wed 7/28/21**	
59	System Assembly and Staging (Update duration from Factory Quote)	0%	8 days	Mon 7/12/21	Wed 7/21/21	57
60	Networking / Cyber Security Production Support (update hours with quote from NP	0%	0 days	Wed 7/21/21	Wed 7/21/21	59
61	Customer Database entered in new core	0%	3 days	Thu 7/22/21	Mon 7/26/21	59
62	ENM for 250 standard NSC checks	0%	1 day	Tue 7/27/21	Tue 7/27/21	61
63	Install Unitrends	0%	1 day	Wed 7/28/21	Wed 7/28/21	62
64	**ISE Internal Factory Acceptance Testing**	**0%**	**5 days**	**Thu 7/29/21**	**Wed 8/4/21**	
65	Conduct System Quality Audit (pre IFAT)	0%	2 days	Thu 7/29/21	Fri 7/30/21	63
66	Conduct Internal Factory Test (IFAT)	0%	2 days	Mon 8/2/21	Tue 8/3/21	65
67	Preship Audit Form (DCPSE102-f08) Completed and Approved	0%	1 day	Wed 8/4/21	Wed 8/4/21	66
68	**Shipping and Warehousing of Equipment**	**0%**	**9 days**	**Thu 8/5/21**	**Tue 8/17/21**	
69	Breakdown and Pack	0%	3 days	Thu 8/5/21	Mon 8/9/21	67
70	Infrastructure shipped	0%	5 days	Tue 8/10/21	Mon 8/16/21	69
71	Deliver to Storage Facility/Customer	0%	0 days	Mon 8/16/21	Mon 8/16/21	70
72	Verify Equipment Inventory	0%	1 day	Tue 8/17/21	Tue 8/17/21	71
73	System Shipment and Delivery Acceptance - Billing Milestone	0%	0 days	Tue 8/17/21	Tue 8/17/21	70,72
74	**MPLS Installation**	**0%**	**18.5 days**	**Fri 5/28/21**	**Wed 6/23/21**	
75	**MPLS Network Update**	**0%**	**18.5 days**	**Fri 5/28/21**	**Wed 6/23/21**	
76	Parse Inventory cards and new chassis	0%	0.5 days	Fri 5/28/21	Fri 5/28/21	19FS+18 wks
77	Upgrade 10 V1 Chassis to V2 and configure	0%	12 days	Mon 6/7/21	Wed 6/23/21	76FS+6 days
80	**System Install**	**0%**	**44.25 days**	**Tue 8/17/21**	**Mon 10/18/21**	
81	**Core Installation**	**0%**	**16.25 days**	**Tue 8/17/21**	**Wed 9/8/21**	

ID	Task Name	% Complete	Duration	Start	Finish	Predecessors
82	Move legacy core cabinets out of permanent location	0%	0.5 days	Tue 8/17/21	Tue 8/17/21	71
83	Install SR10A.7 Cabinets in permanent position	0%	1 day	Tue 8/17/21	Wed 8/18/21	82
84	Turn Up NSC Primary	0%	0.5 days	Wed 8/18/21	Wed 8/18/21	83
85	Turn Up NSC Backup	0%	0.5 days	Thu 8/19/21	Thu 8/19/21	84
86	Complete Core Network Upgrades	0%	0.25 days	Thu 8/19/21	Thu 8/19/21	85
87	Networking / Cyber Security Installation / Optimization Support	0%	1 day	Thu 8/19/21	Fri 8/20/21	85
88	Cutover to new Secondary SR10A.7 Core	0%	0.25 days	Fri 8/20/21	Fri 8/20/21	87
89	Perform Functional Test	0%	1 day	Fri 8/20/21	Mon 8/23/21	88
90	Stabilization Period	0%	3 days	Mon 8/23/21	Thu 8/26/21	89
91	Failover to New SR10A.7 Primary Core	0%	0.5 days	Thu 8/26/21	Fri 8/27/21	90
92	Perform Functional Test	0%	3 days	Fri 8/27/21	Wed 9/1/21	91
93	Stabilization Period	0%	3 days	Wed 9/1/21	Mon 9/6/21	92
94	Power Down SR10A.1 Secondary Core	0%	1.25 days	Mon 9/6/21	Tue 9/7/21	93
95	Power Down SR10A.1 Primary Core	0%	0.25 days	Tue 9/7/21	Tue 9/7/21	94
96	Remove SR10A.1 Secondary Core	0%	0.25 days	Tue 9/7/21	Tue 9/7/21	95
97	Remove SR10A.1 Primary Core	0%	0.25 days	Wed 9/8/21	Wed 9/8/21	96
98	New Core Installation Complete	0%	0 days	Wed 9/8/21	Wed 9/8/21	97
99	**Simulcast Cell**	**0%**	**10.13 days**	**Tue 9/7/21**	**Tue 9/21/21**	
100	**<Madison / UW> P25 RF Site**	**0%**	**3.63 days**	**Tue 9/7/21**	**Fri 9/10/21**	
101	rack, power install and update network for new SAR and SAS equipment	0%	0.5 days	Tue 9/7/21	Tue 9/7/21	93FS+1 day
102	Remotely push MASTR-V site code	0%	0.25 days	Thu 9/9/21	Thu 9/9/21	151
103	Decommission NWS and Install VIDA Edge	0%	3 days	Tue 9/7/21	Fri 9/10/21	101
104	Perform Functional test	0%	0.13 days	Fri 9/10/21	Fri 9/10/21	103
105	**<Roxbury> P25 RF Site**	**0%**	**5.63 days**	**Tue 9/7/21**	**Tue 9/14/21**	
106	rack, power install and update network for new SAR and SAS equipment	0%	0.75 days	Tue 9/7/21	Tue 9/7/21	93FS+1 day
107	Remotely push MASTR-V site code	0%	0.25 days	Thu 9/9/21	Thu 9/9/21	151
108	Decommission NWS and Install VIDA Edge	0%	2 days	Fri 9/10/21	Tue 9/14/21	103
109	Perform Functional test	0%	0.13 days	Tue 9/14/21	Tue 9/14/21	108
110	**<Eisner> P25 RF Site**	**0%**	**5.63 days**	**Tue 9/7/21**	**Tue 9/14/21**	
111	rack, power install and update network for new SAR and SAS equipment	0%	0.75 days	Tue 9/7/21	Tue 9/7/21	93FS+1 day
112	Remotely push MASTR-V site code	0%	0.25 days	Thu 9/9/21	Thu 9/9/21	151
113	Decommission NWS and Install VIDA Edge	0%	2 days	Fri 9/10/21	Tue 9/14/21	103
114	Perform Functional test	0%	0.13 days	Tue 9/14/21	Tue 9/14/21	113
115	**<Rockdale> P25 RF Site**	**0%**	**7.63 days**	**Tue 9/7/21**	**Thu 9/16/21**	
116	rack, power install and update network for new SAR and SAS equipment	0%	0.75 days	Tue 9/7/21	Tue 9/7/21	93FS+1 day
117	Remotely push MASTR-V site code	0%	0.25 days	Thu 9/9/21	Thu 9/9/21	151
118	Decommission NWS and Install VIDA Edge	0%	2 days	Tue 9/14/21	Thu 9/16/21	113
119	Perform Functional test	0%	0.13 days	Thu 9/16/21	Thu 9/16/21	118
120	**<Sun Prairie> P25 RF Site**	**0%**	**6.88 days**	**Wed 9/8/21**	**Thu 9/16/21**	
121	rack, power install and update network for new SAR and SAS equipment	0%	0.5 days	Wed 9/8/21	Wed 9/8/21	116

ID	Task Name	% Complete	Duration	Start	Finish	Predecessors
122	Remotely push MASTR-V site code	0%	0.25 days	Thu 9/9/21	Thu 9/9/21	151
123	Decommission NWS and Install VIDA Edge	0%	2 days	Tue 9/14/21	Thu 9/16/21	113
124	Perform Functional test	0%	0.13 days	Thu 9/16/21	Thu 9/16/21	123
125	**<Verona> P25 RF Site**	**0%**	**7.88 days**	**Wed 9/8/21**	**Fri 9/17/21**	
126	rack, power install and update network for new SAR and SAS equipment	0%	0.5 days	Wed 9/8/21	Wed 9/8/21	116
127	Remotely push MASTR-V site code	0%	0.25 days	Thu 9/9/21	Thu 9/9/21	151
128	Decommission NWS and Install VIDA Edge	0%	3 days	Tue 9/14/21	Fri 9/17/21	113
129	Perform Functional test	0%	0.13 days	Fri 9/17/21	Fri 9/17/21	128
130	**<WMGN> P25 RF Site**	**0%**	**7.38 days**	**Wed 9/8/21**	**Fri 9/17/21**	
131	rack, power install and update network for new SAR and SAS equipment	0%	0.5 days	Wed 9/8/21	Wed 9/8/21	116
132	Remotely push MASTR-V site code	0%	0.25 days	Thu 9/9/21	Thu 9/9/21	151
133	Decommission NWS and Install VIDA Edge	0%	2.5 days	Tue 9/14/21	Fri 9/17/21	113
134	Perform Functional test	0%	0.13 days	Fri 9/17/21	Fri 9/17/21	133
135	**<McKee WT> P25 RF Site**	**0%**	**9.38 days**	**Wed 9/8/21**	**Tue 9/21/21**	
136	rack, power install and update network for new SAR and SAS equipment	0%	0.5 days	Wed 9/8/21	Wed 9/8/21	116
137	Remotely push MASTR-V site code	0%	0.25 days	Thu 9/9/21	Thu 9/9/21	151
138	Decommission NWS and Install VIDA Edge	0%	2 days	Fri 9/17/21	Tue 9/21/21	133
139	Perform Functional test	0%	0.13 days	Tue 9/21/21	Tue 9/21/21	138
140	**<Stoughton WT> P25 RF Site**	**0%**	**8.88 days**	**Wed 9/8/21**	**Tue 9/21/21**	
141	rack, power install and update network for new SAR and SAS equipment	0%	0.5 days	Wed 9/8/21	Wed 9/8/21	131
142	Remotely push MASTR-V site code	0%	0.25 days	Thu 9/9/21	Thu 9/9/21	151
143	Decommission NWS and Install VIDA Edge	0%	2 days	Fri 9/17/21	Tue 9/21/21	133
144	Perform Functional test	0%	0.13 days	Tue 9/21/21	Tue 9/21/21	143
145	**<DeForest > P25 RF Site**	**0%**	**8.88 days**	**Wed 9/8/21**	**Tue 9/21/21**	
146	rack, power install and update network for new SAR and SAS equipment	0%	0.5 days	Wed 9/8/21	Wed 9/8/21	131
147	Remotely push MASTR-V site code	0%	0.25 days	Thu 9/9/21	Thu 9/9/21	151
148	Decommission NWS and Install VIDA Edge	0%	2 days	Fri 9/17/21	Tue 9/21/21	133
149	Perform Functional test	0%	0.13 days	Tue 9/21/21	Tue 9/21/21	148
150	**<WJJO> P25 RF Site**	**0%**	**8.88 days**	**Wed 9/8/21**	**Tue 9/21/21**	
151	rack, power install and update network for new SAR and SAS equipment	0%	0.75 days	Wed 9/8/21	Thu 9/9/21	126
152	Remotely push MASTR-V site code	0%	0.25 days	Thu 9/9/21	Thu 9/9/21	151
153	Decommission NWS and Install VIDA Edge	0%	2 days	Fri 9/17/21	Tue 9/21/21	133
154	Perform Functional test	0%	0.13 days	Tue 9/21/21	Tue 9/21/21	153
155	**Dispatch**	**0%**	**19 days**	**Tue 9/7/21**	**Mon 10/4/21**	
156	**Dispatch Primary [City-County Building (CCB)] DANE**	**0%**	**8 days**	**Tue 9/7/21**	**Fri 9/17/21**	
157	Install Network Equipment	0%	1 day	Tue 9/7/21	Wed 9/8/21	93FS+1 day
158	Upgrade Existing Symphony Consoles	0%	5 days	Wed 9/8/21	Wed 9/15/21	157
159	Perform Initial Tests	0%	2 days	Wed 9/15/21	Fri 9/17/21	158
160	**Dispatch Backup [East District Campus (EDC)] DANE**	**0%**	**4 days**	**Fri 9/17/21**	**Thu 9/23/21**	
161	Install Network Equipment	0%	1 day	Fri 9/17/21	Mon 9/20/21	159

ID	Task Name	% Complete	Duration	Start	Finish	Predecessors
162	Upgrade Existing Symphony Consoles	0%	2 days	Mon 9/20/21	Wed 9/22/21	161
163	Perform Initial Tests	0%	1 day	Wed 9/22/21	Thu 9/23/21	162
164	**Dispatch - SUN PRAIRIE**	**0%**	**7 days**	**Thu 9/23/21**	**Mon 10/4/21**	
165	Install Network Equipment	0%	1 day	Thu 9/23/21	Fri 9/24/21	163
166	Upgrade Existing Symphony Consoles	0%	5 days	Fri 9/24/21	Fri 10/1/21	165
167	Perform Initial Tests	0%	1 day	Fri 10/1/21	Mon 10/4/21	166
168	**Dispatch - FITCHBURG**	**0%**	**6 days**	**Thu 9/23/21**	**Fri 10/1/21**	
169	Install Network Equipment	0%	1 day	Thu 9/23/21	Fri 9/24/21	163
170	Upgrade Existing Symphony Consoles	0%	5 days	Fri 9/24/21	Fri 10/1/21	165
171	Upgrade Existing Symphony Consoles	0%	1 day	Fri 9/24/21	Mon 9/27/21	169
172	Perform Initial Tests	0%	1 day	Mon 9/27/21	Tue 9/28/21	171
173	**Dispatch - MIDDLETON**	**0%**	**3 days**	**Thu 9/23/21**	**Tue 9/28/21**	
174	Install Network Equipment	0%	1 day	Thu 9/23/21	Fri 9/24/21	163
175	Upgrade Existing Symphony Consoles {1 Symphony / 8 CH-IGW]	0%	1 day	Fri 9/24/21	Mon 9/27/21	174
176	Perform Initial Tests	0%	1 day	Mon 9/27/21	Tue 9/28/21	175
177	**ISSI / DFSI / StatusAware**	**0%**	**3 days**	**Tue 9/21/21**	**Fri 9/24/21**	
178	**Complete ISSI installation leveraging existing two TPs**	**0%**	**3 days**	**Tue 9/21/21**	**Fri 9/24/21**	
179	Install UW / Madison ISSI equipment	0%	3 days	Tue 9/21/21	Fri 9/24/21	154
180	DFSI software and license to support ten talkpaths (Acceptance is decoupled from Tes	0%	0 days	Fri 9/24/21	Fri 9/24/21	178FF
181	All Sites Installed	0%	0 days	Mon 10/4/21	Mon 10/4/21	98,104,109,114,119,
182	**Training**	**0%**	**31 days**	**Fri 8/20/21**	**Mon 10/4/21**	
183	System Administrator(s) Identified by Customer	0%	6 days	Fri 8/20/21	Mon 8/30/21	181FF-25 days
184	Customer Approves Training Schedule provided by Harris	0%	6 days	Mon 8/30/21	Tue 9/7/21	183
185	Customer Identifies and Approves Training Location(s)	0%	6 days	Tue 9/7/21	Wed 9/15/21	184
186	Deliver SR10A.7 Maintenance Training (OJT)	0%	15 days	Mon 9/13/21	Mon 10/4/21	181FF
187	System Installation Complete - Billing Milestone	0%	1 day	Mon 10/4/21	Tue 10/5/21	181
188	**System Optimization**	**0%**	**10 days**	**Mon 10/4/21**	**Mon 10/18/21**	
189	Apply IPNs and check TRs	0%	2 days	Mon 10/4/21	Wed 10/6/21	181
190	Configure Two-Factor Authentication	0%	2 days	Mon 10/4/21	Wed 10/6/21	181SS
191	Configure ENM Checks	0%	10 days	Mon 10/4/21	Mon 10/18/21	181SS
192	Install SUMS Updates	0%	0 days	Mon 10/18/21	Mon 10/18/21	189,190,191
193	Pre-Acceptance Test Checklist completed and approved	0%	0 days	Mon 10/18/21	Mon 10/18/21	192
194	Notify customer that system is ready for test	0%	0 days	Mon 10/18/21	Mon 10/18/21	181,187,193
195	**Acceptance Testing**	**0%**	**10 days**	**Wed 10/20/21**	**Wed 11/3/21**	
196	**Functional Acceptance Test Procedures (FATP)**	**0%**	**8 days**	**Wed 10/20/21**	**Mon 11/1/21**	
197	Perform Test IAW test plan	0%	3 days	Wed 10/20/21	Mon 10/25/21	194FS+2 days
199	Submit Functional Test report / documentation to Customer	0%	2 days	Mon 10/25/21	Wed 10/27/21	198
200	Functional Acceptance Test Procedures approved by Customer	0%	0 days	Mon 11/1/21	Mon 11/1/21	199FS+3 days
201	Submit System documentation and final as-built drawings to drafting	0%	2 days	Mon 11/1/21	Wed 11/3/21	200
202	Warranty Start	0%	0.5 days	Mon 11/1/21	Mon 11/1/21	200

ID	Task Name	% Complete	Duration	Start	Finish	Predecessors
203	**Final Acceptance with Customer**	**0%**	**22.25 days**	**Mon 11/1/21**	**Wed 12/1/21**	
204	**Final System Acceptance**	**0%**	**22.25 days**	**Mon 11/1/21**	**Wed 12/1/21**	
205	Submit Certificate of Acceptance to Customer	0%	0.25 days	Mon 11/1/21	Mon 11/1/21	200
206	Submit Certificate of Acceptance to Customer - Billing Milestone	0%	0 days	Mon 11/1/21	Mon 11/1/21	205
207	Final Invoice Submitted to Customer	0%	0 days	Mon 11/1/21	Mon 11/1/21	206
208	Conduct Warranty Handoff Meeting with Customer	0%	0.5 days	Mon 11/8/21	Mon 11/8/21	206FS+1 wk
209	Final Invoice paid by Customer and Program closure with Customer	0%	0 days	Wed 12/1/21	Wed 12/1/21	207FS+22 days
210	**Transition to AMS, TAC, and Close**	**0%**	**25.25 days**	**Wed 10/27/21**	**Wed 12/1/21**	
211	**Warranty Transition to Customer**	**0%**	**5.94 days**	**Mon 11/1/21**	**Tue 11/9/21**	
212	Prepare CCC Customer handoff package	0%	1 day	Mon 11/1/21	Tue 11/2/21	206
213	Updated Warranty Transition documentation approved	0%	0.44 days	Tue 11/9/21	Tue 11/9/21	208,212FS+2 days
214	**Handoff to Harris TAC**	**0%**	**9.5 days**	**Wed 10/27/21**	**Tue 11/9/21**	
215	As-Built Drawings completed (A&E, construction, etc.)	0%	1 day	Mon 11/1/21	Tue 11/2/21	205
216	HW and SW Audit completed (DCPSE102-f09)	0%	1 day	Tue 11/2/21	Wed 11/3/21	215
217	Prepare handoff documentation	0%	5 days	Wed 10/27/21	Wed 11/3/21	216FF
218	Verify 3rd Party warranties are in effect and will cover the Harris Warranty period	0%	1 day	Wed 11/3/21	Thu 11/4/21	217
219	Conduct Handoff Meeting	0%	0.25 days	Thu 11/4/21	Thu 11/4/21	218
220	Updated Internal System Turnover Meeting Form Approved	0%	0.25 days	Tue 11/9/21	Tue 11/9/21	219FS+3 days
221	**Internal Handoff to Harris Warranty**	**0%**	**1.38 days**	**Wed 11/10/21**	**Thu 11/11/21**	
222	Prepare Warranty Handoff Package	0%	1 day	Wed 11/10/21	Wed 11/10/21	220
223	Conduct Internal Warranty Handoff Meeting	0%	0.13 days	Thu 11/11/21	Thu 11/11/21	222
224	Internal Warranty Documentation (DCPSE102-f014) Updated and Approved	0%	0.25 days	Thu 11/11/21	Thu 11/11/21	223
225	**Internal Program Closure Tasks**	**0%**	**5 days**	**Wed 11/24/21**	**Wed 12/1/21**	
226	Close all POs	0%	5 days	Wed 11/24/21	Wed 12/1/21	209FF
227	Receive Final Payment	0%	0.25 days	Wed 12/1/21	Wed 12/1/21	209FF
228	**Final Internal Contract Closure**	**0%**	**14.38 days**	**Thu 11/11/21**	**Wed 12/1/21**	
229	ISE to verify all final closure task have been completed	0%	12 days	Thu 11/11/21	Mon 11/29/21	224
230	IPM to verify all final closure tasks for all internal departments have been completed	0%	4 days	Tue 11/23/21	Mon 11/29/21	229FF
231	Closure form (DCPPM006-f04) Created and Approved	0%	0.25 days	Wed 12/1/21	Wed 12/1/21	226,227,230

PRICING SUMMARY

Software FX and Maintenance costs through 2022, as contained in Addendum 11, will not be altered with the execution of this System Upgrade. Purchase of additional equipment, and/or increase in scope, may impact maintenance prices in the future.

Line	Item	Qty	List Price	Discount	Sale Price
	VIDA Premier Core Upgrade - Hardware	**1 Lot**	**$205,812.14**		**$144,068.50**
	A13 CHANGE: VIDA Premier Core Upgrade - Hardware		**$33,641.23**		**$26,441.07**
1	SERVER, DELL R640, PREMIER	1	55,600.00	30%	$38,920.00
2	CABINET, NSS, 42 RU, 120V	1	6,450.00	30%	$4,515.00
3	POWER KIT, SR10A.4, LOC HA/UNITE/ESSEN, 110	1	195.00	30%	$136.50
4	CABLE KIT, SR10A.4, LOC HA/UNITE/ESSENT	1	195.00	30%	$136.50
5	Non-Ru Netclock, GPS Master Clock	1	5,950.00	30%	$4,165.00
6	Non-Ru Kit, GPS Antenna, Outdoor, For Netclock	1	1,025.00	30%	$717.50
7	Non-Ru Cable, GPS Ant Outdoor, 100ft/Netclock	1	795.00	30%	$556.50
8	Spare Non-Ru Netclock, GPS Master Clock	1	5,950.00	30%	$4,165.00
9	Spare Non-Ru Kit, GPS Antenna, Outdoor, For Netclock	1	1,025.00	30%	$717.50
10	Spare Non-Ru Cable, GPS Ant Outdoor, 100ft/Netclock	1	795.00	30%	$556.50
11	DRAWINGS, PREM/UNITE/CON ON PREM, SR10A.4	1	1.00	30%	$0.70
12	VIDA Security, NSC	1	1,095.57	30%	$766.90
13	KIT, CISCO 4331 ROUTER, NSC MTG	1	18.00	30%	$12.60
14	ROUTER, ISR4331 AX APP & SEC LIC	1	8,690.00	30%	$6,083.00
15	FIREWALL, ASA5506-X W/SEC+/ANYCON-25USR	1	2,826.00	30%	$1,978.20
16	A13 CHANGE: FIREWALL, ASA5506-X W/SEC+/ANYCON-25USR	-1	(2,826.00)	30%	($1,978.20)
17	A13 CHANGE: FIREWALL, ASA5508-X W/SEC+/ANYCON-25USR	1	2,826.00	100%	$0.00
18	KIT, RACKMNT, 5506	1	390.00	30%	$273.00
19	MODULE, NIM 4PORT LAYER2 GE	1	600.00	30%	$420.00
20	A13 CHANGE: FIREWALL,FPR1010, WITH ANYCONNECT	1	3,300.00	7%	$3,085.50
21	SWITCH, CATALYST 3650 24P IP	1	6,595.00	30%	$4,616.50
22	A13 CHANGE: SWITCH, CATALYST 3650 24P IP	-1	(6,595.00)	30%	($4,616.50)
23	A13 CHANGE: SWITCH,SMARTNET,C9200L-24T-4X-A	1	7,320.00	7%	$6,844.20
24	FIREWALL, ASA5506-X W/SEC+/ANYCON-25USR	1	445.00	30%	$311.50
25	ROUTER, C881-K9, ADV IP SVC	1	1,735.00	30%	$1,214.50
26	A13 CHANGE: ROUTER, C881-K9, ADV IP SVC	-1	(1,735.00)	30%	($1,214.50)
27	A13 CHANGE: APP,C921-4P	1	1,650.00	7%	$1,542.75
28	ROUTER, ISR, C1111-4P, SEC	1	2,180.00	30%	$1,526.00
29	KIT, C1111 ROUTER SITE MTG	1	156.00	30%	$109.20
30	SERVER, DELL R640, PREMIER	1	55,600.00	30%	$38,920.00
31	CABINET, NSS, 42 RU, 120V	1	6,450.00	30%	$4,515.00
32	POWER KIT, SR10A.4, LOC HA/UNITE/ESSEN, 110	1	195.00	30%	$136.50
33	CABLE KIT, SR10A.4, LOC HA/UNITE/ESSENT	1	195.00	30%	$136.50
34	Non-Ru Netclock, GPS Master Clock	1	5,950.00	30%	$4,165.00
35	Non-Ru Kit, GPS Antenna, Outdoor, For Netclock	1	1,025.00	30%	$717.50
36	Non-Ru Cable, GPS Ant Outdoor, 100ft/Netclock	1	795.00	30%	$556.50

Line	Item	Qty	List Price	Discount	Sale Price
37	Spare Non-Ru Netclock, GPS Master Clock	1	5,950.00	30%	$4,165.00
38	Spare Non-Ru Kit, GPS Antenna, Outdoor, For Netclock	1	1,025.00	30%	$717.50
39	Spare Non-Ru Cable, GPS Ant Outdoor, 100ft/Netclock	1	795.00	30%	$556.50
40	VIDA Security, NSC	1	1,095.57	30%	$766.90
41	ROUTER, ISR4331 AX APP & SEC LIC	1	8,690.00	30%	$6,083.00
42	KIT, CISCO 4331 ROUTER, NSC MTG	1	18.00	30%	$12.60
43	FIREWALL, ASA5506-X W/SEC+/ANYCON-25USR	1	2,826.00	30%	$1,978.20
44	A13 CHANGE: FIREWALL, ASA5506-X W/SEC+/ANYCON-25USR	-1	(2,826.00)	30%	($1,978.20)
45	A13 CHANGE: FIREWALL, ASA5508-X W/SEC+/ANYCON-25USR	1	2,826.00	100%	$0.00
46	KIT, RACKMNT, 5506	1	390.00	30%	$273.00
47	MODULE, NIM 4PORT LAYER2 GE	1	600.00	30%	$420.00
48	A13 CHANGE: FIREWALL,FPR1010, WITH ANYCONNECT	1	3,300.00	7%	$3,085.50
49	SWITCH, CATALYST 3650 24P IP	1	6,595.00	30%	$4,616.50
50	A13 CHANGE: SWITCH, CATALYST 3650 24P IP	-1	(6,595.00)	30%	($4,616.50)
51	A13 CHANGE: SWITCH,SMARTNET,C9200L-24T-4X-A	1	7,320.00	7%	$6,844.20
52	A13 CHANGE: MODULE, SFP GBIC	1	445.00	30%	$311.50
53	ROUTER, C881-K9, ADV IP SVC	1	1,735.00	30%	$1,214.50
54	A13 CHANGE: ROUTER, C881-K9, ADV IP SVC	-1	(1,735.00)	30%	($1,214.50)
55	A13 CHANGE: APP,C921-4P	1	1,650.00	7%	$1,542.75
56	ROUTER, ISR, C1111-4P, SEC	1	2,180.00	30%	$1,526.00
57	KIT, C1111 ROUTER SITE MTG	1	156.00	30%	$109.20
58	PC, SYSTEM MANAGEMENT TERMINAL	1	1,280.00	30%	$896.00
59	APC ROOF RACK	2	575.40	0%	$575.40
60	METERED RACK 30A	2	2,770.60	0%	$2,770.60
61	APC METERED RACK PDU	1	543.23	0%	$543.23
62	KIT, QUEST DEFENDER, TWO FACTOR, W/SW	2	900.00	0%	$900.00
63	LABOR 2-FACTOR AUTHENTICATION	Lot	4,800.00	0%	$4,800.00
64	A13 CHANGE: [ISSI EXERNALT] ROUTER, ISR, C1111-8P, SEC	1	2,200.00	7%	$2,057.00
65	KIT, C1111 ROUTER SITE MTG	1	156.00	7%	$145.86
66	MODULE, DVU, UAC, INTEROPERABILITY GATEWAY	1	11,500.00	47%	$6,095.00
67	CABLE, AUDIO,4-SLOT CHASSIS GWB, 10FT	4	196.00	47%	$103.88
68	SERVICE, QUAD MODE VOCODER LICENSE	4	120.00	47%	$63.60
69	LICENSE, NETWORK FIRST TALKPATH, UNITE	4	2,000.00	47%	$1,060.00
70	**VIDA Premier Core Upgrade - Software**	**1 Lot**	**$952,237.85**		**$33,521.50**
71	**A13 CHANGE: VIDA Premier Core Upgrade - Software**	**1 Lot**	**$204,000.28**		**$0.20**
72	SERVICE, SYBASE LICENSE	2	5,354.00	30%	$3,747.80
73	SOFTWARE, ISSI GATEWAY, VM	1	83,750.00	100%	$0.00
74	SOFTWARE, PREMIER CORE, VM	1	68,700.00	100%	$0.00
75	License, Quest Authentication, Server	13	5,915.00	30%	$4,140.50
76	LICENSE, QUEST AUTHENTICATION, USER, QTY 6	1	52.00	30%	$36.40
77	Software, Epolicy Orch VM	1	2,000.00	30%	$1,400.00
78	LICENSE, SUMS, ENDPOINT	69	2,415.00	30%	$1,690.50
79	LICENSE, SUMS, CORE	40	1,200.00	30%	$840.00

Line	Item	Qty	List Price	Discount	Sale Price
80	LICENSE, HOST SECURITY, AV, EPO, QTY 51-100	95	11,617.55	30%	$8,132.29
81	LICENSE, HA, LOCATION, NSC	1	50,000.00	100%	$0.00
82	LICENSE, P25 APPLICATION	1	20,000.00	100%	$0.00
83	License, Quad Mode Vocoder	1	35.00	30%	$24.50
84	LICENSE, SQL SERVER 2016 STD, BASE 4CORE	1	4,050.00	30%	$2,835.00
85	LICENSE, CONSOLE	50	50,000.00	100%	$0.00
86	A13 CHANGE: LICENSE, CONSOLE	-8	(8,000.00)	100%	$0.00
87	LICENSE, CONSOLE TALKPATH	600	150,000.00	100%	$0.00
88	A13 CHANGE: LICENSE, CONSOLE TALKPATH	460	115,000.00	100%	$0.00
89	LICENSE, P25 SITE	11	110,000.00	100%	$0.00
90	A13 CHANGE: LICENSE, P25 SITE	2	20,000.00	100%	$0.00
91	LICENSE, P25 TIER 11-17 SITES	1	50,000.00	100%	$0.00
92	LICENSE, P25 SITE TALKPATH	20	20,000.00	100%	$0.00
93	LICENSE, NETWORK FIRST TALKPATH	68	34,000.00	100%	$0.00
94	A13 CHANGE: LICENSE, NETWORK FIRST TALKPATH	8	4,000.00	100%	$0.00
95	LICENSE, TRANSCODER TALKPATH	8	20,000.00	100%	$0.00
96	LICENSE, VMWARE, VCENTER, FOUNDATION	1	2,900.00	30%	$2,030.00
97	LICENSE, VMWARE, VCENTER, FOUNDATION, 3YR	1	2,910.00	30%	$2,037.00
98	LICENSE, ISSI GATEWAY TALKPATH	10	25,000.00	100%	$0.00
99	A13 CHANGE: LICENSE, ISSI GATEWAY TALKPATH	26	65,000.00	100%	$0.00
100	LICENSE, ISSI EXTERNAL SYS CONN, PREMIER	2	100,000.00	100%	$0.00
101	SERVICE, SYBASE LICENSE	2	5,354.00	30%	$3,747.80
102	SOFTWARE, PREMIER CORE, VM	1	68,700.00	100%	$0.00
103	License, Quad Mode Vocoder	1	35.00	30%	$24.50
104	LICENSE, SQL SERVER 2016 STD, BASE 4CORE	1	4,050.00	30%	$2,835.00
105	FEATURE, NO AES ENCRYPTION	1	0.02	30%	$0.01
106	PACKAGE, BEON, FOUNDATION, +10 USERS	1	0.28	30%	$0.20
107	A13 CHANGE: PACKAGE, BEON, FOUNDATION, +10 USERS	1	0.28	30%	$0.20
108	LICENSE, UPGRADE, FOUNDATION TO PREMIER	1	30,000.00	100%	$0.00
109	LICENSE, NSS, IP LOGGING RECORDER	2	4,200.00	100%	$0.00
110	LICENSE, NSS, IP LOGGING RECORDER TALKPATH	42	42,000.00	100%	$0.00
111	A13 CHANGE: LICENSE, NSS, IP LOGGING RECORDER TP	8	8,000.00	100%	$0.00
112	**Unitrends Servers**	**1 Lot**	**$29,000.00**		**$20,300.00**
113	**A13 CHANGE: Unitrends Servers**	**1 Lot**	**$0.00**		**$0.00**
114	SERVER,UNITRENDS RS8006	2	29,000.00	30%	$20,300.00
115	A13 CHANGE: SERVER,UNITRENDS RS8006	-2	(29,000.00)	30%	($20,300.00)
116	A13 CHANGE: SERVER,UNITRENDS 9006	2	29,000.00	30%	$20,300.00
117	**Windows Image for Symphony PC's/Dispatch Upgrade**	**36**	**$26,014.00**	**30%**	**$18,209.80**
118	**A13 CHANGE: Windows Image for Symphony PCs/DSP/Upgrade**		**($4,220.00)**		**($1,720.25)**
119	SW, SYMPHONY PC APP & WIN 10 IMAGE	40	8,000.00	30%	$5,600.00
120	A13 CHANGE: SW, SYMPHONY PC APP & WIN 10 IMAGE	-4	(800.00)	30%	($560.00)
121	ROUTER, ISR, C1111-4P, SEC	4	8,720.00	30%	$6,104.00

Line	Item	Qty	List Price	Discount	Sale Price
122	KIT, C1111 ROUTER SITE MTG	4	624.00	30%	$436.80
123	SWITCH, CISCO 2960 PLUS	6	8,190.00	30%	$5,733.00
124	A13 CHANGE: SWITCH, CISCO 2960 PLUS	-6	(8,190.00)	30%	($5,733.00)
125	A13 CHANGE: SWITCH,SMARTNET,C1000FE-24T-4G-L	5	5,250.00	7%	$4,908.75
126	KIT, MTG HDWR, CISCO 2960 MASTR III/V CAB	6	480.00	30%	$336.00
127	A13 CHANGE: KIT, MTG HDWR, CISCO 2960 MASTR III/V CAB	-6	(480.00)	30%	($336.00)
128	**Engineering & Installation Services**	**1 Lot**	**$555,155.00**	**0%**	**$336,494.19**
129	**A13 CHANGE: Engineering & Installation Services**		**$79,100.00**	**0%**	**$0.00**
130	Program Management	1 Lot	$228,200.00	57%	$98,354.21
131	A13 CHANGE: PM Labor for Change Order	1 lot	$30,000.00	100%	$0.00
132	System Engineering	1 Lot	$50,940.00	0%	$50,940.00
133	A13 CHANGE: SE Labor for Change Order	1 lot	$12,000.00	100%	$0.00
134	Network Engineering	1 Lot	$187,200.00	0%	$187,200.00
135	A13 CHANGE: Network Engineering	1 Lot	$24,000.00	100%	$0.00
136	A13 CHANGE: Network Engineering [Labor for new Cisco Equipment)	1 Lot	$13,100.00	100%	$0.00
137	Installation	1 Lot	$88,815.00	100%	$0.00
138	**VIDA Premier Core Upgrade - Subtotal**	**1 Lot**	**$1,768,218.99**		**$552,593.99**
139	**A13 CHANGE: VIDA Premier Core Upgrade - Subtotal**	**1 Lot**	**$312,521.51**		**$24,721.02**
140	**Additional Control Point (Hardware & Software)**	**1 Lot**	**$87,964.34**	**30%**	**$61,575.04**
141	**A13 CHANGE: Additional Control Point (HW & SW)**	**1 Lot**	**($17,700.00)**	**30%**	**($9,978.00)**
142	ASSY, CONTROLLER, SITEPRO, MME W/ CABLES DC	2	$39,000.00	30%	$27,300.00
143	ROUTER, ISR4331-DC/K9, SEC	2	$16,000.00	30%	$11,200.00
144	A13 CHANGE: MODULE, SFP GBIC	12	$5,340.00	30%	$3,738.00
145	KIT, CISCO 4321 ROUTER MTG	2	$220.00	30%	$154.00
146	POWER SUPPLY, DC, ISR4221, 1100	2	$464.34	30%	$325.04
147	SWITCH, C3650-24TS-L, DC, LANBASE	6	$31,080.00	30%	$21,756.00
148	A13 CHANGE: SWITCH, C3650-24TS-L, DC, LANBASE	-6	($31,080.00)	30%	($21,756.00)
149	MODULE, NIM 4PORT LAYER2 GE	2	$1,200.00	30%	$840.00
150	A13 CHANGE: SWITCH,SMARTNET,C1000-16T-E-2G-L	6	$8,040.00	0%	$8,040.00
151	**Engineering & Installation Services**	**1 Lot**	**$6,000.00**	**0%**	**$6,000.00**
152	**A13 CHANGE: Engineering & Installation Services**		**$0.00**	**0%**	**$0.00**
153	System Engineering	1 Lot	$6,000.00	0%	$6,000.00
154	Discount Credit for Antenna Move		($10,256.00)		($10,256.00)
155	**Additional Control Point - Subtotal**	**1 Lot**	**$83,708.34**		**$57,319.04**
156	**A13 CHANGE: Additional Control Point - Subtotal**	**1 Lot**	**($17,700.00)**		**($9,978.00)**
157	**MPLS Upgrade**	**1 Lot**	**$206,478.80**		**$144,535.16**
158	**A13 CHANGE: MPLS Upgrade**	**1 Lot**	**$3,100.00**		**$2,170.00**
159	ROUTER, NOKIA, 7705, SAR-8, DC	10	$120,000.00	30%	$84,000.00
160	MODULE, NOKIA, 8P GE SFP CARD	10	$31,000.00	30%	$21,700.00
161	A13 CHANGE: MODULE, NOKIA, 8P GE SFP CARD	1	$3,100.00	30%	$2,170.00
162	Switch, T1/E1 Alcatel, SAR 16 port	10	$40,078.80	30%	$28,055.16
163	NOKIA - SFP GIGE BASE-T RJ45 COPPER	55	$15,400.00	30%	$10,780.00
164	**RF Site Upgrade**	**1 Lot**	**$677,796.19**		**$365,747.33**

Line	Item	Qty	List Price	Discount	Sale Price
165	**A13 CHANGE: RF Site Upgrade**	**1 Lot**	**63,113.65**		**$33,013.11**
166	MODULE, SFP GBIC	12	5,340.00	30%	$3,738.00
167	A13 CHANGE: MODULE, SFP GBIC	-12	(5,340.00)	30%	($3,738.00)
168	KIT, CISCO 3650 SWITCH MOUNTING, OPEN RACK	6	2,040.00	30%	$1,428.00
169	A13 CHANGE: KIT, CISCO 3650 SWITCH MOUNTING, OPEN RACK	-6	(2,040.00)	30%	($1,428.00)
170	VS PROD GRP, CONFIGURED MODEL NUMBER	11	4,840.00	30%	$3,388.00
171	A13 CHANGE: VS PROD GRP, CONFIGURED MODEL NUMBER	-11	(4,840.00)	30%	($3,388.00)
172	ASSEMBLY, NWS4, WIN10, UPGRADE	7	43,750.00	43%	$24,815.00
173	A13 CHANGE: ASSEMBLY, NWS4, WIN10, UPGRADE	-7	(43,750.00)	43%	($24,815.00)
174	KIT, NET SENTRY, CNTL/DATA, DC PWR,WIN10	0	147,000.00	30%	$0.00
175	A13 CHANGE: KIT, NET SENTRY, CNTL/DATA, DC PWR,WIN10	0	(147,000.00)	30%	$0.00
176	ROUTER, ISR4221-SEC/K9	9	30,780.00	30%	$21,546.00
177	KIT, CISCO 4221 ROUTER, SITE MTG	9	531.00	30%	$371.70
178	POWER SUPPLY, DC, ISR4221, 1100	7	1,625.19	30%	$1,137.63
179	A13 CHANGE: POWER SUPPLY, DC, ISR4221, 1100	2	361.15	30%	$252.81
180	SWITCH, C3650-24TS-L, DC, LANBASE	27	139,860.00	30%	$97,902.00
181	A13 CHANGE: SWITCH, C3650-24TS-L, DC, LANBASE	-27	(139,860.00)	30%	($97,902.00)
182	A13 CHANGE: SWITCH,SMARTNET,C1000-16T-E-2G-L	27	36,180.00	7%	$33,828.30
183	MODULE, SFP GBIC	54	24,030.00	30%	$16,821.00
184	KIT, CISCO 3650 SWITCH MOUNTING, OPEN RACK	27	9,180.00	30%	$6,426.00
185	A13 CHANGE: KIT, CISCO 3650 SWITCH MNTG, OPEN RACK	-27	(9,180.00)	30%	($6,426.00)
186	A13 CHANGE: KIT, C1000 SWITCH MNTG, OPEN RACK	27	9,180.00	30%	$6,426.00
187	MODULE, NIM 4PORT LAYER2 GE	9	5,400.00	30%	$3,780.00
188	Ru Net Clock - Oscillator, SecureSync, Rb, Master, DC	11	239,536.00	30%	$167,675.20
189	Ru Net Clock - Cable, DC Dstrbn, GPS SecureSync 24 in	11	484.00	30%	$338.80
190	Spare Ru Net Clock - Oscillator, SecureSync, Rb, Master, DC	1	21,776.00	30%	$15,243.20
191	Spare Ru Net Clock - Cable, DC Dstrbn, GPS SecureSync 24 in	1	44.00	30%	$30.80
192	LICENSE, WINDOWS 10 LTSC 2019, IOT ENT	4	780.00	30%	$546.00
193	A13 CHANGE: LICENSE, WINDOWS 10 LTSC 2019, IOT ENT	-4	(780.00)	30%	($546.00)
194	Win 10, Image, NWS	4	800.00	30%	$560.00
195	A13 CHANGE: Win 10, Image, NWS	-4	(800.00)	30%	($560.00)
196	A13 CHANGE: SITE MANAGER, VIDA EDGE	13	266,565.00	82%	$47,876.50
197	A13 CHANGE: POWER SUPPLY, DC, VIDA EDGE	14	3,570.00	30%	$2,499.00
198	A13 CHANGE: MODULE, DIGITAL INPUT (16) ACTIVE HIGH	16	11,040.00	30%	$7,728.00
199	A13 CHANGE: MODULE, DIGITAL OUTPUT SINK (16)	9	6,210.00	30%	$4,347.00
200	A13 CHANGE: MODULE, DIGITAL INPUT (16) ACTIVE LOW	29	20,010.00	30%	$14,007.00
201	A13 CHANGE: I/O CONTROLLER MODULE	14	29,120.00	30%	$20,384.00
202	A13 CHANGE: LABOR, MONITORING SOLUTION	Lot	34,467.50	0%	$34,467.50
203	A13 CHANGE: NETWORK SENTRY BUY-BACK CREDIT		(17,000.00)	0%	($17,000.00)
204	**DFSI Interface**	**10 TP**	**$30,000.00**	**30%**	**$21,000.00**
205	**A13 CHANGE: DFSI Interface**		**$0.00**		**$0.00**
206	SOFTWARE, ENCOMPASS GW FOR DFSI	1	5,000.00	30%	$3,500.00
207	LICENSE, DFSI TALKPATH	10	25,000.00	30%	$17,500.00

Line	Item	Qty	List Price	Discount	Sale Price
208	**Enterprise Network Manager - 3 Yr. Support**	**1 Lot**	**$17,300.00**	**30%**	**$12,110.00**
209	**A13 CHANGE: Enterprise Network Manager - 3 Yr. Support**		**$71,792.00**		**$50,254.40**
210	LICENSE, ENM P-RTU, + 3 YR SUPP, BASE	250	14,000.00	30%	$9,800.00
211	A13 CHANGE: LICENSE, ENM P-RTU, + 3 YR SUPP, BASE	1282	71,792.00	30%	$50,254.40
212	LICENSE, ENM P-RTU, +3YR SUPP, GEO-HA	1	3,300.00	30%	$2,310.00
213	**StatusAware Software for 100 Devices**	**1 Lot**	**$35,000.00**	**30%**	**$24,500.00**
214	**A13 CHANGE: StatusAware Software for 100 Devices**		**$0.00**		**$0.00**
215	SOFTWARE, STATUSAWARE, 100 DEVICES	1	35,000.00	30%	$24,500.00
216	**ISSI Redundancy (Engineering Labor)**	**1 Lot**	**$24,000.00**	**0%**	**$24,000.00**
217	**A13 CHANGE: ISSI Redundancy (Engineering Labor)**	**1 Lot**	**$0.00**	**0%**	**$0.00**
218	Service, L3Harris Senior Sys Engineering	1 Lot	$24,000.00	0%	$24,000.00
219	**Spare Parts (1 ea, of parts listed below)**	**1 Lot**	**$48,333.17**	**30%**	**$36,573.72**
220	**A13 CHANGE: Spare Parts (1 ea, of parts listed below)**	**1 Lot**	**($15,801.00)**	**30%**	**($7,300.70)**
221	**Site Spares - Control Point**				
222	ROUTER,ISR4331-DC/K9,SEC	1	$8,000.00	30%	$5,600.00
223	KIT, CISCO 4331 ROUTER MTG	1	$110.00	30%	$77.00
224	MODULE,NIM 4PORT LAYER2 GE	1	$600.00	30%	$420.00
225	SWITCH,C3650-24TS-L,DC,LANBASE	1	$5,180.00	30%	$3,626.00
226	A13 CHANGE: SWITCH, C3650-24TS-L, DC, LANBASE	-1	($5,180.00)	30%	($3,626.00)
227	A13 CHANGE: SWITCH,SMARTNET,C1000-16T-E-2G-L	2	$2,680.00	7%	$2,505.80
228	MODULE,SFP GBIC	2	$890.00	30%	$623.00
229	KIT,CISCO 3650 SWITCH MOUNTING,OPEN RACK	1	$340.00	30%	$238.00
230	A13 CHANGE: KIT, CISCO 3650 SWITCH MNTG, OPEN RACK	-1	($340.00)	30%	($238.00)
231	A13 CHANGE: KIT, C1000 SWITCH MNTG, OPEN RACK	2	$680.00	30%	$476.00
232	**Site Spares - Tx Site**				
233	ROUTER,ISR4221-SEC/K9	1	$3,420.00	30%	$2,394.00
234	KIT, CISCO 4221 ROUTER, SITE MTG	1	$59.00	30%	$41.30
235	POWER SUPPLY,DC,ISR4221,1100	1	$232.17	30%	$162.52
236	MODULE,NIM 4PORT LAYER2 GE	1	$600.00	30%	$420.00
237	SWITCH,C3650-24TS-L,DC,LANBASE	1	$5,180.00	30%	$3,626.00
238	A13 CHANGE: SWITCH, C3650-24TS-L, DC, LANBASE	-1	($5,180.00)	30%	($3,626.00)
239	MODULE,SFP GBIC	2	$890.00	30%	$623.00
240	KIT,CISCO 3650 SWITCH MOUNTING,OPEN RACK	1	$340.00	30%	$238.00
241	A13 CHANGE: KIT, CISCO 3650 SWITCH MNTG, OPEN RACK	-1	($9,180.00)	30%	($6,426.00)
242	**Dispatch Spares**				
243	ROUTER,ISR,C1111-4P,SEC	1	$2,180.00	30%	$1,526.00
244	KIT, C1111 ROUTER SITE MTG	1	$156.00	30%	$109.20
245	SWITCH,CISCO 2960 PLUS	1	$1,365.00	30%	$955.50
246	A13 CHANGE: SWITCH,CISCO 2960 PLUS	-1	($1,365.00)	30%	($955.50)
247	A13 CHANGE: SWITCH,SMARTNET,C1000FE-24T-4G-L	1	$1,050.00	7%	$981.75
248	KIT,MTG HDWR,CISCO 2960 MASTR III/V CAB	1	$80.00	30%	$56.00
249	A13 CHANGE: KIT,MTG HDWR,CISCO 2960 MASTR III/V CAB	-1	($80.00)	30%	($56.00)
250	**Core Spares**				

Line	Item	Qty	List Price	Discount	Sale Price
251	ROUTER,ISR4331 AX APP &SEC LIC	1	$8,690.00	30%	$6,083.00
252	FIREWALL, ASA5506-X W/SEC+/ANYCON-25USR	1	$2,826.00	30%	$1,978.20
253	A13 CHANGE: FIREWALL, ASA5506-X W/SEC+/ANYCON-25USR	-1	($2,826.00)	30%	($1,978.20)
254	A13 CHANGE: FIREWALL,FPR1010, WITH ANYCONNECT	1	$3,300.00	7%	$3,085.50
255	MODULE,NIM 4PORT LAYER2 GE	1	$600.00	30%	$420.00
256	SWITCH,CATALYST 3650 24P IP	1	$6,595.00	30%	$4,616.50
257	A13 CHANGE: SWITCH,CATALYST 3650 24P IP	-1	($6,595.00)	30%	($4,616.50)
258	A13 CHANGE: SWITCH,SMARTNET,C9200L-24T-4X-A	1	$7,320.00	7%	$6,844.20
259	ROUTER,C881-K9,ADV IP SVC	1	$1,735.00	30%	$1,214.50
260	A13 CHANGE: ROUTER,C881-K9,ADV IP SVC	-1	($1,735.00)	30%	($1,214.50)
261	A13 CHANGE: ROUTER,APP,C921-4P	1	$1,650.00	7%	$1,542.75
262	ROUTER,ISR,C1111-4P,SEC	1	$2,180.00	30%	$1,526.00
263	**Required updates at local agencies. Includes router software and Symphony updates.**				
264	**Middleton**	**1 Lot**	**4,176.00**		**2,923.20**
265	**A13 CHANGE: Middleton**	**1 Lot**	**($395.00)**		**($29.75)**
266	SW, SYMPHONY PC APP & WIN 10 IMAGE	1	$200.00	30%	$140.00
267	WIN 10, 64BIT, LTSB	1	$195.00	30%	$136.50
268	ROUTER, ISR, C1111-4P, SEC	1	$2,180.00	30%	$1,526.00
269	KIT, C1111 ROUTER SITE MTG	1	$156.00	30%	$109.20
270	SWITCH, CISCO 2960 PLUS	1	$1,365.00	30%	$955.50
271	A13 CHANGE: SWITCH, CISCO 2960 PLUS	-1	($1,365.00)	30%	($955.50)
272	A13 CHANGE: SWITCH,SMARTNET,C1000FE-24T-4G-L	1	$1,050.00	7%	$981.75
273	KIT, MTG HDWR, CISCO 2960 MASTR III/V CAB	1	$80.00	30%	$56.00
274	A13 CHANGE: KIT, MTG HDWR, CISCO 2960 MASTR III/V CAB	-1	($80.00)	30%	($56.00)
275	**Fitchburg**	**1 Lot**	**33,401.00**		**7,850.70**
276	**A13 CHANGE: Fitchburg**	**1 Lot**	**($28,830.00)**		**($4,404.25)**
277	SW, SYMPHONY PC APP & WIN 10 IMAGE	6	$1,200.00	30%	$840.00
278	A13 CHANGE: SW, SYMPHONY PC APP & WIN 10 IMAGE	-3	($600.00)	30%	($420.00)
279	WIN 10, 64BIT, LTSB	6	$1,170.00	30%	$819.00
280	A13 CHANGE: WIN 10, 64BIT, LTSB	-3	($585.00)	30%	($409.50)
281	ASSEMBLY, NWS4, WIN10, UPGRADE	1	$6,250.00	43%	$3,545.00
282	A13 CHANGE: ASSEMBLY, NWS4, WIN10, UPGRADE	-1	($6,250.00)	43%	($3,545.00)
283	KIT, NET SENTRY, CNTL/DATA, DC PWR,WIN10	0	$21,000.00	30%	$0.00
284	A13 CHANGE: KIT, NET SENTRY, CNTL/DATA, DC PWR,WIN10	0	($21,000.00)	30%	$0.00
285	ROUTER, ISR, C1111-4P, SEC	1	$2,180.00	30%	$1,526.00
286	KIT, C1111 ROUTER SITE MTG	1	$156.00	30%	$109.20
287	SWITCH, CISCO 2960 PLUS	1	$1,365.00	30%	$955.50
288	A13 CHANGE: SWITCH, CISCO 2960 PLUS	-1	($1,365.00)	30%	($955.50)
289	A13 CHANGE: SWITCH,SMARTNET,C1000FE-24T-4G-L	1	$1,050.00	7%	$981.75
290	KIT, MTG HDWR, CISCO 2960 MASTR III/V CAB	1	$80.00	30%	$56.00
291	A13 CHANGE: KIT, MTG HDWR, CISCO 2960 MASTR III/V CAB	-1	($80.00)	30%	($56.00)
292	**Sun Prairie**	**1 Lot**	**25,381.00**		**$17,766.70**
293	**A13 CHAGNE: Sun Prairie**	**1 Lot**	**($21,595.00)**		**($14,869.75)**

Line	Item	Qty	List Price	Discount	Sale Price
294	SW, SYMPHONY PC APP & WIN 10 IMAGE	3	$600.00	30%	$420.00
295	A13 CHANGE: SW, SYMPHONY PC APP & WIN 10 IMAGE	-1	($200.00)	30%	($140.00)
296	KIT, NET SENTRY, CNTL/DATA, DC PWR,WIN10	1	$21,000.00	30%	$14,700.00
297	A13 CHANGE: KIT, NET SENTRY, CNTL/DATA, DC PWR,WIN10	-1	($21,000.00)	30%	($14,700.00)
298	ROUTER, ISR, C1111-4P, SEC	1	$2,180.00	30%	$1,526.00
299	KIT, C1111 ROUTER SITE MTG	1	$156.00	30%	$109.20
300	SWITCH, CISCO 2960 PLUS	1	$1,365.00	30%	$955.50
301	A13 CHANGE: SWITCH, CISCO 2960 PLUS	-1	($1,365.00)	30%	($955.50)
302	A13 CHANGE: SWITCH,SMARTNET,C1000FE-24T-4G-L	1	$1,050.00	7%	$981.75
303	KIT, MTG HDWR, CISCO 2960 MASTR III/V CAB	1	$80.00	30%	$56.00
304	A13 CHANGE: KIT, MTG HDWR, CISCO 2960 MASTR III/V CAB	-1	($80.00)	30%	($56.00)
305	**Total Amendment 12 Sale Price**		**$2,953,793.49**	**57%**	**$1,266,919.84**
306	**Sub-Total Amendment 13 Change**		**$366,206.16**		**$73,576.07**
307	**Amendment 13 Discount**				**($1,388.00)**
308	**TOTAL AMENDMENT 13 SALE PRICE**		**$367,076.16**		**$72,188.07**
309	**Base + Net Change**		**$3,319,999.65**		**$1,339,107.91**

Licenses for additional ENM points can be purchased at the price of $39.20 per point

Payment Milestones

The Provider shall invoice, and the County shall pay net 30 days, the System Upgrade Price in accordance with the

The following is the proposed payment schedule:

		Scheduled due date	A12	A13
- Project Start Date (1/4/2021)	10%	1/31/21	$126,691.98	
- CDR completed and Customer Accepted	25%	3/31/21	$316,729.96	
- Completion of Factory Staging	0%	not applicable to upgrade		
- Shipment of Equipment	20%	8/31/21	$253,383.97	$36,094.04
- Installation of Equipment Complete	10%	10/15/21	$126,691.98	$36,094.03
- FATP completed and Customer Accepted	15%	10/30/21	$190,037.98	
- Final System Acceptance	20%	12/31/21	$253,383.97	
			$1,266,919.84	**$72,188.07**