

Committee Recommendation

TOTAL APPROVED FY2014 Expenditures \$ 336,149.42

To be completed by 911 Board Staff:

PROPOSED FY2016 FUNDING	\$ 170,678.00
FY2016 Anticipated Capital Expenditures	\$ 410,000.00
FY2016 Anticipated Monthly Recurring	\$ -
Less Fund balance (\$290,849.57)	\$ (245,000.00)

Requested FY2016 Funding \$ 335,678.00

Notes for reconsideration:

Approved 20% carryforward of Fund Balance) \$ 40,956.00

Chowan Letter breakdown:

Invoice (s) Total:	\$ 410,000.00
Per letter Board Decision: Less Fund Balance:	\$ (245,000.00)
Additional Request for funding reconsideration:	\$ 335,678.00

Tapler, Marsha

From: Palmer, Cord
Sent: Wednesday, March 04, 2015 1:56 PM
To: Tapler, Marsha
Cc: Bunch, Andy; Goodwin, Dwayne
Subject: Chowan Central Communications funding reconsideration request
Attachments: Chowan radio console replacement.pdf; radio consoles and backroom equipment FY2016 PSAP_Distribution_Reconsideration_Request.xlsx

Marsha,

Chowan Central Communications is needing to **replace its radio console equipment**. I have attached two files. The file in excel format is the funding reconsideration request. The second file is a scan of multiple documents together that I will explain further.

I included the funding reconsideration form in the pdf document to keep it all together and to share with county officials. There are no differences between the excel format and the one in the pdf document. Following the funding reconsideration form is a letter dated November 12th 2014 from Motorola to Gately Communications notifying Gately Communications that Chowan County falls into their "territory".

Following the Motorola letter is a email dated February 9th 2015 from Warren Bell of Gately communications to myself offering a promotional discount of \$50,000.00 if a purchase order can be issued by the end of July 2015.

The document following the email is the budgetary proposal for the purchase of a Motorola MCC 7500 dispatch console system. The price at the end of the proposal is \$460,000.00. I have used the price of \$410,000.00 on the funding reconsideration form to reflect the \$50,000.00 promotional discount offered in the email mentioned above.

On the funding reconsideration request I have written "included" in three blocks. The "radio console ethernet switch", "radio console dispatch workstations" and "radio console ethernet router" are mentioned on pages 2-1 and 3-1 of the budgetary proposal and are included in the \$410,000.00.

I did not include a cost for hardware maintenance because the system is covered for the first year.

The 'assumptions" and 'additional equipment and services" are commonly found in Motorola proposals and all parts are not necessarily tied to the radio console replacement.

The following are our answers your questions under number 4 of the funding reconsideration form.

We are needing to replace the radio console equipment in Chowan Central Communications. **The equipment is close to ten years old. Parts are scarce and recently a replacement part had to be manufactured. The computer equipment is Windows XP based which is no longer supported by Microsoft. Ongoing system troubles and the equipment being past the "end of life" put us at risk of system failure.**

We have not weighed the advantages and disadvantages of the funding reconsideration verses the grant option. Any recommendation would be greatly appreciated. Our only goal is to get the equipment replaced this year and preferably be able to utilize the discount before its expiration.

The additional funding will be utilized to replace our troublesome radio console equipment.

The fund balance as of June 30th 2014 is \$290,849.57. **We would like to utilize as much as possible.** We request guidance or a recommended minimum fund balance to be able to calculate this fully.

Please email any questions or concerns.

Thank you
Cordell

Cordell Palmer
Chowan County Sheriff's Office
Chowan County Emergency Management
Chowan Central Communications Director
PO Box 78
305 West Freemason St.
Edenton, NC 27932
252-482-8484
252-482-5813 fax
cord.palmer at chowan.nc.gov

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APC	QTY	NOMENCLATURE	DESCRIPTION	UNIT LIST (DUP)	EXT LIST (DUP)
				\$ -	\$ -
				\$ -	\$ -
			K2 CORE BACK ROOM	\$ -	\$ -
405	1	SQM01SUM0237	SINGLE ZONE CONV NON-RED CORE	\$ 24,950.00	\$ 24,950.00
425	1	CA02259AA	ADD: Redundancy	\$ 20,000.00	\$ 20,000.00
483	1	CA01663AB	ADD: RACK	\$ 495.00	\$ 495.00
147	4	SQM01SUM0205	GGM 8000 GATEWAY	\$ 4,200.00	\$ 16,800.00
147	4	CA02141AA	ADD: LOW DENSITY ENH CONV GATEWAY	\$ 3,000.00	\$ 12,000.00
147	4	CA01616AA	ADD: AC POWER	\$ -	\$ -
207	1	DSTSJ100BT	SPD, RJ-48 8 PIN, 10/100 BASE T TSJ PROTECTS/PASSES ON ALL 8 PIN	\$ 154.00	\$ 154.00
207	2	DS110110711	PDU, AC EDGE RACK MOUNT DISTRIBUTION PANEL, 120VAC 60A, 12-15A CIRCUIT	\$ 2,450.00	\$ 4,900.00
207	24	DS37502851	BREAKER KIT AIRPAX 15AMP SNAPAC, FOR AC EDGE OR DC EDGE III QTY 1	\$ 34.00	\$ 816.00
			AUX I/O	\$ -	\$ -
469	1	F4543	SITE MANAGER BASIC	\$ 1,855.00	\$ 1,855.00
469	1	VA00874	ADD: AUX I-O SERV FW CURR ASTRO REL	\$ 175.00	\$ 175.00
469	1	V266	ADD: 90VAC TO 260VAC PS TO SM	\$ 120.00	\$ 120.00
469	3	V592	AAD TERM BLCK & CONN WI	\$ 90.00	\$ 270.00
744	1	6406066M02	PANEL PUNCH BLOCK	\$ 435.00	\$ 435.00
			CORE SPARES	\$ -	\$ -
147	1	SQM01SUM0205	GGM 8000 GATEWAY	\$ 4,200.00	\$ 4,200.00
147	4	CA02141AA	ADD: LOW DENSITY ENH CONV GATEWAY	\$ 3,000.00	\$ 12,000.00
147	1	CA01616AA	ADD: AC POWER	\$ -	\$ -
147	1	CLN1856	2620-24 ETHERNET SWITCH ?	\$ 2,250.00	\$ 2,250.00
112	1	DLN6569	FRU: GCP 8000/GCM 8000	\$ 2,500.00	\$ 2,500.00
112	1	DLN6781	FRU POWER SUPPLY	\$ 2,200.00	\$ 2,200.00
112	1	DLN6898	FRU: FAN MODULE	\$ 206.00	\$ 206.00
			MCC7500 OPERATOR POSITIONS	\$ -	\$ -
443	4	B1933	MOTOROLA VOICE PROCESSOR MODULE	\$ 11,920.00	\$ 47,680.00
443	1	B1905	MCC 7500 ASTRO 25 SOFTWARE	\$ 250.00	\$ 250.00
443	4	CA01642AA	ADD: MCC 7500 BASIC CONSOLE FUNCTIONALITY SOFTWARE LICENSE	\$ 12,000.00	\$ 48,000.00
443	4	CA00147AF	ADD: MCC 7500 SECURE OPERATION	\$ 3,250.00	\$ 13,000.00
443	4	CA00245AA	ADD: ADP ALGORITHM	\$ 300.00	\$ 1,200.00
443	4	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN	\$ -	\$ -
708	4	DSE686772	ELO 1928L 19IN LCD TOUCH MONITOR, DUAL SERIAL USB CONTROLLER, GRAY	\$ 2,340.00	\$ 9,360.00
708	4	TT2538	Z420 LOW TIER WORKSTATION WINDOWS 7	\$ 2,550.00	\$ 10,200.00
877	4	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG	\$ 50.00	\$ 200.00
207	4	DSRMP615A	SPD, TYPE 3, 120V RACK MOUNT, 15A PLUG-IN W/ (6) 15A NEMA 5-15 OUTLETS	\$ 355.00	\$ 1,420.00
443	8	B1912	MCC SERIES DESKTOP SPEAKER	\$ 450.00	\$ 3,600.00
443	4	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE	\$ 250.00	\$ 1,000.00
443	8	B1913	MCC SERIES HEADSET JACK	\$ 200.00	\$ 1,600.00
706	8	RLN6098	HDST MODULE BASE W/PTT, 15' CBL	\$ 210.00	\$ 1,680.00
129	12	CDN6289	MIRAGE NOISE CANCEL HEADSET	\$ 127.00	\$ 1,524.00
454	4	BLN6732	FOOT, SWITCH TRADITIONAL	\$ 120.00	\$ 480.00
708	4	T7885	MCAFFEE WINDOWS AV CLIENT	\$ 165.00	\$ 660.00
229	4	DDN2090	DUAL IRR SW USB HASP W LICENSE, SOUND CARD, & SPKRS (V47)	\$ 2,935.00	\$ 11,740.00
708	1	CDN6221	10 BASE-T PVC CABLE 1000 FT	\$ 345.00	\$ 345.00
708	7	CDN6224	SNAP ON PLUG, RJ-45 PACK OF 10	\$ 59.00	\$ 413.00
			CONFIGURATION MANAGER	\$ -	\$ -
708	1	TT2538	Z420 LOW TIER WORKSTATION WINDOWS 7	\$ 2,550.00	\$ 2,550.00
877	1	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG	\$ 50.00	\$ 50.00
708	1	T7885	MCAFFEE WINDOWS AV CLIENT	\$ 165.00	\$ 165.00
708	1	DS2UKVM12521TV	RACK SOLUTIONS 17 IN. MONITOR & KEYBOARD W/ 2 POST RACK MOUNT	\$ 1,506.00	\$ 1,506.00
207	1	DSRM114R2	HEAVY DUTY EQUIPMENT SHELF	\$ 145.00	\$ 145.00
			OPERATOR SPARES	\$ -	\$ -
443	1	B1912	MCC SERIES DESKTOP SPEAKER	\$ 450.00	\$ 450.00
443	1	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE	\$ 250.00	\$ 250.00
443	1	B1913	MCC SERIES HEADSET JACK	\$ 200.00	\$ 200.00
708	1	TT2538	Z420 LOW TIER WORKSTATION WINDOWS 7	\$ 2,550.00	\$ 2,550.00
443	1	B1934	MCC 7500 VOICE PROCESSOR MODULE FRU	\$ 11,830.00	\$ 11,830.00
443	1	CA00147AF	ADD: MCC 7500 SECURE OPERATION	\$ 3,250.00	\$ 3,250.00
443	1	CA00245AA	ADD: ADP ALGORITHM	\$ 300.00	\$ 300.00
443	1	01009513002	PWR SPLY 108W AC INP 12VDC OUT W18	\$ 150.00	\$ 150.00
443	1	30009351001	DC CABLE ASSY	\$ 32.00	\$ 32.00
271	1	3082933N08	GR500 AC POWER CORD	\$ 16.00	\$ 16.00
			KVL 4000	\$ -	\$ -
201	1	T7537B	KVL 4000 PDA SNAP-ON	\$ 1,250.00	\$ 1,250.00
201	1	U239AD	ADD: ASTRO 25 MODE	\$ 250.00	\$ 250.00
201	1	CA00243AG	ADD: ADP PRIVACY	\$ 300.00	\$ 300.00
201	1	CA01598AA	ADD: AC LINE CORD US	\$ 8.00	\$ 8.00
201	1	C543	ADD: CABLE FOR RNC, DIU, MGEG	\$ 84.00	\$ 84.00
201	1	CA01603AA	ADD: USB COMM/CHARGE CABLE W/ CUP	\$ 75.00	\$ 75.00
201	1	CA01803	ADD: KVL 4000 SLEEVE COVER	\$ 75.00	\$ 75.00

\$ 286,164.00

North Carolina 911 Board

PSAP Name: Chowan Central Communications
 Contact Name: Cordell Palmer
 Contact Address: PO Box 78
 City: Edenton
 Zip: 27932
 Contact Email: cord.palmer@chowan.nc.gov

Instructions: All requests for review of PSAP Distribution amount must use this form with each request. Please do not change block descriptors, formulas or formatting. ***PLEASE SEE INSTRUCTIONS tab for further details All requests must be filed with the NC 911 Board no later than March 6, 2015. Email this form and all supporting documentation to marsha.tapler@nc.gov. If you have questions regarding this form or filing a request, please call Marsha Tapler at 919-754-6344 or email at marsha.tapler@nc.gov.***

June 30, 2014 Emergency Telephone System Fund Balance: \$290,849.57

	FY2014 (2013-2014) ACTUAL Expenditures from Reconciled Report	FY2016 (2015-2016) Requested Increase Amount ONE-TIME Capital Purchase Cost	FY2016 (2015-2016) Requested Increase Amount Recurring <u>MONTHLY</u> Cost	FY2016 (2015-2016) Requested Increase Amount Recurring ANNUAL Cost
Expenditure				
Phone Systems - Furniture				
9-1-1 trunk line charges				
Basic line charge only **One administrative line per call-taking position				
Interpretive Services				
Selective Routing and ALI provisioning				
Data Connections for the sole purpose of collecting call information for analysis. If connections is shared with non-eligible 911 device, only a percentage is eligible.				
Automatic Call Distribution System				
911 telephone equipment (CPE, etc.)				
TDD/TTY				
Furniture: Cabinets, tables, desks which hold 911 equipment				
TOTAL	\$0.00	\$0.00	\$0.00	\$0.00

	FY2014 (2013-2014) ACTUAL Expenditures from Reconciled Report	FY2016 (2015-2016) Requested Increase Amount ONE-TIME Capital Purchase	FY2016 (2015-2016) Requested Increase Amount Recurring MONTHLY Cost	FY2016 (2015-2016) Requested Increase Amount Recurring ANNUAL Cost
SOFTWARE				
CAD (modules that are part of the call-taking process only)				
GIS (to create and display the base map showing street centerlines and address, address point layer)				
Message switch software **must meet requirements noted in Approved Use of Funds list.				
MCT Digital Voiceless Dispatch Licensing **Allowable for Dispatched Protocols Law, Fire & EMS.				
Voice Logging Recorder				
MIS for 9-1-1 phone system				
Time Synchronization				
Dispatch Protocols (Law, Fire, Medical)				
Quality Assurance for Protocols				
ALI Database software				
Software Licensing				
Radio console software. Some Radio console software will include many additional modules that are not a part of the 911 process and are not eligible.				
Console Audio Box (CAB) software				
Paging software (to send call from CAD to first responder pager or mobile phone)				
Computer Aided Dispatch (CAD) to Computer Aided Dispatch (CAD) interface software (sending CAD info to another PSAP for dispatch)				
Automated digital voice dispatching software				
Software MAINTENANCE				
TOTAL	\$0.00	\$0.00	\$0.00	\$0.00

	FY2014 (2013-2014) ACTUAL Expenditures from Reconciled Report	FY2016 (2015-2016) Requested Increase Amount ONE-TIME Capital Purchase Cost	FY2016 (2015-2016) Requested Increase Amount Recurring MONTHLY Cost	FY2016 (2015-2016) Requested Increase Amount Recurring ANNUAL Cost
HARDWARE				
CAD server				

GIS server				
911 Phone server				
Voice logging server				
Activity Monitor **must meet requirements				
Computer Workstations				
Time Synchronization				
UPS				
Generator				
Call Detail Record Printer (automatically captures incoming 911 telephone call data)				
Radio Network Switching Equipment used exclusively for PSAP's Radio Dispatch Consoles (i.e.: CEB, IMC, NSS)		410,000.00		
Fax Modem (for rip & run)				
Printers (CAD, CDR, Reports, etc.)				
Radio Console Dispatch Workstations		Included		
Radio Console Ethernet Switch		Included		
Radio Console Access Router		Included		
Back Up Storage Equipment for 911 Data Base Systems				
Mobile Message Switch				
Paging Interface With Computer Aided Dispatch (CAD) system				
Alpha / Numeric Pager Tone Generator				
Radio Console **as defined in Approved Use of Funds List				
Handheld GPS devices that are used strictly for 911 addressing **as defined in Approved Use of Funds List.				
Hosted Solutions:**Must be approved by 911 Staff prior to reporting.				
Hardware MAINTENANCE				
TOTAL	\$0.00	\$410,000.00	\$0.00	\$0.00

Training Expenditures

TOTAL	\$0.00	\$0.00	\$0.00
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IMPLEMENTAL FUNCTIONS

Database Provisioning for 911			
Addressing for 911			
TOTAL	\$0.00	\$0.00	\$0.00

To be completed by 911 Board Staff:

PROPOSED FY2016 FUNDING	
FY2016 Anticipated Capital Expenditures	\$410,000.00
FY2016 Anticipated Monthly Recurring	\$0.00
Requested FY2016 Funding	\$410,000.00

Motorola Solutions, Inc
Andrew Curd
PO Box 122
Holly Springs, NC 27540
November 12, 2014

Warren Bell
Motorola Manufacturer Representative
Gately Communications
320 W Lake Dr
Kill Devil Hills, NC 27948

Dear Warren:

As you are aware, at the beginning of 2012, Motorola Solutions, though myself and my management, added accounts to your Motorola Solutions Manufacturer Representative (MR) Territory. I wanted to validate the Counties that we added to your territory at that time, which include:

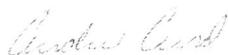
- Chowan County
- Bertie County
- Hertford County
- Gates County

These accounts were added to your territory based on your professional track record, and ultimately so that Motorola Solutions could extend our ability to properly serve these important customers through our Direct Sales Channel. The MR role will mean that you will have the exclusive ability to sell our Direct Portfolio of Motorola Solutions products, as well as allowing you to sell Motorola products listed on the State Contract through the Two-Way Radio Contract #725G.

We appreciate all of your efforts over the years as a Manufacturer Rep in other Counties, and hope that you continue to establish great customer relationships in these additional Counties as well. I encourage you to pass this information on to these new Counties, so that it is understood that you have the ability to sell as a direct extension of Motorola Solutions.

If you or any of the customers you serve have any questions, please pass along my information, and I will be glad to discuss how the MR program works, and the criteria we use to select an MR for a given area.

Sincerely,



Andrew Curd
Account Executive
Motorola Solutions, Inc.

Updated MCC7500 Console quote

Bellwarrens@aol.com

Sent: Monday, February 09, 2015 12:56

To: Palmer, Cord

Cc: wbell@gately.com

Attachments:ChowanCountyProposal_Janua~1.pdf (384 KB) ; ChowanCoverLettersigned2-9~1.pdf (262 KB)

Cordell,

I have attached an updated Budgetary quote for you on the Motorola MCC-7500 Consoles (4 position) with K2 Redundant Core. I apologize for the delay in getting this updated for you but I just got this back from Motorola..

The Promo for a (\$ 50,000) discount expired last year, but Andrew has been able to get that extended thru July of this year just for Chowan County. The discount is Not reflected in this Budgetary quote, but will be honored if a PO can be cut before end of July. Please call me with any questions. I will go over everything when we meet on the 24th, but just wanted to get this to you ahead of meeting.

Thanks Cord,
Warren



MOTOROLA SOLUTIONS

Motorola Solutions, Inc.
1302 E. Algonquin Rd.
Schaumburg, IL 60196
USA

Tel + 1 847 578 5000
Fax + 1 847 538 6020

January 31, 2015

Cordell Palmer
Chowan County Central Communications
305 W. Freemason Street, Suite 1300
Edenton, NC 27932

Subject: MCC 7500 Dispatch Console System with Conventional K2 Core

Dear Mr. Palmer,

Motorola Solutions, Inc. (Motorola) is pleased to present Chowan County Central Communications (Chowan County) with this budgetary proposal. The development of this proposal provided us an opportunity to evaluate our current mutual business and further explore the means by which we can fulfill Chowan County's communications needs.

The information in this proposal is provided to assist in your budget planning process. We will provide a final design and comprehensive proposal with firm pricing, based upon a more detailed analysis of Chowan County's requirements.

As the industry's premier supplier of radio and integrated solutions, Motorola possesses many unique capabilities which offer our customers effective solutions to their complex business problems. Our primary goal is to provide Chowan County with a solution that improves the safety level of your employees and citizens. Simultaneously, we are committed to contributing to Chowan County's increased productivity and organizational profitability, while always ensuring customer satisfaction.

Questions or inquiries may be addressed to me at 252-441-2066. We look forward to your positive review of our proposal, to subsequent discussions, and to helping Chowan County achieve your communications goals and objectives.

Sincerely,

Motorola Solutions, Inc.

A handwritten signature in cursive script that reads "Andrew Curd".

Andrew Curd
Account Manager - North Carolina
Motorola Solutions, Inc.

MCC 7500 DISPATCH CONSOLE SYSTEM WITH CONVENTIONAL K2 CORE



The design, technical, and cost information furnished with this proposal is proprietary information of Motorola Solutions, Inc. (Motorola). Such information is submitted with the restriction that it is to be used only for the evaluation of the proposal, and is not to be disclosed publicly or in any manner to anyone other than those required to evaluate the proposal, without the express written permission of Motorola Solutions, Inc.

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INTRODUCTION

The Motorola Solutions, Inc. (Motorola) portfolio includes world-class system integration and technologies, including wireless handsets, wireless accessories, digital entertainment devices, wireless access systems, voice and data communications systems, and enterprise mobility solutions. With the rapid convergence of fixed and mobile broadband Internet and the growing demand for next-generation mobile communication solutions, our mission is to lead the next wave of innovative products that meet the expanding needs of our customers around the world.

We deliver high-availability network infrastructure systems to commercial service providers and mission-critical, end-to-end wireless communication networks, primarily for the government and public safety markets. Through our enterprise product portfolio, we deliver leading-edge mobile computing, mobile office, and enterprise product network solutions. We are also an industry leader in the development of next-generation IP wireless broadband mobility technologies, offering an entire suite of end-to-end WiMAX infrastructure and customer premises equipment products. In addition, we offer a family of point-to-point and point-to-multipoint wireless broadband products to serve Wi-Fi and wireless DSL operators.

With over 80 years of experience, Motorola offers a unique combination of innovative technology; extensive market experience; and the ability to design, integrate, and seamlessly implement the various technologies Chowan County Central Communications (Chowan County) needs, both today and in the future. As the recipient of the 1988 and 2002 prestigious Malcolm Baldrige National Quality Award, the nation's premier award for performance excellence and quality achievement, we have the resources and unmatched experience to help Chowan County address your unique situation in order to create a total solution that is right for you.



Motorola Firsts

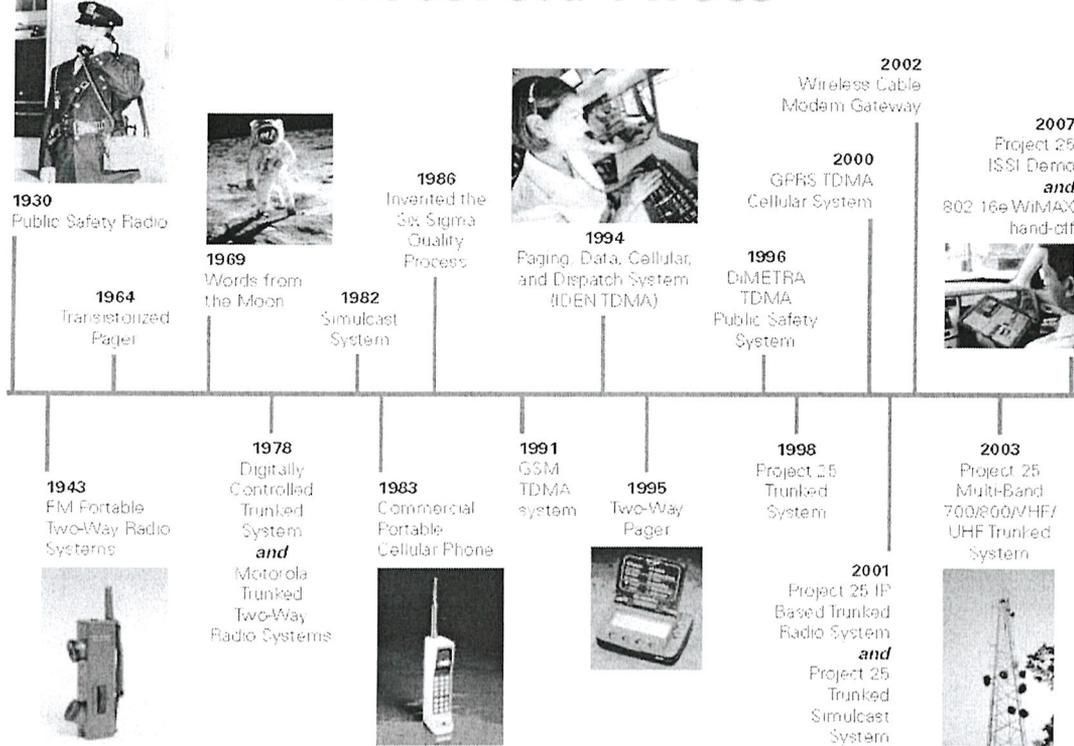


Figure 1-1: From the first portable radio for public safety to the first Project 25 trunked system, Motorola has led the industry in innovation.

This budgetary proposal, presented for your consideration, is intended to assist Chowan County with defining your project funding requirements, as well as your solutions requirements for equipment and services. Upon request, your Motorola account executive will provide a detailed proposal with firm pricing that is tailored to your specific needs, which will include verification of all assumptions relative to unknowns that are contained within this proposal.



SYSTEM OVERVIEW

In our response to Chowan County's request for a price estimate and system recommendation, we selected our MCC 7500 console and K2 Core solution to best suit your communication needs.

Motorola's MCC 7500 dispatch console is our mission-critical, IP high-tier radio dispatch system. The MCC 7500 features an intuitive, easy-to-use Graphical User Interface (GUI) that runs under a Microsoft Windows® operating system, utilizing the industry-standard PC platform. MCC 7500's highly recognizable icons are designed to reduce user training time and allow dispatchers to manage information more productively.

Designed for effective, flexible dispatch communications, the MCC 7500 provides a range of valuable features, including:

- MCC 7500 provides seamless integration with ASTRO® 25 trunking systems.
- MCC 7500 supports the IP network protocols of the ASTRO 25 system's transport network.
- Encryption and decryption occurs in the dispatch consoles, allowing true end-to-end encryption in the radio system.
- The MCC 7500 console system is configured and managed by the ASTRO 25 system's configuration manager, fault manager, and performance reporting applications. This provides Chowan County with a single point for configuring and managing the entire radio system, including the console portion. This information can also be accessed from multiple remote locations, giving Chowan County convenient access while enjoying the benefits of centralized system management.
- MCC 7500's environment features the familiar, user-friendly standards used by other Windows programs, worldwide.
- Screen layout, menus, and icons are easy to understand and quickly recognizable.
- Each dispatcher's configuration can be customized via the Elite Admin application.
- Elite Dispatch GUI uses a simple point-and-click response. The dispatcher has the choice of using a mouse, trackball, or optional touchscreen, and the keyboard is not required for day-to-day operations.
- Agency partitioning allows multiple agencies to use a common system while maintaining control over their console resources.

There are three main components of a Motorola MCC 7500 system:

- A. Dispatch Console
- B. Archiving Interface Server
- C. Conventional Channel Gateway (CCGW)

Various combinations of these components are connected together and to the rest of the ASTRO 25 system via console site routers and switches on an IP network.



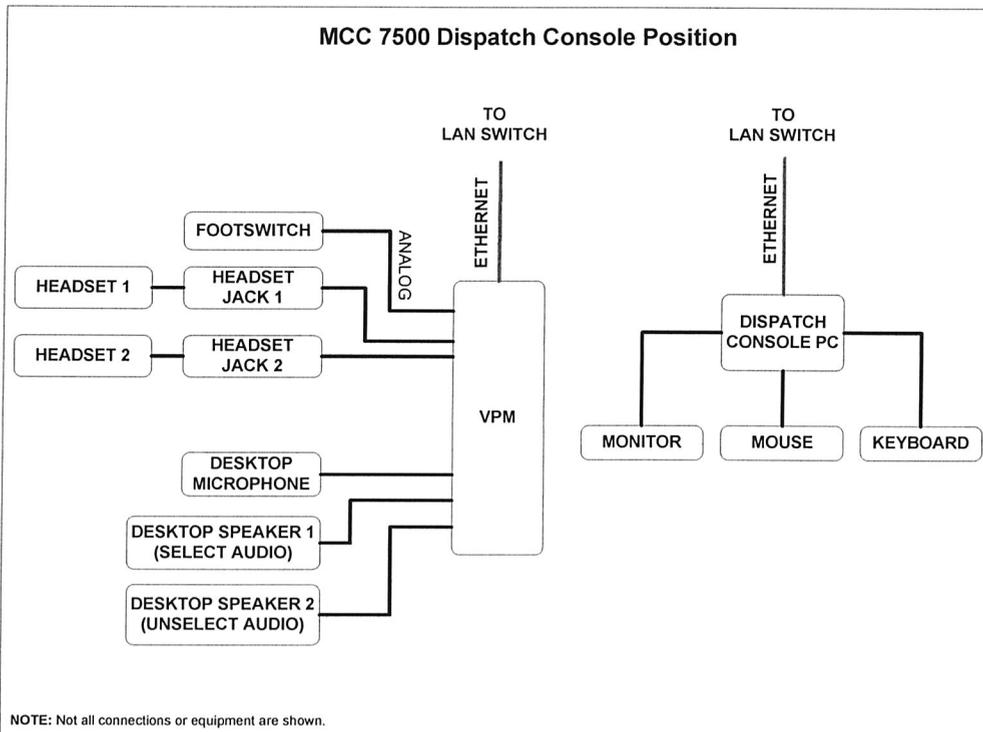


Figure 2-1: Motorola MCC 7500 Dispatch Console Hardware Architecture.

The dispatch console software consists of the Elite Dispatch GUI and is based on a commercially available personal computer with Motorola-provided hardware and software.

The Motorola-provided hardware (Figure 2-1) includes a Motorola-certified personal computer with:

- A voice card installed inside the computer
- An optional Secure Card installed inside the computer
- A Voice Processor Module (VPM)
- Desktop speakers (up to four)
- Headset jacks (up to two)
- A desktop microphone
- A footswitch

The VPM connects to the voice card and performs the digital-to-analog and analog-to-digital conversions for all analog audio flowing into or out of the dispatch console. It also provides the connections for items such as the speakers, headset jacks, microphone, footswitch, local logging recorder, 911 telephone headset, and instant recall recorder for radio.

The voice card provides the vocoding and audio processing services for the dispatch console. It is capable of supporting IMBE vocoder algorithms for ASTRO 25 operation, as well as supporting audio level adjustments, summing, and filtering, and can support multiple simultaneous streams of audio.

The optional Secure Card provides the encryption and decryption services for the dispatch console. It is capable of supporting multiple, simultaneous encryption/decryption sessions using multiple algorithms and multiple secure keys.



The Archiving Interface Server (AIS) provides flexible, high-quality archiving services for audio and data associated with various types of calls and events associated with radio resources. The AIS is a server which allows an IP-based logging recorder to “log onto” the radio system and request talkgroup and conventional channel audio be directed to it for recording. Once configured by the logging recorder, the AIS sends the audio and any information associated with the call (PTT ID, Alias, Type of Call, etc.) to the recorder.

The Conventional Channel Gateway (CCGW) is used in the MCC 7500 dispatch console to connect the dispatchers to analog conventional channels in their system. The CCGW allows an analog conventional channel to connect to the transport network in the ASTRO 25 trunking system. Once these channels are connected to the network, dispatchers are able to monitor and transmit on the channel.

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SYSTEM COMPONENTS

Motorola's proposed solution includes the following summary of equipment.

ASTRO K2 Redundant Conventional Core

- Redundant conventional K2 Core backroom equipment. This includes:
 - Two (2) core LAN switches
 - Two (2) GCP 8000 site controllers
 - Two (2) GGM 8000 gateways
 - Two (2) backhaul switches
- Recommended spares

MCC 7500 Dispatch Console System

- Four (4) MCC 7500 positions
 - One (1) certified workstation per position
 - Two (2) speakers per position
 - One (1) gooseneck microphone per position
 - Two (2) headset jacks per position
 - One (1) footswitch per position
 - One (1) Install Recall Recorder (IRR) per position
 - One (1) 19-inch touch monitor
- One (1) Configuration Manager workstation with monitor
- Up to 16 analog channel licenses interfaces
- Up to 16 auxiliary outputs
- Up to 48 auxiliary inputs
- Recommended spares

KVL 4000 Key Loader for ADP Encryption

- ADP Encryption Algorithm Software
- Cable for MCC7500 Dispatch Console

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SERVICES

4.1 PROFESSIONAL INTEGRATION SERVICES

To ensure smooth installation and deployment, Motorola's proposed solution for Chowan County includes estimates for the following services:

- System staging at Motorola's Customer Center for Solutions Integration (CCSi).
- Project Management for system installation and optimization.
- Field Engineering support for system installation and optimization.
- System installation and optimization.
- WLS console user training for up to nine dispatchers.

This solution will be installed, optimized, and tested by our dedicated Project Implementation Team.

4.2 MOTOROLA SYSTEM SUPPORT

Motorola's standard warranty covers on-site response during normal business hours and provides for the repair of defective hardware components.

In addition to this warranty, we have included a Support Service Package in the price of the system designed to provide a higher level of support and service to Chowan County 24x7x365. Motorola's Support Service Package comprises services such as:

- 24x7 Technical Support
- Infrastructure Repair
- 24x7 Dispatch Services
- 24x7 OnSite Infrastructure Response
- Network Preventative Maintenance (when applicable)

After the first year, these services may be purchased under a separate agreement.



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ASSUMPTIONS

Motorola has made several assumptions in preparing this budgetary proposal to Chowan County (Customer). In order to provide a firm quote, Motorola will need to verify all assumptions or seek alternate solutions in the case of invalid assumptions.

- All existing sites or equipment locations will have sufficient space available for the system described.
- All existing sites or equipment locations will have adequate electrical power and site grounding to support the requirements of the system described.
- Any towers, shelters, and/or connectivity required for new sites will be the responsibility of the Customer.
- Any tower stress/structural analyses or tower upgrade requirements will be the responsibility of the Customer.
- All existing towers will have adequate space and size to support the antenna network requirements of the system described.
- The Customer will make any necessary site improvements to meet R56 standards.
- Any site/location upgrades or modifications are the responsibility of the Customer.
- Any tower stress analysis or tower upgrade requirements are the responsibility of the Customer.
- The Customer will provide frequencies necessary to support the system design.
- Approved FCC licensing will be provided by the Customer.
- Approved local, state, or federal permits as may be required for the installation and operation of the proposed equipment are the responsibility of the Customer.
- Any required system interconnections not specifically outlined here will be provided by the Customer. These may include dedicated phone circuits or microwave links.
- Where necessary, the Customer will provide a dedicated delivery point, such as a warehouse, for receipt, inventory, and storage of equipment prior to delivery to the sites.



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SECTION 6

ADDITIONAL EQUIPMENT AND SERVICES

The following is a summary of equipment and services that Motorola will quote separately, upon request from Chowan County (Customer):

- Site connectivity.
- Site acquisition or preparation costs, such as buildings, towers, grounding, or licenses/permits or costs to upgrade sites to comply with Motorola's "Standards and Guidelines for Communications Sites" (R56).
- Site power generation or utility costs, such as electrical power terminations, generators, battery chargers, backup battery banks, etc.
- Console furniture.
- Application software such as Computer Aided Dispatch (CAD), Records Management System (RMS), etc.
- Customized service package based upon Customer-specific requirements.
- Subscriber programming and installation.
- Coverage prediction and testing.
- In-building coverage enhancements
- Microwave maintenance.
- Security remediation.
- Subscriber repair services and upgrades.
- Lifecycle system management services.
- Extended warranty services
- Asset management.
- Video surveillance.
- Customer training (<http://www.motorola-wls.com>).
- Applicable federal, state, and local taxes.



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SECTION 7

SYSTEM ESTIMATE

Motorola estimates the system solution and services for Chowan County to be as follows:

Description	Estimated Price
Equipment	\$267,000.00
Services	\$193,000.00
System Budgetary Pricing Total	\$460,000.00

\$ 410,000.00

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OUR COMMITMENT

Motorola products are growing and changing, as they have over the years, and our drive for excellence has strengthened and intensified. From the five-pound Handie-Talkie™ radio to the lightweight models of today, Motorola has been the leading provider of two-way radio services to public safety, government, transportation, utility, and manufacturing enterprises. We changed the way the world communicates, from making the equipment that carried the first words from the moon to the introduction of the DynaTAC cell phone in 1983. We were the first to bring Push-to-Talk over Cellular to market.

More recently, Motorola delivered the first all-digital, high-definition television (HDTV) technical standard and demonstrated the world's first WiMAX 802.16e mobile handoff. In the arena of mission-critical, public safety communications, Motorola implemented the first statewide Project 25 IP-based network, and the only VHF Project 25 IP-based statewide trunked networks. We maintain our leadership in Project 25 systems by developing innovative solutions for our customers.

Throughout our history, Motorola has transformed innovative ideas into products that connect people to each other and the world around them. Moving forward, we strive to fulfill our commitment to make products and services better, and to make sound recommendations that will guide Chowan County Central Communications in linking your current and future communication needs and objectives with technology's ever-evolving promise.

Upon request, your Motorola account executive can provide a firm proposal tailored to meet Chowan County's solution needs.



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