

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of: )  
)  
Implementation of Sections 309(j) and 337 of the )  
Communications Act of 1934 as Amended )  
)  
Promotion of Spectrum Efficient Technologies on ) WT Docket No. 99-87  
Certain Part 90 Frequencies )  
)  
Narrowbanding Memorandum Opinion and Order )  
)  
47 C.F.R. § 90.209(b) )

**REQUEST FOR EXTENSION of WAIVER OF COMMUNICATIONS RULES  
EXPEDITED ACTION REQUESTED**

City of Winchester, Virginia (“the City”), pursuant to Section 1.925 of the Commission’s rules and the guidelines issued in the Public Notice, DA 11-1189, hereby submits this Request for an Extension of its previously granted Waiver of the January 1, 2013 deadline for transitioning to narrowband operations in the 150-174 MHz VHF Band.<sup>1</sup> The City respectfully requests that the Commission grant this request to extend its previously granted one year Waiver to continue operating on existing 25 kHz channels through December 31, 2015, in order to allow the City to complete the implementation of a new citywide 800MHz, P25, digital, trunked public safety communications network along with VHF 12.5kHz paging and interoperability channels . As required by Section 1.925, the City believes and will demonstrate in this petition that “(i) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the waiver would be in the public interest; or (ii) in view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.” The City further believes that this petition follows the recommended content guidelines defined in the Public Notice, DA-11-1189, and addresses the facts applicable to the specific narrowbanding migration path defined by the City.

**I. BACKGROUND**

The City of Winchester is located in the northwest region of the Commonwealth of Virginia covering 9.3 square miles and is surrounded by Frederick County, Virginia. The City supports communications interoperability and mutual aid operations with Frederick County and other jurisdictions on a daily basis. Approximately 80 Police Officers, 90 Fire & Rescue, 16 Sheriff Deputies and 120 Public Safety/Public Services Associates who protect the

<sup>1</sup> Wireless Telecommunications Bureau, Public Safety and Homeland Security Bureau, and Office of Engineering and Technology Provide Reminder of January 1, 2013 Deadline for Transition to Narrowbanding Operations in the 150-174 MHz and 421-512 MHz Bands and Guidance for Submission of Requests for Waiver and Other Matters, DA 11-189, released July 13, 2011.

lives and property for a census population of 26,000 and a daytime population estimated at 70,000. These responders are supported by mutual aid agreements with neighboring Counties, the Virginia State Police and the Virginia Department of Health, Emergency Medical Services Division.

Prior to initiating its project to narrowband the Police Department, Sheriff's Office and Fire & Rescue Department operated conventional analog 25kHz LMR communications systems using six (6) Part 90 VHF channels. The current number of mobile and portable subscriber radios, of various ages, on the system was approximately 150 for Police, 32 for the Sheriff's Office, 85 for Fire & Rescue and 40 for Public Safety/Services agencies. The systems operate from two (2) transmitting and receiving sites utilizing PL steered technology. Based on the equipment survey that was done about 3% of the existing subscriber radios were capable of operating in the 12.5 kHz mode. The remaining 97% of the subscriber radios are being replaced as they will not operate in the 12.5 kHz mode. The base radios and system infrastructure are also of various ages dating back to the early 1990's or before and are almost universally not capable of being converted to operate in the 12.5 kHz mode. Due to the need for interoperability through mutual aid the City has no plans to relinquish any of the current VHF licenses assigned. However, should overall circumstances within the region change in the future reducing or not requiring VHF, current licenses may be relinquished.

As detailed in its original waiver request due to the age of our existing communications equipment and our need for improved interoperability, coverage, features and capabilities offered by new state of the art mission critical communications networks, the City has made the decision to enter into a contract with Motorola Solutions, Inc. to implement a new 800MHz, P25, trunked system. The City's goal is to provide two-way mission critical and support communications throughout the City for the benefit and safety of life and property of all public safety and government users, and the citizens they serve.

Additionally, as is identified through the Department of Homeland Security (DHS) and the Commonwealth of Virginia's Interoperability Plan communications interoperability is a critical component of overall operations. Through the implementation of the 800 MHz, P25 system and the incorporation of the VHF frequencies the city will achieve internal and external interoperability thus addressing the goals of DHS and the Commonwealth. This migration to a new P25 trunked system will be accomplished Citywide allowing the City to migrate to a more efficient spectrum use of the 800MHz band.

In DA 11-1189, the Commission provided guidance to licensees for submission of Requests for Waiver of the narrowband deadline. It emphasized that Requests for Waiver of the deadline will be subject to a high level of scrutiny under the waiver standards set forth in Section 1.925 of the Commission's rules, which requires the waiver petitioner to demonstrate either that "(i) [t]he underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the waiver would be in the public

interest; or (ii) [i]n view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.”<sup>2</sup>

Relevant to the Commission’s assessment of the Waiver Request, it recommended that petitioners provide information addressing the following to show that the waiver request has met the Commission’s waiver standard under Section 1.925:<sup>3</sup>

- Steps already taken to plan for, initiate, and complete the transition to narrowband operations
- Commissioned a study of viable options for narrow band compliance (Strategic Communications Report, August 2007).
- System size and complexity
- Whether system equipment is narrowband-capable or must be replaced or upgraded
- Whether the licensee plans additional system upgrades or improvements in addition to converting to narrowband operation
- Funding sources, including whether the licensee’s budget requires government approval or a multi-year budget process
- Whether the licensee’s narrowbanding schedule is affected by neighboring systems due to interoperability relationships or other interdependencies
- Plans to minimize the negative impact of extended wideband operations on co-channel and adjacent channel operations, including a description of the spectrum environment in the affected area

The Commission further requested that licensees should provide a proposed timetable for completion of narrowbanding that includes the following elements:

- What steps in the process have been or will be taken prior to January 1, 2013
- Anticipated dates of commencement and completion
- Replacement or retuning of mobiles/portables
- Infrastructure replacement or retuning

When addressing the above factors, the Commission recommends that licensees explain how (i) they have worked diligently and in good faith to narrowband their systems expeditiously; (ii) their specific circumstances warrant a temporary extension of the deadline; and (iii) the amount of time for which a waiver is requested is no more than

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<sup>2</sup> 47.C.F.R. §§ 1.925(b)(3)

<sup>3</sup> DA 11-189, released July 13, 2011, page 3.

is reasonably necessary to complete the narrowbanding process.

## **II. NARROWBANDING STEPS TAKEN TO DATE OR PRIOR TO JANUARY 1, 2013**

Prior to the original narrowband deadline the City implemented and completed a number of specific steps to date and is committed to completing additional steps by year end towards meeting the Commission's narrowband requirements, including:

1. Completed an in-depth survey of existing mobile and portable subscriber radios and base station radio equipment to determine the capability of current radio equipment to operate in 12.5 kHz mode via a software update.
2. Hired a consulting firm to assist the City in writing and administering an RFP for a new communications system.
3. Completed a citywide coverage and capacity analysis and developed the corresponding proposed site plan. The system being implemented will be an 800MHz P25, trunked system, utilizing at minimum seven (7) VHF 12.5 kHz frequencies, six (6) for interoperability and one (1) for paging. The system is designed to provide a guaranteed 95% portable in building coverage throughout the City.
4. Issued an RFP for a new communications system (December 2011).
5. Negotiated a contract with Motorola Solutions to install, implement and optimize the City's newly designed Public Safety communications system.
6. Developed a detailed plan and project completion schedule to migrate to a citywide interoperable 800MHz Project 25 network, and obtained a vendor detailed pricing proposal to design the system including new subscriber equipment, and provide ongoing maintenance services. See the project timetable below.
7. Developed the funding request for the complete project and submitted to the City of Winchester's City Council for approval. The funding proposal has been reviewed and approved by City Council.
8. A Contract Design Review (CDR) will be conducted to review the design and verify the equipment list. System design will be completed by the vendor and approved by the City. Upon completion of the CDR the infrastructure equipment will be ordered.

**III. Extenuating Circumstances** – It must be noted that this project has encountered multiple delays resulting from numerous issues relating to regulatory and issues brought forward by the community. The original design of the P-25, 800 Mhz trunked system utilizing a single site was abandoned when the regulations addressing minimum descent altitude were modified and the FCC rejected the proposed height of the tower. The reduction in height at this location was not acceptable as it would not permit the system to meet the specified performance standard of the system. This resulted in a delay of several months while various options were examined. Following the

examination it was determined that the only way to meet the performance standard was to institute a total new design utilizing a minimum of two (2) sites. The re-design phase was implemented and a new design was approved utilizing two sites. The redesign created an increase in cost of \$1.7 million dollars which required action on the behalf of the Winchester Common Council to appropriate additional funds for the project. While the appropriation process was moving forward such items as finalizing design, reviewing site options and preparing regulatory submission documents were being pursued.

As the City was working through these issues and submitting applications we cleared the Board of Zoning Appeals and Conditional Use Permit processes without difficulties. We then encountered the State Historical Preservation Office (SHPO) issue for one of the sites. Compliance with SHPO has now become the issue of the day. Currently a Memorandum of Agreement (MOA) has been submitted to the Virginia Department of Historical Resources (VDHR) for review, comment and hopefully approval. The SHPO issue should be the final regulatory issue to be addressed as the project moves forward.

The City has taken a pro-active position with the vendor and we continue the process of finalizing design as we are acutely aware that we must comply with the narrowbanding. Additionally the fact that the City has an antiquated radio communications system that does not provide sufficient coverage, is not dependable and creates an inherent threat to the safety of public safety personnel and citizens of the community on a daily basis is of primary concern..

The City is committed to completing this project in as timely a manner as possible. Staging of the Fixed Network Equipment (FNE) is scheduled for December 17-18, 2014 and a portion of the FNE will be shipped following staging. The City is contractually committed to vendors in the amount of \$5.2 million dollars of which nearly \$1.0 million has been expended to date. From the City's perspective there is no reversing course but the extenuating circumstances addressing regulatory issues have extended the timeline of the project significantly.

#### **IV. Supplemental Accomplishments January 1, 2013 – December 2013**

1. Determined location of a transmitter single site to provide a 95% 95% coverage for the city incorporating a state of the art 800MHz, trunked P-25 system for utilization throughout the system.
2. The State Historical Preservation Office (SHPO) testing has been performed at the site and a report received that no adverse impact had been indicated relating to the identified resources.
3. The National Environmental Policy Act (NEPA) is being performed but the final report has not yet been received.
4. The following Milestone have been completed with Motorola Solutions, payments authorized and completed:
  - a. Contract Execution November 14, 2012
  - b. Federal Aviation Authority (FAA) ruling received in relationship to the original site. February 2013

c. Contract Design Review completed, July 25, 2013

The city has invested nearly \$500,000 in this project with Motorola Solutions and nearly \$200,000 with Robert. L. Kimball & Assoc. for consulting services.

5. The City encountered areas of deficiency in relationship to the R-56 standard relating to grounding within the Timbrook Public Safety Center that houses the Emergency Communication/9-1-1 Center. This has created a significant delay in the overall process as specific deficiencies were identified and confirmed. Based on the identified deficiencies design criteria determined, construction drawings established and cost estimates requested. The identified deficiencies have created a significant delay in the overall project timeline.
6. The City had determined a location for the erection of a 250' Public Safety Radio Communications Tower and filed the proposed site location with the Federal Aviation Agency (FAA). The City received a favorable response from the FAA but after receiving such found that the location was unfavorable as related to overall safety. The City attempted to relocate the proposed site within the perimeters permitted by the FAA but determined the relocation was not feasible due to overall safety concerns. The City has now filed a second location for a 230' Public Safety Radio Communications Tower at a site that provides overall safety for the erection of the tower and long term operations. Due to the location modification resulting from safety concerns and regulatory issues in accordance with the FAA a delay in the project has occurred. As of this date the ruling of the FAA has not yet been received.

The City received notification from the FAA, Monday, December 9, 2013 stating the FAA had received objections from the Winchester Regional Airport Authority in relationship to the tower's location and height. The objection identified the tower's proposed location would encroach into the Minimum Decent Altitude (MDA) for the airport by 20' potentially creating an obstruction. This may preclude a favorable ruling from the FAA unless we can reach a compromise with the airport and the objection is removed. It was also determined by the FAA that when the calculation were performed relating to the original site there was an oversight on behalf of the FAA and the MDA was not considered in the calculation. The City was further advised by Cindy Whitten, Air Traffic, Obstruction Evaluation Group, Airspace Specialist that not only could the active application not be approved but the previously received favorable ruling is being rescinded. The City is actively and expeditiously pursuing discussions with the Winchester Regional Airport Authority, FAA representatives, the City's consulting firm (Robert L. Kimball and Associates) and Motorola Solutions to identify options and solutions to overcome this element of the project. I have attached a copy of the e-mail received from Ms. Whitten of the FAA addressed to Gerry Boyd, Teltronic Vice President (City's Representative) verifying the above. Additional information is anticipated from the FAA but has not yet been received. Upon receipt the information from the FAA the City will be glad to provide such to the FCC.

7. The Conditional Use Permit (CUP) Application was filed and heard by the Planning Commission on August 27, 2013 and was reluctantly approved and forwarded to the Winchester Common Council for consideration during the regular Council Meeting of September 10, 2013. Due to objections received by the Council during the Public Hearing the proposed public safety radio communications tower was tabled. The tower is scheduled for discussion during a future Council Meeting at which time action will be taken.

The CUP was scheduled to be removed from the table for action during the Regular Council Meeting of December 10, 2013. Due to the receipt of information from the FAA relating to the ruling pertaining to the site the CUP was removed from the table for discussion purposes. City Council acted upon a motion directing staff be immediately commence discussions with the Regional Airport Authority relating to their objection and a possible compromise position and due to the uncertainty involved with the proposed tower site discussions are to be pursued with the City's consultants and communication vendor to determine alternative measures and technology that may be employed to continue the communications project and create compliance with the FCC's Narrowbanding regulations.

Pursuant to Section 1.925 of the FCC rules, the City has no other viable alternative than to continue to advance the plan for the implementation of the proposed 800 MHz, P25 trunked radio communications system. The City recognizes the narrowbanding compliance date as established by the FCC was January 1, 2013 which was found to be unachievable from the City's perspective. The waiver which was applied for requested an extension until March 1, 2014. The FCC granted a waiver but identified the waiver was valid until January 1, 2014, three months shy of the requested date. Based on the project schedule it was an identified fact that completion of the project by January 1, 2014 could not be achieved. However, it was and continues to be the intent of the City and Motorola Solutions to advance the project as expeditiously as possible while being cognizant of the many regulatory issues that are necessary. Based on the fact that the aging base radios, system infrastructure and subscriber units were aged to a point where conversion to operate in a 12.5 kHz mode is all but impossible replacement of the system is necessary.

It was recognized and acknowledged by the City that replacement of the system provides the City with the opportunity to migrate to a new state of the art citywide network that will provide the first responders with an effective and reliable communications network that will promote safety for life and property, and will be in the public interest. Failure to provide a state of the art 800 MHz P25 trunked system would be inequitable, unduly burdensome and contrary to the public interest.

## V Actions/Accomplishments/Obstacles Since December 13, 2013 - Present

1. December 13, 2013 – Received notification from the Federal Aviation Agency (FAA) rejecting their previous approval of the proposed 252' tower. The FAA. The FAA rescinded the site approval and active application on the grounds the structure protruded into approach path and reduced the minimum descent altitude.
2. February 2014 – Strategic Planning Session followed the action of the FAA to determine the most appropriate course of action and establish strategic plan in order to move the comprehensive radio communications project forward.
3. April 2014 – The Common Council of the City of Winchester review options and determined that to move the project forward it would involve the designation of a second transmit/receive site in order to achieve the system performance standard established for the system. Members of the Common Council authorized an increased appropriation of \$1.7 million to a total appropriation of \$5.4 million to complete the project.
4. July 15, 2014 – SHPO packet submitted to the Virginia Department of Historical Resources (VDHR) on the behalf of the City by Geo-Technology Associates, Inc. (GTA).
5. July 17 & 18, 2014 – SHPO balloon test performed at new/second site
6. July 17, 2014 – Project meeting conducted with city and vendor representatives to discuss high level design criteria, pricing, regulatory issues and project timeline.
7. August 9, 2014 - New/second site was an agenda item for the city's Board of Zoning Appeals (BZA) requesting a variance in tower height from 100' to 150'. BZA's action was favorable and variance was granted.
8. July 25, 2014 – Virginia Department of Historical Resources (VDHR) advised there were properties that would be negatively impacted by the proposed radio communications tower and that mitigating measures would be necessary.
9. August 19, 2014 – The Winchester Planning Commission met and considered CU-14-432 whereby the City was requesting a Conditional Use Permit (CUP) to allow a 150' to be erected at 231 E. Piccadilly Street. The Planning Commission identified no adverse impact and recommended the Common Council approve the request.
10. September 10, 2014 – The Common Council of the City Winchester met and considered CU-14-432 requesting a conditional use permit for a communications tower at 231 East Piccadilly Street. Members of the Common Council approved the request.
11. October 27, 2014 – Following several discussions including internal project team members, GTA, Motorola Solutions and the crafting of a Memorandum of Agreement (MOA) a final draft of the MOA was provided to GTA for submittal to the VDHR.
12. November 11, 2014 – The MOA underwent a final review of the MOA and was submitted to the

VDHR by GTA on behalf of the city. The city is currently awaiting a response from VDHR as to their acceptance or rejection of the mitigating measures offered in the MOA.

13. December 17 & 18, 2014 – Members of the city’s Radio Communications Implementation Team (RCIC) will be attending the Staging phase of the project in Schaumburg, IL.

**MILESTONE TIMELINE CHART**

<b>Milestone</b>	<b>Original Proposed Completion Date</b>	<b>Proposed Completion Date</b>	<b>2014-15 Revised Completion Date</b>
Contract Award	November 9, 2012	November 9, 2012	November 9, 2012
Contract Design Review – (Alternate Contract Design Review due to need to redesign the system from a single site network to a two site network)	January 8, 9 & 10 2013	July 30, 2013	February 15, 2015
All Site/Infrastructure Equipment Ordered	February 15, 2013	January 15, 2014	March 31, 2015
Fixed Equipment Installation	June 1, 2013	March 31, 2014	July 15, 2015
Order New Subscribers	July 10, 2013	February 4, 2014	July 15, 2015
System Optimization	September 7, 2013	July 21, 2014	September 1, 2015
Subscriber Installation and Programming	November 1, 2013	July 29, 2014	August 15, 2015
System Training	December 15, 2013	August 19, 2014	September 1, 2015
System Testing and Cutover	January 15, 2014	July 29, 2014	September 15, 2015
Final Acceptance and System Cutover Completed	February 20, 2014	September 19, 2014	October 1, 2015
Finalize Documentation	March 1, 2014	September 19, 2014	November 1, 2015

**Summary:** The City’s position is to continue to move forward with the implementation of the 800 Mhz system and to obtain narrowband compliance with VHF frequencies coordinated to the city. The city will continue progress on the system in an expeditious manner and as permitted through the regulatory process. It has been and

continues to be the city's goal to provide state of the art radio communications for first responders in such a manner as to promote safety for the responder and the overall community while accomplishing such in a manner that is in compliance with regulatory measures.

## **VI Request for Extension of Waiver**

The City of Winchester has planned for and continues to advance the project of replacing the aging communications system and is committed to meeting the FCC's narrowbanding requirements as defined in this Request for Waiver Extension. The City fully expects to meet this mandatory narrowbanding requirement as quickly as possible, in line with the revised Milestone Timeline Chart. As most of the system's infrastructure equipment is not capable of conversion to 12.5 kHz operation the City continues its commitment to totally replacing the existing system with an 800MHz, P25 trunked system along with a VHF 12.5kHz conventional paging and inoperability system. All existing infrastructure, including (but not limited to) base stations, antennas, and coax systems, will be replaced by new state of the art trunked 800 Mhz and VHF 12.5 kHz equipment. Additionally the system will include two transmit/receive sites rather than one increasing the radio coverage while adhering to regulatory issues.

The City respectfully requests that the Commission grant this waiver request to continue operating 25 kHz channels through December 31, 2015, in order to allow the City to complete the implementation of its new public safety communications network. This requested 12 month extension allows the City time to complete the system per the optimum Milestone Timeline Chart shown above plus a reasonable time for schedule slippage and unforeseen setbacks, such as severe weather conditions, delay in availability of parts and equipment, and public safety emergencies. The underlying purpose of the Commission's narrowbanding rule would not be frustrated by the Commission granting this Waiver. The Waiver Request does not extend the date for narrowbanding the City's 25 kHz operation to a lengthy or indefinite date, but instead petitions for a finite time extension to permit the implementation of a new interoperable citywide network.

## **VII CONCLUSION**

As detailed above, the City of Winchester believes it has shown to grant this Request for an Extension of its previously granted waiver for a 12 month period would be in the public interest, could actually promote extended interoperability with neighboring Counties, not harm any other licensee, and not frustrate the Commission's underlying goals of its narrowbanding order. The City urges the Commission to recognize that we are in the process of implementing a new 800MHz, P25 system and that the City has no other viable alternative than to proceed with the plans currently in place.

Call signs and frequencies associated with the petition and assigned to the City of Winchester are as follows:

<b>City of Winchester Public Safety Radio Frequencies &amp; Call Signs</b>			
<b>Call Sign</b>	<b>Frequency</b>	<b>Simplex/Repeated</b>	<b>Remarks</b>
KIG279	154.280	Simplex	
	154.370	Simplex	
	154.415	Simplex	
	154.250	Simplex	
	154.220	Simplex	Assigned to Frederick County, Virginia
WQDW620	159.060	Simplex	
KIA408	159.910	Repeated	
	159.210		
KB79505	156.000	Repeated	
	158.925		
WNSH503	155.205	Simplex	Virginia Statewide Disaster Frequency-Mobiles

The City respectfully requests the Commission grant this request to extend its previously granted Waiver to continue operating on existing 25 kHz channels through December 31, 2015, to allow the City to complete the implementation of a new citywide public safety communications network.

Respectfully submitted,



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