

**STATEWIDE AGENCIES RADIO SYSTEM (STARS)
PROGRAM**

**A Report to the Governor, House Appropriations Committee,
And Senate Finance Committee**



October 2009

**Colonel W. Steven Flaherty
Superintendent**



COMMONWEALTH OF VIRGINIA

Colonel W. S. (Steve) Flaherty

Superintendent

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DEPARTMENT OF STATE POLICE

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Lt. Colonel Robert B. Northern
Deputy Superintendent

September 30, 2009

TO: The Honorable Timothy M. Kaine, Governor of Virginia

The Honorable Charles J. Colgan
Chairman of the Senate Finance Committee

The Honorable Lacey E. Putney
Chairman of the House Appropriations Committee

Pursuant to Item 454 (D) of Chapter 2 of the 2004 Virginia Acts of Assembly, I am respectfully submitting herewith a *Report on the Statewide Agencies Radio System (STARS) Program*.

Respectfully,

A handwritten signature in black ink that reads "W. S. Flaherty".

Superintendent

WSF/CAV

Enclosure

Scope of the Statewide Agencies Radio System (STARS) Contract

Colonel W. Steven Flaherty, State Police Superintendent and Mr. Mark Moon, Vice President and General Manager of Motorola signed a \$329 million contract between Motorola and the Commonwealth of Virginia for the design, construction, and implementation of Statewide Agencies Radio System (STARS) on July 13, 2004. A ceremonial contract signing was held on July 16, 2004, in conjunction with a press conference.

In summary, the major implementation milestones completed are; Division I infrastructure System Acceptance completed on December 21, 2006, and Division V went live on June 12, 2007. The Zone 2 Master Site in Salem was completed September 15, 2008. The verbal Occupancy Permit approval was received September 16, 2008.

STARS provides multi-channel trunked digital voice and data wireless communications that are specifically designed for public safety requirements, based on APCO Project 25 technology. The existing State Police microwave radio network's technology and capacity is being upgraded and disaster recovery alternate paths are being added. The STARS contract provides for essential public safety grade communications that can operate seamlessly throughout the Commonwealth for the 21 state agencies and facilitate interoperability with local governments and federal agencies.

The STARS design is a culmination of partnering with the Commonwealth, the project's engineering consultant AECOM Design formerly Hayes, Seay, Mattern & Mattern, Inc. (HSMM) / CTA Communications, and Motorola. Meeting needs, utilizing existing resources, and minimizing risk were heavily weighted design parameters in developing the STARS contract. Capitalizing on existing infrastructure and resources, whenever possible, benefited the Commonwealth in the ability to implement STARS in a cost effective manner. Finally, design risk is minimized through the use of Motorola, a proven system integrator and communications manufacturer, along with the use of a redundant, fault-tolerant, hierarchal design that allows for re-routing in case of a single point of failure. The wireless communications system for the Commonwealth of Virginia contains today's latest technology and will continue to provide updated technology at no additional cost throughout the STARS implementation. STARS allows the Commonwealth to retain a high level of service and security, plus flexibility to add more users when additional radio frequencies are available. In all applicable design components, STARS has addressed safeguards to system security, including controlled system access, and Advanced Encryption Standard (AES) encryption for law enforcement users. The system infrastructure will serve the Commonwealth for many years to come.

Projected Total Cost of System

Special Funds

Pursuant to the Code of Virginia §2.2-2264, the General Assembly authorized the Virginia Public Building Authority to issue revenue bonds not to exceed \$159,300,000 for the constructing, improving, furnishing, maintaining, acquiring and renovating buildings, facilities, improvements and land for the STARS project. Chapter 245 approved by the General Assembly session March 30, 2006, authorized additional funding via Bonds issued by the Virginia Public Building Authority in the amount not to exceed \$201,900,000 to complete STARS.

The breakdown of projected total costs for the system is as follows:

Contract Cost for Core System, paid by Bond Funds

Land mobile radio equipment and upgrades	\$ 148,977,412
Microwave network equipment and upgrades	\$ 33,082,094
Mobile data (in car computers)	\$ 33,908,049
Transmitter sites & towers	\$ 83,163,356
Network Operations Center Zone 2 Control Center equipment	\$ 16,056,940
Communications Centers renovation and equipment	\$ 10,440,190
Test equipment and spare parts	\$ 3,823,658
Performance bond	<u>\$ 222,000</u>

Total Motorola Contract Cost **\$ 329,673,699**

Revised Motorola Contract Cost to include 33 Contract Modifications as of July 14, 2009 **\$321,678,247.65**

Tasks Removed from the Contract that the Commonwealth will Complete at a reduction in costs, to be paid by Bond Funds

Procure and install control station poles	\$ 240,000
Computer Aided Dispatch Interface software changes	\$ 300,000
Procurement of software for mobile data, asset management and help desk	\$ 4,310,000
Tower site acquisitions, grounding, Environmental & emissions compliance and removal of unused towers	\$ 3,383,000
Renovations to warehouse to house The Network Operations Center and Construction of the Zone 2 Control	\$ 2,700,000
Renovation of the STARS office as a Training Center, travel and equipment for training	\$ 2,650,000
Independent verification and validation testing	\$ 300,000
Legal and licensing fees	\$ 450,000
Payment to Motorola for guaranteed clear and usable frequencies	<u>\$ 5,250,000</u>

Total Commonwealth Tasks Cost **\$ 19,583,000**

Revised Total STARS Construction Cost **\$ 358,064,082**

The STARS Program contract was signed on July 13, 2004. At that time, the cost to complete the project was \$349,256,699. Currently, the STARS Program has \$159,300,000 from bond funds allocated. The amount authorized during the 2006 legislative session for the final funding of the STARS Program is not to exceed \$201,900,000.

The revised Contract appropriation cost for STARS is \$361,200,000.

General Funds – Operational Expenses

The general fund appropriation for both FY 2007 and 2008 is \$2,510,000 to be used for implementing STARS. The projected annual operating expenditures during the implementation phase for the general funds consist, in part of the following:

Category	Amount
Personnel-STARS Staff	\$ 800,000
Contractual Services (includes AECOM Design and Attorneys)	\$ 1,185,000
Supplies & Materials	\$ 5,000
Insurances	\$ 20,000
Equipment	<u>\$ 500,000</u>
	\$ 2,510,000

Approved STARS Positions

Network Console Operators (six) were hired and are maintaining 24/7 coverage in the Network Operations Center. The Network Operators monitor performance diagnostics and network alarms. They also operate a systems repair help desk and are capable of dispatching, if required, for unusual events.

Additional Projected STARS Reoccurring Operating Costs in future Fiscal Years

A decision package for the maintenance of the STARS network has been submitted to the Department of Planning and Budget through the Secretary of Public Safety.

The STARS network is a public safety grade wireless communications system that must be maintained in an operational status 24 hours per day, seven days per week. To accomplish this, a well trained staff of engineers and technicians must be available and have access to parts, tower sites and vehicles on the network on a 24/7 basis. Commercial service is cost prohibitive, will not maintain the required level of knowledge of this network, and is not available on a 24/7 basis. The Department has always maintained our own communications network with Department employed engineers and technicians. There is no other practical way to maintain the STARS network and the vehicles on the network.

The Department will assume the responsibility for the equipping of new vehicles and boats that belong to the 21 STARS agencies. In addition to installation of new vehicles, retired or crashed vehicles would be brought to the Department garage for removal of the STARS radio equipment and re-installed into another vehicle. When the Department assumes equipment and radio installations for the other STARS agencies, additional positions and equipment will be needed.

Summary of costs and positions

	GF Dollars	Personal Services Costs	Nonpersonal Services Costs	GF Positions
FY 2011	\$ 7,821,603	\$1,345,510	\$6,476,093	26.00
FY 2012	\$10,186,546	\$3,029,379	\$7,157,167	49.00
FY 2013	\$13,105,697	\$3,261,867	\$9,843,830	49.00
FY 2014	\$ 8,477,504	\$3,261,867	\$5,215,637	49.00
FY 2015	\$ 9,136,449	\$3,261,867	\$5,874,582	49.00
FY 2016	\$12,316,963	\$3,261,867	\$9,055,096	49.00

Completed Network and Equipment Maintenance

When completed and no longer under warranty, STARS network infrastructure maintenance will be handled by current State Police Communications Division personnel. The warranty period is one year for equipment and the infrastructure and three years for the mobile radios, portable radios, and mobile data in-car computers. The State Police Communications Division will provide equipment maintenance for agencies they presently serve. A decision package for the maintenance of the STARS network has been submitted to the Department of Planning and Budget through the Secretary of Public Safety. In addition, a new garage has been funded through the Purdue Pharma Fund (Oxycontin Settlement). The Architectural Design is being reviewed by the Bureau of Capital Outlay Management (BCOM). Construction is anticipated to begin early 2010. This garage will support all UARC vehicular subscriber installs and decommissioning.

Communications Technologies and System Capabilities

Systems Integration

The Motorola STARS project team implementation is based on a designed and detailed integration plan. The Motorola Program Director has brought together the people and resources for the STARS project, and manages them toward meeting every project milestone. This intensive planning, based on dozens of successful large-scale integrations, reduces risk to the Commonwealth. Important details, such as the execution of the Customer Design Review, development of the talkgroup plan, the development of a migration plan for each agency and end user, including the appropriate timing of end user training, are all

crucial in the implementation of a successful integration strategy for STARS. A thorough Project Schedule is critical for planning, resources, costing, and risk mitigation. During the implementation phase of each Division, detailed plans and pre-builds of the system are completed at the Motorola staging facility and/or the Customer Center for System Integration. This staging includes all third-party equipment also. The system is then tested, measured, and optimized to ensure it meets the design considerations. Commonwealth employees are an essential part of the testing and implementation processes.

Much of the work entails coordinating local vendors to secure antenna sites, and erect towers and buildings. Site development continues for Divisions III, IV and VI. Divisions I and V are installed and Live on STARS. Divisions II and VII are anticipated to be live on STARS by December 31, 2009. The implementation process is broken down into individual tasks in a full project plan, which covers:

- Engineering and design
- Procurement
- Facility construction and upgrades
- Systems installation
- Optimization and testing by system and subsystem
- Agency migration and cutover
- Closeout and Acceptance
- Frequency Planning
- Talk Group (Fleet Map) Development

Once the system is working, as designed, in each Division, the Department of State Police (VSP) will provide the expertise to manage, monitor, and service the system.

Motorola is performing the work and tasks required to design, manufacture, install, optimize, test, and integrate STARS; in addition to providing the documentation and training to support the operation of STARS to the Commonwealth. Motorola and the Commonwealth have provided a dedicated project leader to act as the single point of contact for all administrative, technical, and scheduling issues related to the project. Mr. Wes Jones replaced Mr. Mike Archbold as the new Motorola Program Manager September 22, 2008. The Motorola Program Manager has the overall responsibility for providing the Motorola deliverables required for the implementation of STARS and management of the STARS project schedule. The Commonwealth's Program Director, Captain Michael E. Bolton, has the overall responsibility for ensuring that all Commonwealth responsibilities and tasks are completed per the Contract Schedule.

Communications within the Tunnels

Motorola will install VHF and 800 MHz wireless communication coverage in six tunnels in the Commonwealth of Virginia (Big Walker Mountain, Hampton Roads, Elizabeth River Downtown, Elizabeth River Midtown, Monitor/Merrimac, and East River Mountain.) Installation has been completed in three tunnels (Elizabeth

River Midtown, Monitor/Merrimac, and Hampton). The design allows for effective mobile radio, portable radio, and computer data communications within the tunnels. In addition to being designed for STARS, the tunnel design accommodates the existing VSP communication channels that increase the effectiveness of the overall Commonwealth migration plan to STARS.

The Chesapeake Bay Bridge Tunnel (CBBT) was added to STARS by the Management Group with expenditures approved by the 2006 General Assembly. Installation began May 31, 2007. Numerous problems with the installation were encountered and the project was put on hold until acceptable resolutions were agreed upon. A tunnel site walk was held on June 27, 2008, and numerous meetings have been held to discuss and resolve the issues. A new Implementation Plan presented by Motorola has been approved. A schedule is being coordinated to begin the new installation. The revised final Design Plan will be signed by all parties before work begins.

Transportable Communication Site

The transportable site is contained within a trailer that is easily moved to provide additional radio capacity, interoperability, and support for disaster-recovery operations for STARS. This site is designed to be moved and placed into service where needed by the Commonwealth during events such as floods, hurricanes, or during a major event like what occurred at the Pentagon on September 11, 2001, where additional radio system capacity and interoperability are required. This Transportable Site provides on-site ASTRO 25 digital trunked communication in 800 MHz frequency band, as well interconnection with other agencies, regardless of the frequencies they operate on, via an ACU-1000 network interface. The entire site can typically be deployed within one hour of the arrival of the trailer at the site. The transportable site was utilized this year during the Virginia State Fair.

Voice and Data Coverage

STARS integrates voice and data over the same frequencies. As STARS is a public safety grade system designed to support life and death situations, the system is configured such that voice traffic is given the priority over data messages. The performance guarantees and test procedures will ensure the Commonwealth will experience clear communications as defined by the vigorous testing standards established in the contract.

Microwave Network

The microwave network provides the Commonwealth with the digital transport required for interconnecting Land Mobile Radio, Mobile Data, Telephone, and Alarm and Control Networks. In addition, it will be used to replace leased data lines currently connecting State Police sites. It will also be highly reliable and capable of supporting government relocation, if required. For instance, the current State Police microwave network (that STARS is upgrading) was quickly reconfigured by the State Police Communications Division at the Columbia Pike

Area Office to serve as a command center in response to the 9/11 terrorist attack on the Pentagon. In addition, statewide there were no outages in the State Police microwave network because of Hurricane Isabel.

The network consists of Digital Microwave equipment of various frequencies and capacities. This microwave network, consisting of Synchronous Optical Networks loops, allows rerouting of microwave traffic if required during a failure or emergency. The microwave spurs are protected by hot standby equipment.

Each State Police Division Headquarters and most Area Offices will be equipped with a microwave phone network that will allow on-site personnel to place and receive telephone calls over the microwave network. This circuit is connected to the Commonwealth's private phone system and the public service phone system.

Mobile Data Applications

The Premier Mobile Data Computers installed in patrol cars will provide the following to the Commonwealth:

- Law enforcement mobile data such as wanted checks and DMV records checks
- Intra-agency and inter-agency text messaging
- Interface with the VSP Computer Aided Dispatch
- Global Positioning System support for Automated Vehicle Location

STARS is including an Automated Vehicle Location subsystem to identify the location of law enforcement patrol cars that are equipped with computers. Location data will be sent to a display at the closest State Police Division Headquarters during vehicle stops or from a dispatcher initiated request. This feature is directly intended to support the commitment to maximizing a STARS subscriber users' safety.

Since signing the contract, the mobile data requirements for the Department of State Police and the STARS Law Enforcement Agencies have changed. The Integrated Voice and Data (IV&D) Network provides a limited data capability that will not support sending DMV photographs, amber alert photographs, nor will it support an over the air Recording Management System (RMS). STARS mobile data users will now have the option to use a Verizon Air Card to provide the required capacity to support sending photographs and RMS files over the air. The Verizon cards will provide the primary mobile data transport with the IV&D mobile data as secondary where Verizon coverage is unavailable, as may be the case during a significant disastrous event.

Alarm and Control

The STARS Network Fault Management subsystem manages transmitter site/equipment alarms and controls various site functions. The Network Fault Management subsystem collects data automatically, processes that data, and then displays it at the Network Operations Center. This management tool

provides a single interface for monitoring equipment and systems alarms over internet protocol. The data is used to operate the network, analyze the flow of site alarm and system control data, offer system solutions and handle pre-defined alarm situations automatically. The system provides reports to the engineers and the operators that will help in administering the network. The Network Operations Center at State Police Headquarters houses personnel on a 24/7 basis to identify, remotely correct alarm conditions or dispatch technicians.

Transmitter Sites

The 121 transmitter sites in STARS consists of 45 Land Mobile Radio (LMR) towers sites and 76 microwave tower sites. Our current totals have been modified to include four additional LMR sites (Burgess, Eastville, Edgehill, and Elkins Branch) for a total of 49 and we have deleted forty-eight (48) Area Offices located throughout the Commonwealth leaving a total of 28 microwave sites. These sites support the land mobile radio voice, microwave radio, and the mobile data subsystems. Each site's communications equipment is housed in a protective building, and is monitored for technical functions and protected with emergency power systems and sophisticated grounding systems to protect from lightning damage.

Each site will be implemented using the most efficient and cost effective process, a methodical approach will be followed which takes into consideration many facets such as: microwave radio path surveys, necessary FAA submittals and approvals, architectural and engineering work, and site specific improvements. The major components necessary for the completion of a communication site include; site preparation, radio towers, radio buildings, heating ventilation and air-conditioning, backup power systems, as well as fencing.

Master Sites and Dispatch Center Renovations

Motorola is providing the Commonwealth with design-build construction services to upgrade three of the seven State Police Communications Centers. They will be constructed as additions to existing State Police Division Headquarters buildings. Divisions I and V Communications Centers have been renovated and expanded; both now have eight new dispatcher consoles.

During contract negotiations, it was determined the Commonwealth will be able to manage and procure construction services for the STARS Network Operations Center and the Zone 2 Master Site facilities resulting in considerable cost savings. Motorola has installed the equipment in both facilities. To meet the aggressive schedule, an existing State Police warehouse was refurbished for the Network Operations Center. The Network Operations Center became operational on February 13, 2006. A new building at Division VI (Salem) has been completed and is supporting State Police dispatching and the Zone 2 Master Site equipment.

Voice and Data Subscribers

Motorola is providing the Commonwealth with vehicular radios, portable radios, mobile digital vehicular repeaters, and mobile computer terminals for users to operate on STARS. Different models are being supplied that will enable the Commonwealth agencies to employ the radio types appropriate for their particular operational needs.

Status of Site Acquisitions

Division I has twenty-two (22) operational transmitter sites as of December 22, 2008. All seven (7) sites in Division V have been completed and are live as of March 12, 2008. In Division II, all five (5) sites have been completed, and coverage testing is scheduled to begin October 14, 2009. Division III has six (6) of eight (8) sites complete and Division VII has three (3) of five (5). Coverage testing for Division VII is anticipated to begin November 4, 2009. There are currently 15 sites scheduled for Division IV and five (5) are currently under construction. There are 12 sites for Division VI in which five (5) have been completed and three (3) are currently under construction. Transmitter site surveys are being completed and are ongoing in Divisions IV and VI.

Project Management Plan

Executive Order 28 (2002)

On June 26, 2002, Executive Order 28 (2002) was signed officially continuing the Statewide Agencies Radio System (STARS) Project. It also provided direction as to how the project would proceed, including participating agencies, and formulated the basis of this Project Management Plan.

Executive Order 101 (2005)

On November 1, 2005, Executive Order 101 (2005) was signed and continues the STARS Project through October 31, 2008.

Executive Order 79 (2008)

On October 24, 2008, Executive Order 101 (2005) was signed and continues the STARS Project through October 25, 2011.

The STARS membership is composed of the following 21 state agencies. Representatives from each agency make up the User Agencies Requirements Committee (UARC):

- Alcoholic Beverage Control
- Capitol Police
- Charitable Gaming
- Chesapeake Bay Bridge & Tunnel Police
- Conservation and Recreation
- Corrections
- Emergency Management
- Environmental Quality
- Fire Programs
- Forestry
- Game and Inland Fisheries
- Health
- Juvenile Justice
- Military Affairs
- Mines, Minerals, and Energy
- Motor Vehicles
- State Police
- Transportation
- Virginia Information Technologies Agency
- Virginia Marine Resources Commission
- Virginia Port Authority

STARS Program Oversight and Workgroups

The STARS Management Group is a Board established by Executive Order 28 (2002) and composed of the Secretaries of Agriculture and Forestry, Commerce and Trade, Finance, Health and Human Resources, Natural Resources, Public Safety, Technology, and Transportation. The Secretary of Administration was deleted July 1, 2008, with the reassignment of Charitable Gaming under the Department of Agriculture. The Secretary of Public Safety serves as the Chairman. The STARS Management Group provides direction and overall governance for the development, implementation, and ongoing operation of STARS. In addition, they review all procurements and contracts, coordinate radio frequency licenses granted by the federal government to agencies of the Commonwealth, and promote interagency cooperation and coordination in the use of communications resources.

The User Agencies Requirements Committee (UARC) consists of two representatives (primary and alternate) from each member agency and institution. The Chairman of the UARC is selected by the STARS Management Group. The current Chairman is Mr. Warren Wahl with the Virginia Department of Conservation and Recreation. Mr. Wahl replaced Mr. Jackie T. Davis with the Department of Mines, Minerals and Energy. The UARC meets as necessary, but at least quarterly. The specific duties of UARC are to advise on the needs of member agencies for the planning, design, establishment, and operation of

STARS, provide advice on proposals for other federal, state, or local agencies to join STARS and on any proposals for third party use of any STARS infrastructure or component, and assist the STARS Management Team with the development of a comprehensive management plan and procedures for the operation of STARS.

The UARC will form various interoperability working groups to advise the STARS Program Management Team how to configure/program the networks. They will plan talkgroups to communicate during various intra-agency events and potential emergency situations. Interagency planning is part of the Systems Integrator contract.

The Virginia Information Technologies Agency (VITA) will be consulted by the Secretary of Public Safety, or his designee, prior to implementing any significant data transport related network upgrade or modification. STARS continues to provide monthly updates on the VITA ProSight IT Investment Portfolio Tool.

The Intra/Inter-agency Workgroup meets every other Monday and is chaired by the STARS Program Director. The group is comprised of State Police Administrative and Support Divisions, the STARS Program Management Team, and representatives as needed from other agencies based upon their involvement as forecasted by project schedule. Accomplishments and tasks that need to be started and completed are discussed.

The STARS/Motorola/AECOM Project Workgroup is comprised of the STARS Program Management Team, the Systems Integrator, and the engineering consultant. The managers meet on a monthly basis in accordance with the contract and topic oriented work groups as needed (typically multiple groups weekly.) The meetings have an agenda and minutes are recorded. The purpose of the meetings is to review the schedule, identify problems, provide solutions to problems, establish action items, and schedule any needed teleconferences. Advisors from the various agencies will be included when their input is required.

STARS Program Management Team Responsibilities

The Program Director (Captain Michael E. Bolton) is responsible for the overall direction of the STARS Program and management of daily operations. Captain John E. Furlough, Communications Officer for the Communications Division, is responsible for providing engineering guidance and inspections from his staff for STARS. The STARS Program Director holds meetings with representatives from the Intra/Inter-agency Work Group. Monthly meetings are held with the STARS/Motorola/AECOM Project Group to outline progress and tasks. The Program Director will ensure the Integrator provides proper documentation and that all work is inspected and approved within the terms of the Contract.

The Program Director maintains a liaison with the Secretary of Public Safety, the User Agencies Requirements Committee (UARC) and the STARS Management Group to ensure they are kept abreast of progress and developments. Monthly

status reports required by policy and law are being provided. The Program Director will provide reports and testimony to the General Assembly as required.

The Program Director is responsible for ensuring the Virginia Information Technologies Agency (VITA) is consulted and the Secretary of Public Safety is informed prior to implementing any significant data transport related network upgrade or modification.

The Program Manager (Ms. Angela Edwards) joined the STARS Team on August 31, 2009, as the new STARS Program Manager. Ms. Edwards replaced Mr. Randy Peeler. She will maintain a close working relationship with the Motorola STARS Program Director and Resource Manager, consultants, and Commonwealth staff to ensure the project progress is monitored and issues are resolved in a timely manner as they arise.

Technical Lead Engineer (Mr. Thomas A. Struzzieri) is the technical lead and supervises the STARS engineering staff. He works closely with the Systems Integrator, and consultants through the STARS Program Manager to provide solutions to technical problems. He evaluates any new or improved technology that may be recommended by the Systems Integrator, consultants, and advisors.

Procurement and Contract Officer (Ms. Patricia T. Trent) develops and issues solicitations, negotiates and administers the Contract, she prepares sole source justifications, monitors contractor performance, initiates contract resolutions and issues change orders. In addition, she maintains the overall Bond Program Budget. She is also the mediator between the agencies and contractors to resolve any contract issues, responses needed, or scheduling delays.

Computer Systems Engineer– This position is currently vacant. Funds are being utilized to support the STARS Program Manager.

Telecommunications Engineers (Two) (Mr. Michael D. Deane and Mr. Noel Armstrong) assist with the engineering, design, installation and documentation for upgrade of the existing land mobile radio system, the microwave system, radio towers, subscriber equipment, fleet mapping, and talkgroup development to meet the requirements of the STARS system. They work closely with the Systems Integrator, consultants and member agencies to ensure all upgrades are made in a timely manner and meet the requirements of STARS.

Program Administrator (Ms. Teresa M. Hudgins) is responsible for maintaining the master program schedule, individual project schedules, work breakdown structures, and performing monthly project status via ProSight to VITA. Additionally, the Program Administrator is responsible for maintaining the General Fund Program budget and managing expenditure accounts during the implementation period.

Property and Logistics Executive Secretary (Ms. Anna Poole) is the liaison for STARS with all the member agencies.

Project Timelines for Implementation

<u>Pending Division I Categories</u>	<u>Projected Completion</u>	<u>Actual Completion</u>
4. Integrated Voice and Data Freq. Plan Development	11-29-04	Ongoing
15. Microwave Optimization and Testing	10-06-05	12-08
18. Division I – System Operational	08-01-06*	03-27-07
22. Construction at Edgehill	05-07	12-22-08

<u>Division V Categories (7 Sites)</u>	<u>Projected Completion</u>	<u>Actual Completion</u>
8. Documentation and Acceptance	09-07	3-26-08
9. System Acceptance of Division V (50%)	1-4-08	6-28-07

Motorola submitted their August 2009 STARS Master Schedule 081809 on August 25, 2009. This Master Schedule delineates the Completion of Division IV Transmitter Site Acceptance or the last Division (Division IV) and its beneficial use on or before December 23, 2010. This reflects a positive impact of four (4) days, from December 30, 2010, as noted last month. Final and close out documentation is projected to be completed by May 05, 2011 (Final Project Acceptance).

Subscriber Installation Migration is approximately 98% completed.

Significant progress continues to be made involving site locks. There are three remaining sites requiring official lockdown which involve pending Land Leases. Even though these sites are not officially locked, design and permitting is ongoing for these sites. All sites required to complete the STARS network have been acquired.

* Integrated Voice and Data Freq. Plan Development

The contract originally required a statewide frequency plan. Due to the accelerated schedule to implement Division I by December 2005, the focus of the frequency plan was changed to finish the Division I plan and then concentrate on the statewide plan. The Division I plan was completed on June 13, 2005. The first draft of the statewide plan has been submitted and reviewed. The second draft of the statewide plan was received on September 22, 2005. The third draft of the statewide plan was received on October 5, 2006. Several additional revisions have been received for Divisions II, III, V and VII as statewide implementation is being performed.

All member agencies will have their STARS equipment installed along with the State Police field divisions in which they have operations. The additional State Police field divisions will be operational on STARS by:

	Beneficial Use	
Culpeper (Division II)		12/09
Northern Virginia (Division VII)		12/09
Salem (Division VI)		08/10
Appomattox (Division III)		06/10
Wytheville (Division IV)		12/10

Other Information

COMLINC

The Motorola's Motobridge interoperability solution, renamed COMLINC (Commonwealth Link to Interoperable Communications) within Virginia, allows dispatchers at the counties and cities to establish up to eight patches. One of the eight paths will come back to the STARS network. The locality dispatcher may use the other seven patches to connect agencies within their jurisdiction or to other localities. For example, a Sheriff's Department can patch to the Fire Department regardless of the frequencies used by each agency. Patches can also be made to phone networks and used to establish dispatcher conferences. By using COMLINC, the requirement to call by phone to establish a patch is no longer required; each dispatcher initiates the patch themselves at their console. COMLINC also provides instant recall of recorded audio. It enables the use of advanced calling features such as Emergency ID, and allows monitoring of the interoperability network activity and associated operations. For agencies requiring end-to-end encryption, COMLINC provides AES encryption over the network. COMLINC was implemented in 16 localities in Division I, and at VSP Division I and V Headquarters, along with the STARS Network Operations Center (NOC). The current COMLINC participants are the counties of: Caroline, Charles City, Chesterfield, Essex, Goochland, Hanover, Henrico, King George, Lancaster, New Kent, Northumberland, Powhatan, Richmond, Westmoreland, Amelia, Nottoway, and the Virginia Department of Transportation (VDOT). COMLINC will be expanded statewide if additional funding can be obtained.

VSP has received a Grant in the amount of \$1,628,850 from the Public Safety Interoperable Communications (PSIC) to provide interoperability with 13 additional localities. A Contract was issued on June 5, 2009, to Systems Engineering Technologies Corporation (SyTech) for this project. Memorandums of Understanding (MOUs) have been received from all but one locality. SyTech has already delivered equipment to nine sites with five additional sites scheduled by the end of September, 2009. An installation schedule is being planned for these sites. The anticipated completion date is March, 2010.