

Motorola Warranty and Support Plan

15.0 Motorola Warranty and Support Plan

15.1 Overview

Motorola has developed a customized Warranty and Support Plan for the Commonwealth's STARS. A unique aspect of this plan is the collaboration that will take place between Motorola and the Virginia State Police (VSP). During the warranty period(s), the VSP technical staff will have the opportunity to join Motorola or Motorola Subcontractor technicians as they respond to issues that arise with the infrastructure or fixed network equipment. After each Division warranty has expired, the Commonwealth will assume all equipment maintenance other than the master site equipment. This will complement Motorola's formal technical training program further preparing the VSP technical staff to assume ongoing maintenance functions as described later in this document.

The Network Operations Center (NOC) located at SPHQ will be the primary point of contact for all warranty and maintenance issues. The NOC will receive landline calls for maintenance issues and during warranty will notify the Motorola SSC who will dispatch service. The NOC will also receive all status alarms from the infrastructure equipment. The NOC will also dispatch a Commonwealth technician at the same time for on the job training. If the NOC receives a maintenance call or an alarm on infrastructure that is post warranty, the Commonwealth will have the primary maintenance responsibility and will dispatch Commonwealth technicians accordingly.

The Warranty and Support Plan for the Commonwealth combines the services of the Commonwealth's technical staff, local Motorola Service Subcontractors (MSS), the Radio Support Center (RSC), the Motorola System Support Center (SSC), and other specialized technical subcontractors, with the availability of Motorola and other manufacturer's technical, engineering, and administrative support as required. This approach will enable Motorola to make maximum utilization of resources while providing responsive service and maximum system operation and reliability. Motorola will update as required the SPHQ NOC with contact information of the various service providers until the closure of the final warranty period.

The Zone 1 and Zone 2 Master Site equipment as identified in Exhibit B at the end of this section will remain the responsibility of Motorola through expiration of final warranty. At the expiration of the final warranty, the Commonwealth will assume maintenance responsibilities for the Zone 1 and Zone 2 master site equipment.

Support does not include the physical repair or restoration of any equipment or software provided under this contract except as identified in the Warranty and Support Plan.

This Warranty and Support Plan is comprised of the following service products that are later described in detail:

- | | |
|--|-----------------------------------|
| • Dispatch Service | • Remote Technical Support |
| • Network Monitoring Service | • On-Site Infrastructure Response |
| • Subscriber Support | • Subscriber Repair |
| • Preventive Maintenance | • Infrastructure Board Repair |
| • Infrastructure Software Installation | • Generator Support |
| • System Audit | • Vendor Management |
| • UPS Support | • Network Security |
| • Asset Management | • Configuration Management |
| • 3 rd Party Depot Repair | • Software Subscription Agreement |
| • Network Management | • |

15.2 Dispatch Service

The Call Center Operation (CCO) at Motorola's System Support Center (SSC) will continuously provide a point of contact for technical customer service requests received from the Commonwealth. The CCO is staffed with customer support representatives who will coordinate the appropriate service response and resources. Service requests received from the Commonwealth will be tracked and monitored from creation to close through an electronic Case process described below.

The primary responsibilities of the Motorola Helpdesk Tier 1 System Technologists and the general logical flow for handling trouble calls are listed below. The Customer Support Plan Document definitions and trouble call flow will supersede this Warranty and Support Plan document.

This service applies to the entire STARS infrastructure during any applicable warranty period and to the master sites until expiration of the final warranty.

Motorola has the following responsibilities for STARS infrastructure equipment:

- Continuously receive technical service requests from the Commonwealth or Motorola via telephone as the primary dispatch provider to STARS.
- Open a Case and gather information from the Commonwealth to perform the following:
 - Characterize the issue
 - Determine a plan of action
 - Assign and track the Case to resolution.

- Dispatch a Servicer as required by procedures in the CSP and provide necessary Case information collected from the Commonwealth as noted below.
 - Upon Dispatch of Servicer, notify the Commonwealth's State Police Headquarters' Network Operation Center (SPHQ NOC) to allow VSP Communications Division technicians the opportunity to assist in the repairs, if desired during a warranty period.
- Ensure the required cleared personnel have access to STARS information as needed.
- Escalate the Case to the appropriate party.
- Verify with the Commonwealth that Restoration is complete or the STARS is functional, if required by the Commonwealth's repair verification preference as set forth below. If verification by the Commonwealth cannot be completed within 20 minutes of Restoration, the Case will be closed and the Servicer will be released.
- Close the Case upon receiving notification from the Commonwealth contact or Servicer, indicating the Case is resolved.
- Notify the SPHQ NOC of Case status at the following Case levels as determined below:
 - Open and Close; or
 - Open, Assigned, Arrival, Deferred, Closed.
- As defined in the Customer Support Plan, provide periodic activity reports to the Commonwealth.
- Notify the SPHQ NOC that a site is about to be entered.

The Commonwealth has the following responsibilities:

- Prior to service Start Date provide Motorola with the following pre-defined information:
 - Case notification preferences
 - Repair verification preference
- Should service be required on equipment supported by Motorola, call the SSC and provide the following information to the customer support representative:
 - Assigned System ID number
 - Problem description and site location
 - Other pertinent information for Motorola to open a Case.
- Verify with the SSC that Restoration is complete or the STARS is functional, if required by the Commonwealth's repair verification preference stated above.
- Submit changes to any Commonwealth administrative information supplied in the Customer Support Plan to the Customer Support Manager.
- Cooperate with Motorola to enable Motorola to provide the Dispatch Service to the Commonwealth.

15.3 Network Monitoring Service

Network Monitoring Service electronically monitors specific elements of the STARS for Events. When an Event is detected, it is forwarded to the Motorola System Support Center and, the SPHQ NOC, using system specific monitoring tools. These facilities are staffed with trained technologists, who can acknowledge the Event, run available diagnostic routines, and initiate an appropriate response.

This service applies to the entire STARS infrastructure during any applicable warranty period and to the master sites until expiration of the final warranty.

Motorola has the following responsibilities:

- Recommend and coordinate installation of any needed connectivity or monitoring equipment.
- Provide dedicated 56k frame relay necessary for monitoring the STARS.
- Verify connections and Event monitoring prior to System Acceptance or Start Date.
- Remotely Monitor the STARS continuously as the primary monitoring entity during warranty, then only the master sites through expiration of final warranty.
- Access the STARS to perform remote diagnostics as indicated per the Commonwealth as noted below.
- Create a Case when action is required.
- Coordinate with the SPHQ NOC, whenever devices are to be disabled and enabled within STARS as needed for Servicers who go to the Commonwealth's sites when intervention is required.
- Verify service of Event as needed.
- Provide activity reports to the Commonwealth on Case history.
- Provide Performance Reports for the STARS.

The Commonwealth has the following responsibilities:

- Allow Motorola remote access continuously to obtain STARS performance data.
- Notify the System Support Center when an employee or representative of the Commonwealth performs any activity that may impact a covered STARS element. (This activity may include, but is not limited to, installing software or hardware upgrades, performing upgrades to the network, or taking down part of the system to perform maintenance.)
- Allow cleared Servicers access to Equipment (including any connectivity or monitoring equipment) if remote service is not possible.
- Order and maintain dedicated dial-up phone lines for telephone service for the VSP Dispatch Administrative Phone System diagnostics during warranty.
- Cooperate with Motorola to enable Motorola to provide the Network Monitoring Service to the Commonwealth.

15.4 Remote Technical Support Service

The Technical Support Operation at Motorola's SSC provides the Commonwealth's technical staff with centralized remote telephone support for technical issues that require a high level of communications systems expertise or troubleshooting on the Equipment. The Technical Support Operation is staffed with technologists who specialize in the diagnosis and resolution of system performance issues.

This service applies to the entire STARS infrastructure until expiration of the final warranty.

Motorola has the following responsibilities:

- Continuously provide Technical Support Operation availability for all Severity One issues.
- Respond to requests for the Restoration of failed systems and to diagnose operation-affecting problems in accordance with the Response times defined in Table 15-1 and Severity Levels defined in Table 15-3 and System Response Times defined in Tables 15-1 and 15-2 located at the end of this Warranty and Support Plan document.
- Advise caller with procedure for determining any additional requirements for issue characterization, Restoration, or known fix for issue resolution.
- Attempt remote access to STARS for remote diagnostics, if possible.
- As needed, coordinate with the Servicer and SPHQ NOC until close of the Case.
- Coordinate technical resolutions with agreed upon third party vendor(s) as identified in the CSP, as needed.
- Escalate support issues to Motorola or other manufacturers' engineering and product groups, if necessary.
- Provide a focal point for any Systemic issue and manage the Systemic issue to resolution.
- Escalate the Case to the appropriate party to meet system response times as defined in Tables 15-1 and 15-2.
- Provide remote assistance, if needed to install Software Enhancement Releases pursuant to the Software Subscription Agreement.
- Provide Configuration Change Support and Work Flow changes to systems that have dial in capability.

The Commonwealth has the following responsibilities:

- Submit changes to any Commonwealth administrative information supplied in the Customer Support Plan to the Customer Support Manager.
- Contact the System Support Center in order to access the Technical Support Operation, provide name of caller, name of the system (The Commonwealth of Virginia or STARS for example), System ID number, Service Agreement number, site(s) in questions, and brief description of the problem.
- Supply on-site presence when requested by System Support Center.
- Validate issue resolution prior to close of the Case.
- Allow Motorola remote access to the STARS when required for issue characterization.

- Cooperate with Motorola to enable Motorola to provide the Technical Support services to the Commonwealth.
- Acknowledge that Cases will be handled in accordance with the times and priorities as defined in Tables 15-2 and 15-3 and system response times as defined in Tables 15-1 and 15-2 at the end of this Warranty and Support Plan.

15.4.1. Infrastructure Repair with Advanced Replacement

Infrastructure Repair provides repair service to Motorola and select third party Infrastructure as identified in Exhibit A located at the end of this section. Equipment is serviced down to the component level at the Motorola Infrastructure Depot Operations (“IDO”). At Motorola’s discretion, select third party Infrastructure may be sent to the original equipment manufacturer or third party vendor for repair.

When available, Motorola will provide the Commonwealth with an Advanced Field Replacement Unit(s) “FRU(s)” in exchange for the Commonwealth’s malfunctioning FRU (s). Non-standard configurations (none are currently identified in this Contract) and any Commonwealth-modified units are excluded from this service. Malfunctioning FRU (s) will be evaluated and repaired by Motorola’s (IDO) and returned to IDO FRU inventory upon completion of repair. In cases where advanced replacement is not an option, such as when the Commonwealth requires the exact serial number in order for equipment to be returned, the FRU may be available on a loaner basis.

This service applies to the entire STARS infrastructure until expiration of the final warranty.

Motorola has the following responsibilities:

- Maintain and provide access to an inventory of FRU, subject to availability, that can be shipped from IDO to the Commonwealth or Servicer upon request as described below. IDO reserves the right to provide new or refurbished units as FRU. The FRU will be of the same kit and version, and will contain similar boards and chips, as the Commonwealth’s malfunctioning FRU(s).
- Program FRU which will be exchanged with the Commonwealth’s malfunctioning unit to original operating parameters based on templates provided by the Commonwealth.
- Properly package and ship FRU from IDO’s FRU inventory to the Commonwealth specified address.
 - During warranty Motorola will be responsible for appropriate shipment of FRUs. Otherwise, an FRU is sent next day air (paid by Motorola) via Federal Express Priority Overnight or UPS Red unless otherwise requested. Shipments outside of the above mentioned delivery programs such as NFO (next flight out), are subject to additional charges to be paid by the Commonwealth.

- Other than during warranty, Motorola will pay shipping and handling during normal operating hours of Monday through Friday 7:00 am to 7:00 pm CST, excluding holidays. Shipments outside these hours are subject to additional shipping and handling charges to be paid by the Commonwealth.
 - When sending the FRU to the Commonwealth, provide a return air bill in order for the Commonwealth to return the malfunctioning FRU.
- Receive equipment from the Commonwealth in the FRU's shipping container and document its arrival, repair and return. Provide return authorization numbers when requested as mentioned below.
- Perform the following service on Motorola Equipment:
 - Perform an operational check on the equipment to determine the nature of the problem.
 - Replace malfunctioning Components with new or refurbished assemblies.
 - Verify that Motorola Equipment is returned to manufactured specifications, as applicable.
 - Perform a Box Unit Test on all serviced equipment.
 - Perform a System Test on select equipment when possible.
- Provide the following service on select third party Infrastructure:
 - Perform pre-diagnostic and repair services to confirm equipment malfunction and eliminate sending equipment with no trouble found (NTF) to third party vendor for repair, when applicable.
 - Ship equipment to the original equipment manufacturer or third party vendor for repair service.
 - Coordinate and track equipment sent to the original equipment manufacturer or third party vendor for service.
 - Perform a post-test to confirm malfunctioning equipment has been repaired and will function properly in the STARS configuration.
 - Reprogram Equipment to original operating parameters based on templates provided by the Commonwealth as noted below. If the Commonwealth template is not provided or is not reasonably usable, a standard default template will be used. If IDO determines that the malfunctioning equipment is due to a Software defect, IDO reserves the right to reload equipment with a similar Software version.
 - Properly package and return ship (Motorola will pay return shipping charges) equipment to the Commonwealth specified address or if the Commonwealth FRU was exchanged with an IDO FRU, return the Commonwealth's FRU(s) to IDO's FRU inventory upon completion of repair.

The Commonwealth has the following responsibilities:

- Contact the Motorola System Support Center (SSC) and request an advanced FRU exchange or a return authorization number (for all other repairs) prior to shipping malfunctioning equipment or third party Infrastructure named in the applicable attached Exhibit when not covered by a warranty. The initial call to the SSC may be from Servicer if, pursuant to this Contract, Servicer is acting on the Commonwealth's behalf.
 - Provide model description, model number, serial number, type of system and Firmware version, symptom of problem and address of site location for FRU or equipment when not covered by a warranty.
 - Indicate if known that the Equipment or third party Infrastructure being sent in for service was subjected to physical damage or lightning damage. Follow Motorola instructions regarding inclusion or removal of Firmware and Software applications from Equipment being sent in for service.
 - Provide a Commonwealth purchase order number to secure payment for any cost as set forth above except during warranty where there will be no costs.
- Upon receipt of the FRU from IDO's FRU inventory, properly package the Commonwealth's malfunctioning equipment and ship the malfunctioning equipment to IDO within five (5) business days for evaluation and repair as set forth above. The Commonwealth will send the return air bill, referenced above back to IDO in order to ensure proper tracking of the return. The Commonwealth will be subject to a replacement fee for FRU not properly returned. For equipment and/or third party Infrastructure repairs that are not exchanged in advance, properly package equipment and ship the malfunctioning FRU (freight prepaid by the Commonwealth when not under warranty) to Motorola. Clearly print the return authorization number on the outside of the packaging. The Commonwealth is responsible for properly packaging the Commonwealth FRU or IDO FRU to ensure that the shipped equipment arrives un-damaged and still in repairable condition.
- Maintain templates of Software/applications and Firmware for reloading of equipment as set forth above.
- Cooperate with Motorola to enable Motorola to provide the Infrastructure Repair with Advanced Replacement services to the Commonwealth.

In addition to any exclusions named in Terms and Conditions or the Excluded Services section of this Warranty and Support Plan the following items are excluded from Infrastructure Repair with Advanced Replacement:

- Physically damaged equipment.
- Third party equipment not provided by Motorola with the original STARS and not specifically added to this Contract.
- Consumable items, except defective items during warranty.
- Test equipment, except defective items during warranty.
- Racks, furniture and cabinets, except defective items during warranty.
- Firmware and/or Software upgrades.

15.4.2. 3rd Party Depot Repair

3rd Party Depot Repair provides repair service to STARS for bi-directional amplifiers and microwave radio Infrastructure equipment. Equipment is serviced down to the component level at the appropriate original equipment manufacturer's repair depot.

This service applies to the entire STARS infrastructure until expiration of the final warranty.

Motorola has the following responsibilities:

- Receive equipment from the Commonwealth (non-warranty) and document its arrival, repair and return. Provide return authorization numbers when required as the primary 3rd party depot repair provider.
- Provide the following service on all equipment during warranty and on identified third party Infrastructure after warranty:
 - Perform pre-diagnostic and repair services to confirm equipment malfunction and eliminate sending equipment with no trouble found (NTF) to third party vendor for repair, when applicable.
 - Ship equipment to the original equipment manufacturer or third party service vendor for repair service.
 - Coordinate and track equipment sent to the original equipment manufacturer or third party vendor for service.
 - Perform a post-test to confirm malfunctioning equipment has been repaired and will function properly in the STARS configuration.
- Reprogram equipment to original operating parameters based on templates provided by the Commonwealth as indicated below. If the Commonwealth template is not provided or is not reasonably usable, a standard default template may be used. If Motorola determines that the malfunctioning equipment is due to a Software defect, Motorola reserves the right to reload equipment with a similar Software version.

The Commonwealth has the following responsibilities:

- Contact Motorola after warranty as previously defined in Dispatch Service to initiate a service request.
 - Provide symptom of problem and address of site location for equipment.
 - Indicate if the third party Infrastructure for which service is being requested was subjected to physical damage or lightning damage. Follow Motorola instructions regarding inclusion or removal of Firmware and Software applications from equipment being sent in for service.
- Maintain templates of Software/applications and Firmware for reloading of equipment as set forth above.
- Cooperate with Motorola to enable Motorola to provide these repair services to the Commonwealth.

15.4.3. On-Site Infrastructure Response

Onsite Infrastructure response service times are in accordance with Tables 15-1 and 15-2 located at the end of this document.

This service applies to the entire STARS infrastructure during any applicable warranty period and to the master sites until expiration of the final warranty.

Motorola has the following responsibilities:

- As the primary on site infrastructure restoration provider for the STARS equipment under warranty, Motorola will first respond in accordance with the Remote Technical Support Service section and Table 15-2 herein. If in the performance of the Technical Support responsibilities an on-site technician is necessary to restore the system, dispatch will occur promptly after such determination is made and on-site response will occur in accordance with Table 15-1.
- If Remote Technical Support is not required and Motorola is only providing OnSite Infrastructure Response, Motorola will respond in accordance with this Warranty and Support Plan and Tables 15-1 and 15-2.
- Perform diagnostics on the Component/Field Replaceable Unit (FRU) /assembly
- Restore the covered STARS equipment by replacing defective Component/FRU/assembly:
 - FRU and assembly will be provided by the Commonwealth, if available.
- Maintain and store any and all Software needed to restore the covered STARS equipment.
- Provide materials, tools, documentation, physical planning manuals, diagnostic and test equipment necessary to perform the Maintenance service.

The Commonwealth has the following responsibilities:

- Maintain the provided environment (heat, light, and power) for the Equipment location and provide the cleared Servicer full, free, and reasonably safe access to the Equipment so that the Servicer may provide services. All sites will continue to be accessible by standard four-wheel-drive service vehicles.
- Purchase and maintain an inventory of critical spare FRU equipment as listed in the Equipment list in Appendix 8 and subsequent change orders.
- Distribute the spare FRU equipment across the Commonwealth as identified in Appendix 8.
- Supply FRU or assembly as needed and available in order for Motorola to Restore the STARS as set forth above.
- Cooperate with Motorola to enable Motorola to provide the OnSite Infrastructure Response services to the Commonwealth.

15.5 Local Subscriber Support

Local Motorola Service Providers determine if a subscriber can be repaired immediately or requires additional services. The Local Subscriber Support includes removal and reinstallation of serviced mobile subscribers from their vehicles from their vehicle mounting brackets.

If the Equipment has an external defect, or can be Restored without opening the subscriber case, the Equipment will be Restored and returned to the Commonwealth. If the Equipment has an internal defect, or is not serviceable without opening the subscriber case, then the Equipment will require additional service as described.

This service applies to the STARS Subscriber equipment during its applicable warranty period.

Motorola has the following Responsibilities:

- Service to be performed at the Servicer facility during Standard Business Days. These facilities will be at most 100 miles between locations.
- Perform an operational check on Equipment to determine the nature of the problem.
- Remove/reinstall mobile or data Equipment from/to vehicle as needed for servicing.
- Repair mobile or data Equipment utilizing Subscriber Repair service as identified elsewhere in this Warranty and Support Plan if needed.
- Install a Commonwealth provided FRU if needed to allow user to return to service during repair of original Equipment.
- Anti-virus or software updates during the warranty period will be provided at VSP Area Offices, Divisions, and Motorola Service Facilities.

The Commonwealth has the following Responsibilities:

- For after hours support of First Responder users, the VSP Communications Division personnel will perform 1st echelon service and replace defective subscriber equipment with a Commonwealth provided FRU and deliver the failed unit to the Servicer facility as described above.
- The SPHQ NOC will direct STARS users to the best available Communications Division resource or Motorola Servicer.
- Inform Servicer of description of problem for equipment brought in for service.
- Cooperate with Motorola to enable Motorola to provide the Local Subscriber Support service to the Commonwealth.

15.6 Subscriber Repair

Subscriber Repair provides board level service for the Equipment that is specifically named in the Contract. Services are performed at a designated Motorola facility.

In addition to Equipment specifically named in this Contract, Subscriber Repair includes service on standard palm microphones and mobile control heads provided.

This service applies to the STARS Subscriber equipment during its applicable warranty period. Motorola has the following responsibilities:

- Test and Restore the equipment to factory specifications.
- During warranty, reprogram equipment to original operating parameters based on the Commonwealth template, if retrievable, or from a Commonwealth supplied backup diskette. If the Commonwealth template is not usable, a generic template utilizing the latest Radio Service Software (RSS) version for that equipment will be used and the subscriber will be reprogrammed by the field Servicer.
- Clean external housing of the equipment.
- Pay the outbound freight charges for next day shipping.
- Pay the inbound freight charges only if the Commonwealth uses the Motorola designated delivery service unless that service is not readily available at the service location.
- Provide the Commonwealth with the Motorola repair request form and inventory adjustment form.
- Process inventory adjustment requests received by fax or email from the Commonwealth. If the request is received by email, Motorola will email an acknowledgement to the sender.
- If applicable, notify the Commonwealth of changes in Motorola designated inventory adjustment email address or fax number.
- Update the STARS asset management and inventory control.

The Commonwealth has the following Responsibilities if shipping a Subscriber directly to the Motorola designated repair depot:

- Utilize the Motorola designated delivery service program for inbound shipping.
- Complete a Motorola repair request form and submit it with each unit of equipment sent in for service. Mobile control heads or accessory items sent in must reference the serial number of the main unit.
- If desired, supply Motorola with a 3.5" backup diskette or CD with the Software template or programming in order to assist in returning the equipment to original operating parameters. This step must be completed for equipment that will not power up. If applicable, record the current flash code for each radio.
- Update the STARS asset management and inventory control.

15.6.1. Preventive Maintenance

Motorola will provide operational tests and alignments on the Commonwealth's Equipment as required by manufacturer's specifications. Preventive Maintenance will be performed during Standard Business Days and coordinated with the STARS Project Management Team. If the STARS or Commonwealth requirements dictate this service must occur outside of Standard Business Days, Motorola will provide an additional quotation.

This service applies to the entire STARS infrastructure during the applicable warranty period. Motorola has the following responsibilities:

- Prior to preventive maintenance activities, the activities that will be performed, the impact on the system operation during the preventive maintenance, and probable mitigation steps to restore the system if something goes wrong will be discussed at project meetings and documented in the meeting minutes.
- Coordinate with the STARS Project Management Team of any possible STARS downtime needed to perform this service.
- Physically inspect the infrastructure Equipment in the system (equipment cabinets, general circuitry, fault indicators, cables, and connections).
- Remove any dust, and/or foreign substances from the equipment.
- Clean filters, if applicable.
- Measure, record, align, and adjust the equipment parameters in accordance with the manufacturer's service manuals and the Rules and Regulations of the Federal Communications Commission (FCC), where applicable.

The Commonwealth has the following responsibilities:

- Provide preferred schedule for Preventive Maintenance to Motorola.
- Authorize and acknowledge any STARS downtime.
- Maintain periodic backup of databases, Software applications and Firmware as defined in the Customer Support Plan.
- Provide the cleared Servicer full, free, and reasonably safe access to the Equipment so that the Servicer may provide services.
- Cooperate with Motorola to enable Motorola to provide the Preventive Maintenance services to the Commonwealth.
- Refilling of Propane tanks
- Prior to preventive maintenance activities to be performed by the Commonwealth pursuant to this Contract, the activities that will be performed, the impact on the system operation during the preventive maintenance, and probable mitigation steps to restore the system if something goes wrong will be discussed at project meetings and documented in the meeting minutes.

15.7 Software Subscription Agreement

Motorola provides Software releases by means of a Software Subscription Agreement (“SSA”). As more thoroughly discussed in the SSA, Motorola will provide to the Commonwealth periodic bulletins which announce and explain available Enhancement Releases and Core Releases for Motorola Software for use with upgrade-capable Motorola Equipment covered by the SSA.

This service applies to the entire STARS infrastructure until expiration of the final warranty.

Motorola has the following responsibilities:

- Prior to beginning any software upgrade, provide the STARS PD a detailed software migration plan with step by step activities and a problem mitigation plan to restore STARS to the previous version of software if a problem occurs during the upgrade.
- Provide to the Commonwealth bulletins announcing Enhancement Releases and Core Releases. Identify the features and capabilities that pertain to the current configuration of STARS. Notify the Commonwealth of any potential hardware or other software upgrades that may be required.
- Provide to the Commonwealth available Enhancements Releases and Core Releases as ordered by the Commonwealth. If the Commonwealth orders a new Enhancement Release or Core Release, provide those Standard Features included in the release which apply to the Commonwealth’s existing system components.
- Obtain the STARS Program Director’s concurrence prior to installing any software upgrade or revision.

The Commonwealth has the following responsibilities:

- Use the Software and releases in accordance with the terms of this contract.
- Cooperate with Motorola to enable Motorola to provide the Software Subscription Agreement services to the Commonwealth.

15.8 System Audit

System Audit provides the technical resources to gather system configuration information related to the Equipment prior to implementation of a Software Enhancement release. Depending on the specific requirements for the audit, information such as software versions, hardware versions, model and serial numbers, equipment distribution and system layout/architecture is gathered and retained by Motorola and Commonwealth. Motorola will provide a soft copy of the audit data to the Commonwealth.

This service applies to the entire STARS infrastructure until expiration of the final warranty.

Motorola has the following responsibilities:

- Determine information to be collected in the audit, which may include software versions, hardware versions, model and serial numbers, equipment distribution and system layout/architecture.
- Contact the Commonwealth STARS PD to schedule a mutually acceptable date and time for the audit, and inform the Commonwealth of scheduled down-time in order to complete the audit.
- Service will be performed during Standard Business Day hours.
- Collect system audit data.
- Provide the Commonwealth a soft copy of the audit data collected.
- Notify the Commonwealth if malfunctioning Equipment is discovered during the audit and if that Equipment cannot be audited due to the malfunction.
- Update the STARS asset management database.

The Commonwealth has the following responsibilities:

- Provide Motorola full, free, and reasonably safe access to the Equipment so that the Cleared Servicer may collect the audit data.
- Cooperate with Motorola to enable Motorola to provide the System Audit services to the Commonwealth.

15.9 Infrastructure Software Installation

Infrastructure Software Installation provides the technical resources to install and activate Enhancement Releases to the STARS.

This service applies to the entire STARS infrastructure until expiration of the final warranty.

Motorola has the following responsibilities:

- Prior to beginning any software upgrade, provide the STARS PD a detailed software migration plan with step by step activities and a problem mitigation plan to restore STARS to the previous version of software if a problem occurs during the upgrade.
- Install Enhancement Releases that may be provided by Motorola.
- Install board replacements as required by the Enhancement Release, which are purchased by the Commonwealth as noted below.
- Service will be performed during Standard Business Days.

The Commonwealth has the following responsibilities:

- Coordinate with STARS users of upgrade plans and scheduled STARS downtime.
- Cooperate with Motorola to enable Motorola to provide the Infrastructure Software Installation services to the Commonwealth.

15.10 Vendor Management

Manage and coordinate vendor provided services and products, and quality or certification as required. These services include third party coordination, network connectivity integrity, and transport vendor interface.

This service applies to the entire STARS infrastructure during any applicable warranty period and to the master sites until expiration of the final warranty.

15.11 UPS Support Service – Remote Sites

Motorola will provide service and maintenance of UPS components to the Commonwealth to maintain and ensure maximum system availability during the applicable warranty periods.

Motorola has the Following Responsibilities:

- Maintenance support for the Motorola supplied UPS equipment.
- Preventative maintenance per manufacturers' specifications.
- Support will be provided seven days per week, 24 hours per day.
- Provide a written inspection report to the Commonwealth within 20 days of inspection.

The Commonwealth has the Following Responsibilities:

- Allow Motorola remote access to the STARS.
- Cooperate with Motorola to enable Motorola to provide the UPS support services

15.11.1. Generator Support

Motorola provides service and maintenance to perform periodic inspections on all remote site generators for the STARS during the applicable warranty periods.

Motorola has the following responsibilities:

- Provide a written inspection report to the Commonwealth within 20 days of inspection
- All generator preventive maintenance will be in accordance with the manufacturers' PM schedule.
- Check automatic transfer switch for proper operation
- Check all instruments for proper operation
- Instruct Commonwealth technical personnel, if such personnel are available and present, on operating and upkeep procedures between regular calls by Motorola
- Simulate engine safeties for proper operation
- After all of the above is performed, run generator test and conduct test under building load when practical.

The Commonwealth has the following responsibilities:

- Allow Motorola remote access to site.
- Expenses to repair damage caused by abuse, accident, thefts, acts of a third person, forces of nature or alerting the equipment.

15.12 Asset and Configuration Management

This service applies to the entire STARS infrastructure until expiration of the final warranty.

15.12.1. Inventory Management Setup

Inventory Management Setup is a one-time service necessary to organize and setup the Commonwealth's asset specific data elements. It is a precursor for assets that will be tracked and managed under Inventory Management Service. This service will include confirming the Commonwealth requirements for asset specific data tracking, gathering existing asset specific information from the Commonwealth, and loading and implementing a database tool with the asset specific data elements. Assets to be setup in this service may include assets such as subscriber units, fixed network equipment, site equipment and accessories.

As part of this service, Motorola will utilize the provided database as stated in the asset management section of this document to provide a tracking mechanism for the Commonwealth's communication assets. Examples of typical data elements to be setup in this service for each asset are: asset type, model number, current department assignment, part numbers, serial numbers, the Commonwealth's specific asset number, RF frequency, purchase price, FO number, asset transfer date, ship date, install date, warranty end date, field service activity dates, and asset status.

15.12.2. Inventory Management Service

Inventory Management Service effectively tracks and manages asset specific data elements for STARS assets.

- The delivery of this service begins once Motorola has initially loaded the database with the Commonwealth specific data elements as performed in the Inventory Management Setup. Motorola will track and manage installs, moves, additions and changes to 60,000 serialized asset specific data elements during the warranty period. Motorola will provide standard reporting on asset specific data elements as defined in the Customer Support Plan.

The following items are included in this service:

- Asset Location – Lists those assets currently in possession by specific locations such as a department (agency) or site location along with other asset specific information.
- Asset Status – Provides status of assets so that the number of assets in repair, active, spare, etc. may be understood and managed accordingly.
- Warranty Expiration – Advises when expiration date of warranty is due.
- Spares by Location - Provides detail on what types of spares and quantities are available at a given location.
- Unit Data Input via bar code scanner
- Location of equipment by name, vehicle ID, Officer ID, Radio ID

- Trouble ticket tracking system
- Ability to track all public safety equipment in vehicles; Radios, Control Heads, Portables, Chargers, Radars, Repeaters, Camera Systems, CBs, MCTs, Lojack, etc.
- Motorola will provide an agreed upon set of data from it's Asset and Configuration Services to the Commonwealth for use in Commonwealth existing systems. Motorola and the Commonwealth will agree to the content and format of this data set. Motorola will provide the data to the Commonwealth on an agreed-upon periodic and scheduled basis such as daily, weekly or monthly. It is intended that the Commonwealth utilize this data to update their existing Asset management information system.
- Updates or changes regarding radio system assets held in the existing Commonwealth asset management system may be provided to Motorola.
- Several "STARS" specific fields will require definition in the Motorola system in order to provide the contracted asset management service; such as: Commonwealth of Virginia specific asset tag information, Departments numbers or locations. Motorola and the Commonwealth will agree to the content and format of this data set. The Commonwealth will provide the data to Motorola on an agreed-upon periodic and scheduled basis, such as daily, weekly or monthly. Motorola will utilize this data to keep the asset records for the Commonwealth up to date while delivering Asset & Configuration services.
- Any further linkage between the Motorola Services and the Commonwealth database can be addressed through a change order process. A discussion and in-depth of understanding of requirements and the structure of the existing Commonwealth database is required to scope the electronic information and data formats utilized to ensure accurate exchange of information.

15.12.3. Configuration Management

Configuration Management will provide the Commonwealth with current diagrams, drawings and device specific parameters to facilitate shorter cycle time for network resolution and reduced cost for network upgrades associated with STARS.

Features:

- Tracking and updating current information
- Tracking programming templates such as subscribers, repeaters and routers
- Software and hardware version for each end-item
- Device code plugs, flash codes, and parameter settings
- Site connectivity configurations
- Network drawings and block diagrams
- Rack diagrams
- Maintain copies of dispatch console diagrams and programming parameters

- Retain all versions of operational and technical manuals of the complete system for the Commonwealth
- Equipment Hardware Configuration- Shelf and Card locations, Switch Settings, Jumpers, Router Tables
- Retain all versions of templates and other user data

15.13 Network Security

15.13.1. Network Security Services

[CONFIDENTIAL/PROPRIETARY Information – EXEMPT from public disclosure]

15.13.1.1. Pre-tested Anti-Virus Subscription

[CONFIDENTIAL/PROPRIETARY Information – EXEMPT from public disclosure]

15.13.1.2. Anti-Virus Management

[CONFIDENTIAL/PROPRIETARY Information – EXEMPT from public disclosure]

15.13.2. Network Barrier Management

[CONFIDENTIAL/PROPRIETARY Information – EXEMPT from public disclosure]

15.13.3. Network Management

Network Management provides management and operational activities necessary to ensure performance, availability and utilization to meet the service level requirements. This includes remote system monitoring and alarm diagnostics, system utilization, and a network optimization plan.

This service applies to the entire STARS infrastructure until expiration of the final warranty.

- Reports of the system performance, use, operational and maintenance activities.
 - Standard reports include device availability and system performance, repair activity, response and restoration cycle time and open/closed Cases for tracking issue resolution.
 - Identify system capacities pertaining to LMR voice, LMR data, and MW.
 - Identify other technologies that may be implemented and their benefits.
- On a monthly basis, analyze the data and provide recommendations for improvement.
- Custom reports that might be needed to meet specific requirements for the Commonwealth of Virginia system are available subject to design and costing considerations.
- Motorola will perform annual Technology Refresh reviews with the STARS PD and determine any modifications necessary to the existing scope of services provided.
- Participate in ongoing fleet mapping and talk group configuration meetings
- Tracking of Motorola service suppliers
- As-built drawing updates and approval process
- Maintain antenna and antenna site diagrams
- Retain all versions of coverage documentation both actual and predictive
- Tracking of Transmitter site utility providers and site contracts for master sites
- Service Manual updates

Commonwealth Post Warranty Maintenance Responsibilities

15.14 Sites and Facilities Maintenance

The Commonwealth will be responsible for all maintenance functions after warranty.

15.14.1. Tables and Exhibits

Table 15-1 –On-Scene Response Times

Severity Level	Response Time
Severity 1	Within 2 hours from alarm or receipt of notification from SPHQ NOC
Severity 2*	Within 4 hours from alarm or receipt of notification from SPHQ NOC*
Severity 3*	Within 24 hours from alarm or receipt of notification from SPHQ NOC *

Table 15-2 –Response Times for Network Monitoring Service, Remote Technical Support and OnSite

Severity Level	Response Time
Severity 1	NMS: Resolve or escalate within 15 minutes from alarm.
	RTS: Respond or escalate within 1 hour of receipt of request for Technical Support and communicate with SPHQ NOC to update status. Coordinate with SPHQ NOC within 2 hours to determine further appropriate action.
	OS: Enroute within 4 hours from time of alarm or receipt of notification from SPHQ NOC unless otherwise agreed to by SPHQ NOC.
Severity 2*	NMS: Resolve or escalate within 15 minutes from alarm.
	RTS: Respond or escalate within 2 hours of receipt of request for Technical Support and communicate with SPHQ NOC to update status. Coordinate with SPHQ NOC within 3 hours to determine further appropriate action.
	OS: Enroute within 6 hours from time of alarm or receipt of notification from SPHQ NOC unless otherwise agreed to by SPHQ NOC.
Severity 3*	NMS: Resolve or escalate within 15 minutes from alarm.
	RTS: Respond or escalate within 8 hours of receipt of request for Technical Support and communicate with SPHQ NOC to update status. Coordinate with SPHQ NOC within 8 hours to determine further appropriate action.
	OS: Enroute within 24 hours from time of alarm or receipt of notification from SPHQ NOC unless otherwise agreed to by SPHQ NOC.

*Denotes that these response times are applicable only during Standard Business Day. Severity 1 Response Times are applicable continuously.

Table 15-3 – Severity Definitions

Severity Level	Problem Types
Severity 1	<ul style="list-style-type: none"> • Any Site Down • >25% of channels down at any site • Loss of functionality of entire site • Loss of >than 50% of console operator positions at a communications center • Loss of ability to report critical alarms at any site • Loss of multi-site controls or networking • Failure of the primary and backup message switches •
Severity 2	<ul style="list-style-type: none"> • Significant STARS Impairment • Failure of the primary or backup message switch • SW or HW subsystem failure for a non-critical function • Loss of < or equal to 50% of console operator positions at a communications center
Severity 3	<ul style="list-style-type: none"> • Parts Questions • Upgrades • Intermittent problems that have a non-system affect • STARS Cases presently being monitored • Operational and informational questions • Configuration Change Support and Work Flow procedure questions

Equipment Category	Exhibit A - Coverage and Exclusions for Infrastructure Repair Notes/ Exceptions
Antenna Systems	Kaval bi-directional amplifiers, TXRX multicouplers, TXRX combiners, Celwave antennas, Decibel antennas, Sinclair antennas, Andrew transmission lines
Base Stations and Repeaters	ASTRO 25 digital trunked Quantar repeaters and analog conventional Quantar base stations.
Central Electronics Banks (CEBs)	CENTRACOM Gold Series CEB Power Supplies, Base Interface Modules (BIMs), Smart Phone Interfaces (SPIs), Logging Recorder Interfaces, and Network Hubs
Digital Access Cross-Connects (DACS) and Channel Banks	Zhone ARCA-DACS 100 and Zhone Telecommunications Network Server (TeNSr) channel banks
Computers	ASTRO 25 Private Network Management System computer terminals, CENTRACOM Gold Series Elite dispatch workstation computers, MOSCAD Fault Management Graphic Master Central (GMC) and Graphic Workstation (GWS) computers. Includes keyboards, mice and trackballs. Excludes defective or phosphor-burned cathode ray tubes CRT(s) and burned-in flat panel display image retention.
Consoles	CENTRACOM Gold Series Elite dispatch consoles. Includes headset jacks, dual footswitches, and gooseneck microphones.
Controller(s) -Trunking	MZC 3000 Zone Controllers and PSC 9600 Private Site Controllers.
Logging Recorder Equipment	Nice WordNet Logging Recorder System
Embassy Switch	Ambassador Electronics Bank (AEB), Ambassador (AMB) cards, Ambassador Interface Mux Interface (AIMI), Zone Ambassador Interface (ZAMBI), Motorola Gold Elite Gateway (MGEG)
Private Network Management System (PNMS) Terminals	PNMS Pentium IV servers and client computers associated with the User Configuration Server (UCS), Zone Database Server (ZDS), Zone Statistics Server (ZSS), Air Traffic Router (ATR) Server, FullVision Server (FVS), Ethernet Switch Management Server (ESMS), and the WAN Switch Management Server (WSMS)
Telephone Interconnect	DTI 1000 Private Branch Exchange (PBX)
Microwave Equipment.	Microwave Networks Inc. (MNI) CM6 6 GHz Digital Microwave and 18 GHz Proteus Digital Microwave systems; Fujitsu SONET Muxes
Monitor(s)	All monitors connected to computers that directly interface with or control the Equipment. Includes flat panel displays and touch screen monitors. Excludes defective or phosphor-burned cathode ray tubes CRT(s) and burned-in flat panel display image retention.

Alarm and Control System	MOSCAD Graphic Master Centrals (GMCs), Graphic Workstations (GWSs), Network Fault Management Front-End Processors (FEPs), Network Fault Management Remote Terminal Units (RTUs)
Network Fault Management	FullVision Pentium IV servers and client computers
Printers	Laser and dot-matrix printers used with the Private Network Management System, FullVision, MOSCAD, and CENTRACOM Gold Series Console System.
Synchronization and Frequency/Time Standards	Trak Model 9100 Modular Frequency/Time System and Spectracom GPS-Based Netclocks.
UPS Systems.	UPS systems provided under this contract

Equipment Category	Exhibit B – Covered STARS Master Site and Similar Equipment
Computer(s)	Includes computers that directly interface with or control the STARS IV&D equipment. Includes computer equipment for Network Security. Includes keyboards, mice, trackballs, and connected monitors for this equipment.
LAN/WAN Routers	ASTRO 25 IV&D LAN/WAN Router equipment located at Master sites. Does not cover routers for the RF equipment located at the remote RF and/or microwave sites after warranty.
Ethernet Switches	Enterprise Ethernet LAN switches located at Master sites. Does not cover routers for the RF equipment located at the remote RF and/or microwave sites after warranty.
Firewall and Network Barriers	ASTRO 25 IV&D LAN/WAN Firewall equipment associated with the STARS IV&D equipment access security.
Master Sites	Ambassador Electronics Bank (AEB), Zone Manager and Controller, WAN/LAN Switches, Packet Data Gateway (PDG), Routers, System Clock, and related equipment.
Printer(s)	Printers that directly interface with the equipment above.

This Page Left Blank Intentionally