Document Section	2 – Management	Status: SIEC Sub Committee Approval Date: 8/30/2021
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Standard Title	**Technical Staff and Maintenance Providers Training and Qualifications**	
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1. Purpose or Objective

The purpose of this standard is to establish minimum qualification requirements and procedures for system support staff, both in-house and contracted. This will ensure that functionality and integrity are maintained by requiring system configuration, maintenance, and repair functions be performed by qualified personnel.

2. Technical Background

▪ **Capabilities**

This Standard protects the integrity of the system by ensuring training and background requirements of all personnel working on the system and radios, and by describing the authorized activities of a contract service provider who provides maintenance and programming services.

▪ **Constraints**

Sensitive and non-public safety security information will be available to various state and local agencies and private business providing support services. It is possible that the integrity of the system may be jeopardized without a standard or agreement in place to ensure the appropriateness of the businesses' activities.

3. Operational Context

System functionality and integrity must be maintained by ensuring that only qualified personnel perform system configuration, maintenance, and repair functions. Not all user agencies participating in the statewide ND SIRN System have technicians on staff to program and perform configuration, maintenance, and repair on radios and other electronic infrastructure. Agencies may need to contract with one or more service providers for these services. The choice of service provider is at the discretion of the user agency, but the contract service provider must enter into an agreement with the user agency, and the user agency must ensure the requirements of this Standard are met prior to execution of the service. The Statewide System Administrator shall approve all service providers.

4. Recommended Protocol/ Standard

System Owners' Internal Technical Staff

- Any staff members or technicians with access to SIRN infrastructure, software or hardware used to maintain or configure SIRN infrastructure equipment or subscriber devices shall, at a minimum, be required to pass a criminal history background check per the State of North Dakota Information Technology (NDIT) guidelines or the employing local agency's protocols.

- Any staff members or technicians will follow the process of ensuring technical competency, as outlined below in the Technical Staff Requirements (Internal and Contracted) section.

- Each SIRN User Agency will formally designate an Agency Administrator or Liaison as a Primary Point of Contact (Agency POC) for its users. This Agency Administrator will have the authority to represent their respective agency/agencies' interest and make decisions on issues related to the day-to-day operation, maintenance, and repair of their equipment. See SIRN Standard 2.8.0 Operational Management for details on roles and responsibilities.

Contract Service Providers

- All contract service shops (e.g., radio shops) providing service to local agencies or the State must enter into a provider agreement with the requesting agency and maintain current said agreements.

- It is the responsibility of the contracting User Agency to validate the qualifications of contract service providers and to ensure the providers' compliance to this Standard.

- Contracting agencies shall notify the Statewide System Administrator of any contract for services. The Statewide Administrator will maintain a log of all contracted service providers in the State and a respective list of SIRN User Agencies to whom they officially provide services.

- The Statewide System Administrator or designee has the right to view the qualifications of any staff member of the contract service provider.

- Contract staff members or technicians with access to SIRN infrastructure, software or hardware used to maintain or configure SIRN infrastructure equipment or subscriber devices shall, at a minimum, be required to pass a criminal history background check per the State of North Dakota Information Technology (NDIT) guidelines or the employing local agency's protocols.

- Contract service providers servicing end user devices (radios or consoles) must meet the following requirements:

  o Prove it is a qualified service center eligible to conduct business in the State of North Dakota.

  o Demonstrate proficiency in supporting the equipment and solutions for which it is contracted, including completion of manufacturer's training courses and make

references available for verification if necessary.

- o Use the contract service provider's technical staff in their certified areas of competency

- o Maintain all training certifications for their personnel.

- o Prove it has specified insurance coverage and may, prior to commencement of work, be asked to purchase a security bond by the user agency.

- When a SIRN User Agency contracts with a contracted service provider for the purpose of providing maintenance, repair, programming, and related service on electronic infrastructure to include dispatch consoles and/or radio subscriber equipment, the service provider must obtain and pay for all permits, licenses, and approvals necessary for programming and maintenance to fulfill the provisions.

- Due to the sensitive and non-public nature of the programming information, the contract service provider must provide written assurance that is authorized and has all necessary permits and licenses to conduct business in the state of North Dakota. Unless specifically authorized by the Local System Administrator, in writing and on an individual radio-by-radio basis, the contract service provider may not directly or indirectly permit any third person to view, read, print, extract, copy, transmit, archive, edit, create, clone, transfer, release, tamper with, reverse engineer, or otherwise compromise the security of any radio code plug programming file, system key file, encryption key file or any infrastructure configuration database file for any radio, console, or other infrastructure element on the system.

Technical Staff Requirements (Internal or Contracted)

- Technical Staff assigned to work on system and/or subsystem equipment shall successfully complete appropriate training on all equipment they are assigned to work on. This training will be completed prior to working on the equipment. *See Appendix A Equipment Manufacturer Training Courses* for additional details on required course work by staff/technician role or function.

- Training requirements shall include courses provided by the original manufacturer or reseller covering the specific software, firmware, hardware or processes.

- Technical Staff must additionally attend any applicable webinars, informational meetings or training courses delivered by the SIRN Statewide Administrator or designee. As the SIRN training program is evolving, Technical Staff must contact the SIRN Statewide Administrator to obtain the most current set of training materials and courses.

- Untrained personnel shall not perform configuration, maintenance, or repair work unless this work is performed under the direct supervision of trained and approved personnel.

- Technical Staff shall only work in the areas for which they have completed the required training

or informational meetings.

- Technical Staff shall be familiar with all applicable ND SIRN State Standards including, but not limited to, <u>SIRN Standards on system maintenance, subscriber maintenance and radio programming requirements</u>.

- Technical Staff shall be familiar with the site access procedures, equipment outage, and maintenance notification requirements of the State Standards.

- Technical Staff providing system maintenance shall have access to and use radios for required SYS-TECH announcements before performing any work on the system.

- Technical Staff connecting to the radio network shall have a computer with the most current virus protection software and follow all standards regarding security.

5. Recommended Procedure

Appendix A: Equipment Manufacturer Training Courses provides a list of courses as of July 2021. Courses evolve over time to keep pace with evolving technologies and solutions. Questions regarding specific required training courses shall be directed to the Statewide System Administrators.

Agencies requiring contract services must enter into an agreement with the contractor providing service. The agreement will specify enforcement provisions, including consequences of misuse and the release of non-public system security information. The Statewide Administrator will maintain a log of all contracted service providers in the State and a respective list of SIRN User Agencies to whom they officially provide services.

The Statewide System Administrator will:

- Facilitate the development of and maintain the current version of the common practices, courses and webinars for the different categories of work
- Maintain a list of the overview/common practices training completed by the contract workers

Contracting and User Agencies shall ensure:
- Minimum training requirements of in-house staff are met.
- Only qualified personnel perform maintenance functions.
- Familiarity of technical staff with all applicable sections of the SIRN Standards.
- Standards are followed when using contracted services.
- SIRN Statewide Administrator is notified when contracting for service.

6. Management

The Statewide System Administrator and the contracting agencies are responsible for managing and maintaining service contracts with vendors in compliance with this Standard.

Appendix A: Equipment Manufacturer Training Courses

The following courses indicate the minimum training requirements for government and private contractor staff by category, role or responsibility. Proof of completion may be required by the SIRN Statewide Administrator before tools and applications for providing technical support to SIRN systems and devices are granted. Courses are current as of August 2021.

Motorola Systems and Devices

ASTRO Radio System Administrator
- AST1038_ASTRO® 25 IV&D System Overview (Online Self-Paced)
- AST4104_ASTRO® 25 Systems Applied Networking
- AST4102_ASTRO® 25 IV&D Radio System Administrator Workshop

Radio Programmer/Codeplug Developer
- RDS1017V_ASTRO® 25 Systems Fleetmapping Workshop
- APX7001_APX CPS Programming and Template Building

Radio Management Application User
- RDS2017_APX™ Radio Management Workshop

Console Administrator
- MCC7500 Console Supervisor

Network Administrator
- AST1038_ASTRO® 25 IV&D System Overview
- AST4104_ASTRO® 25 Systems Applied Networking

Site RF Technician/Engineer
- AST1038_ASTRO® 25 IV&D System Overview
- AST4208_ASTRO® 25 IV&D GTR8000 Repeater Site Workshop

Console Technician/Installer
- AST1038_ASTRO® 25 IV&D System Overview
- CON012_MCC7000 Series Dispatch Consoles Workshop

Lead Radio User Train-The-Trainer
- APX Portable and APX Mobile Train-the-Trainer and User
- Other training as sponsored by the state or local jurisdiction

Console Operator/User
- MCC7500 Console Operator

EF Johnson/Kenwood Devices

Radio Programmer/Codeplug Developer
- Basic Armada Programmer
- Armada Advanced Programmer
- Course FM1 – Viking Radio Fleet Manager

Radio Repair Technician/Service Shop
- Course PMT2 – Viking Radio Technician Level 2 Training
- Course PMT2 – Viking Radio Technician Level 3 Training
- Common Course C1 – Introduction to EF Johnson 2-Way Radio
- Common Course C2 – Introduction to EF Johnson Infrastructure
- Common Course C3 – EF Johnson Conventional, Trunked, P25 System Architecture and Connectivity