Title:	P25 Subscriber Template Management	SOP No:	ITS-RADIO-005
Revision:	1.2	Effective Date:	August 28, 2018
Owner:	Manager - Wireless Communications	Department:	IT Solutions

P25 Subscriber Template Management

1   Purpose

Subscriber Template Management, Configuration and Programming Guidelines are required to ensure optimum performance, uninterrupted communications and maximum interoperability of the public safety radio system that provides communications for first responders across much of North Central Texas and its end users.

2   Scope

All Subscribers on the Radio System must comply with the policies and procedures in this document.

External Agencies Subscriber Template Management

External Agencies that operate subscribers on the Radio System, must manage their own radio templates and comply with the specific radio template and programming rules in this policy and particularly section 6.3

Entities with Programming Keys

Entities that utilize System Keys to program radios themselves, or else use a radio shop to perform programming tasks must comply with this policy and particularly 6.4 and 6.5.

3   References

- ITS-RADIO-001_P25 ID&Naming
- ITS-RADIO-003A_New Subscriber Activation Plan
- ITS-RADIO-004_Encryption Management

4   Conditions for Exemption

Exceptions to the policy must be approved by the Senior Manager over Wireless Communications.

Title:	P25 Subscriber Template Management	SOP No:	ITS-RADIO-005
Revision:	1.2	Effective Date:	August 28, 2018
Owner:	Manager - Wireless Communications	Department:	IT Solutions

5 Justification

Enforcing control of subscriber templates and parameters protects security of the mission critical network by minimizing programming errors that could cause security breaches, transmissions by unauthorized radios or interference.

Adherence to this policy will reduce the risk of Public Safety End Users experiencing loss or interruption of service due to incorrect programming.

6 Subscriber Template and Configuration Programming Rules

This section defines the methodologies for Subscriber Template Management.

6.1 Subscriber Template Mangement Process

Fleetmap information is stored on a secure network drive with restricted access and maintained by Wireless Communications. The Fleetmap for the Radio System contains the talkgroup names, decimal and hexadecimal codes, failsoft frequencies and whether it's encrypted, talkgroup description and owning agency. Radio codeplugs are stored separately in a secured network drive only accessible by Wireless Communications. Radio codeplugs are saved in read-only mode to prevent accidental changes.

Should an external agency require their Fleetmap information for programming purposes, a written request must be submitted to Wireless Communicaitons, after which it will be selectively distributed for use.

Requests for other agencies or department talkgroups not in the requestor's department codeplug requires written authorization from the other agency or department management.

City of Fort Worth Wireless Communications will manage and store any templates created for External Agencies by the City of Fort Worth Wireless Communications.

6.2 Change Control of New or Revised Templates

All request for changes must be submitted to Wireless Communications in written form and include the Agency's senior management approval. (i.e. Deputy Chiefs, Department Managers). All changes must be at the division level and customized individual codeplugs are not allowed.

Title:	P25 Subscriber Template Management	SOP No:	ITS-RADIO-005
Revision:	1.2	Effective Date:	August 28, 2018
Owner:	Manager - Wireless Communications	Department:	IT Solutions

6.3   Access of Programming Tools

All City of Fort Worth Wireless Communications Technicians will be issued programming cables and have access to the latest programming software versions. The latest versions of programming software will be made available one month after release from the manufacturer, or earlier if needed for newly purchased or depot returned radios.

Lost, stolen, or damaged programming materials should be reported in writing to Senior Technicians and the Wireless Communications Manager.

System Keys

System Keys enhance the security of the programming process by requiring an Advanced System Key (ASK) or Software System Key to program radios.

Advanced System Keys are hardware based and cannot be replicated, however they do expire after a predetermined time period after which they must be replaced or updated. Radios must be capable of the Advanced System Key in order to use it for programming. Software System Keys are less secure.

Advanced System Keys

Advanced System Keys are held by the City of Fort Worth.

Other agencies requesting an ASK must do so in writing to the Wireless Communications Manager along with a justification for use and security measures implemented to protect it. The agency's Wireless Communications Manager will be the designated point of contact and assume responsibility for the ASK. It should not be distributed to others without written consent from the CFW Wireless Communications Manager.

If approved, an ASK and USB dongle must be supplied by the requesting external agency. Notification of lost or stolen ASK's must be immediately submitted in writing to CFW Wireless Communications.

ASK validity will be limited to a year from the date of activation. External agencies are responsible for requesting extensions in writing as the expiration date approaches. Only the CFW Wireless Communications Manager may authorize the extension of an ASK expiration.

Title:	P25 Subscriber Template Management	SOP No:	ITS-RADIO-005
Revision:	1.2	Effective Date:	August 28, 2018
Owner:	Manager - Wireless Communications	Department:	IT Solutions

Software System Keys

Software System Keys are held and utilized by the CFW Wireless Communications division only and are not distributed due to security concerns.

6.4   Subscriber Configuration Guidelines

For City of Fort Worth P25 subscribers, and agencies operating subscribers on the network, the configuration guidelines below apply.

- Transmission type should be set to "PTT-ID".

- Mobile Transmit Power must be set to 18W with a maximum Mobile Effective Radiated Power (ERP) of 35W. This field is dependent on the type of antenna and its gain so CFW Wireless Communications may be consulted if necessary.

- Private Call and Paging is not allowed and must not be enabled in the codeplug.

- If the emergency button is programmed, CFW Wireless Communications recommends a 500 ms short key press duration to reduce accidental activation. CFW Radios are programmed in this manner.
- After programming, radios should be checked for compliance with operational standards such as correct alignment, on-frequency, power etc.

6.5   Quality Control of Radio Templates

Once the codeplug is written, it is peer reviewed by a second Radio Tech and a Senior Tech prior to programming. The codeplug will be placed in the "Ready for Peer Review" folder. A Senior Technician will be responsible for scheduling the Peer Review and assigning a second Radio Technician.

Once the Peer Review is completed, the codeplug will be assigned a version number and moved to the "Ready For IT Test" folder. The three Tech's performing the Peer Review must sign-off on the Section 1 of Appendix A, the Peer Review and Customer Approval Form.

A few test radios will be programmed; functionality tests and a visual inspection will be performed. The customer will then be given the opportunity to verify the codeplug prior to mass programming. The Customer must sign-off on Section 2 of Appendix A, the Peer Review and Customer Approval Form.

The codeplug and a scanned version of the Peer Review & Customer Approval Form in Appendix

A will then be placed in the folder assigned for that department and be deemed ready for programming use.

Codeplugs not written by CFW are not reviewed unless requested.

6.6 Interoperability Requirements

All radios must be programmed with the correct interoperability zones per the CFW P25 Interoperable Communications Plan, which is referenced in Section 7.

6.7 Subscriber Encryption

Subscribers with encryption must comply with Radio 004: Subscriber Encryption Management, specifically the CKR assignment.

7 Supporting Documentation

Appendix A Peer Review & Customer Approval Form:
Radio Services Peer Review Sign-off Sheet

CFW P25 Interoperable Communications Plan Website Link:
http://fortworthtexas.gov/itsolutions/

Title:	P25 Subscriber Template Management	SOP No:	ITS-RADIO-005
Revision:	1.2	Effective Date:	August 28, 2018
Owner:	Manager - Wireless Communications	Department:	IT Solutions

Version Control

Version	Date	Description	Author
1.0	8/1/2014	Original version	Abinta Khan
1.1	12/5/2016	Update CFW P25 Radio System to Fort Worth Regional Radio System, update Radio Services to Wireless Communications, remove vendor specific references to programming software.	Douglas O'Neal
1.2	6/26/18	Removed reference to FWRRS, completed update of Radio Services to Wireless Communications; minor edits	Larry Crockett