

King and Queen / Essex Radio Committee
Needs and Priorities
October 22, 2015

Radio committee work group has identified the following areas of need and priority for consideration in design and preparation of the technical specifications system document.

Operability:

- Maximize and expand where possible mobile and portable radio coverage to meet public safety standards through use of adjacent coverage (Essex/KQ)
- Open Standards based system design- non-proprietary P25 (Essex/King and Queen)
 - vendor should best meet open standard for all options
- Update/Replace hardware to ensure compliance with new technology (Essex/KQ)
- Expand microwave backhaul system capacity (King and Queen)
- Replace soon to be unsupported microwave backhaul system (Essex)
- Replace soon to be unsupported radio repeater stations (Essex)
- Update and replace unsupported radio subscribers (Essex)
- Provide functional features to meet public safety users (Essex/KQ)
- Provide for additional channel capacity through maximum channel use (King and Queen/Essex)
- Ensure minimum integration of SIRS and Virginia State EMS into system (King and Queen/Essex)
- Provide for mobile communications coverage outside of county geography (King and Queen/Essex)
- Paging and alerting overlay on system (Essex)

Interoperability:

- Provide for communications between disparate systems when needed and authorized (Essex/KQ)
- Meet specifically identified operational needs (Essex/KQ)
 - Routine daily interoperability
 - Large scale incident interoperability
 - Gaps (State communications cache)
- Limit negative consequence to system capacity when interconnected (ALL systems)
 - Number of users from surrounding jurisdictions
- Provide for scalable interoperability- priority to be based on mutual aid response data (Essex/King and Queen)
 - Control station
 - Console Patch
 - System Gateway
 - ISSI
 - State/Comlink
- Interoperability priority for assistance within/into partner home localities (Essex/King and Queen)
 - Public safety coverage within locality- footprint restrictions (??)

Governance and Sustainability:

- Establish regional governance MOU to be adopted by board- committee to address system design and issues (Essex/King and Queen)
- Regional partnership to foster shared costs and future expansion and redundancy (King and Queen / Essex)
 - Grant funding initiatives
 - Local shared costs for maintenance and upgrades
- Shared use between partner localities (Essex/King and Queen)
- Identify long term maintenance costs for sustainment (Essex/King and Queen)
- Seek grants (RSAF, SHSP, AFG, COPS) to fund subscriber and interoperability devices (Essex/King and Queen)

Infrastructure, Expansion and Features

- Existing Infrastructure and civils to be utilized as best possible (King and Queen/Essex)
 - Towers
 - Shelters
 - Generators
- Future expandability (15 year window @ 200 % expandability minimum) Essex/King and Queen
- Maintenance and support for life of system (15 year minimum) Essex/ King and Queen
- System backhaul to support potential E911 integration, CAD, broadband, and mapping/GIS
- Expandable to additional localities (Essex/King and Queen)
- Allow for Mobile Data Expansion (King and Queen/Essex)
- FirstNET capability consideration (*specification does not exist*)
- Subscriber Feature Capability- to support or offer benefits and features below within system//
TBD at locality discretion:
 - P25 Phase II support
 - Emergency Button Activation
 - Man Down
 - Encryption (AES standard)
 - OTAR
 - OTAP
 - GPS
 - Bluetooth
 - WiFi
 - Internet based system access option (Twisted pair or BeOn type service)

User Report- This chart bases projects known users and estimated system PTT frequency based off of current subscriber count

Agency	Locality	Est Subscriber User Count	Priority	PTT Frequency (percentage of use)	User PTT Rank
Essex County Sheriff	Essex	31	PS 1	0.6	1
Tappahannock Police Department	Essex	32	PS 1	0.6	1
King and Queen County Sheriff	King and Queen	38	PS 1	0.6	1
Tappahannock Essex Fire	Essex	47	PS 1	0.3	3
King and Queen Fire (Upper)	King and Queen	25	PS 1	0.2	4
Walkerton Fire	King and Queen	29	PS 1	0.3	3
Central Fire	King and Queen	24	PS 1	0.2	4
Lower Fire-EMS	King and Queen	45	PS 1	0.4	2
Essex EMS	Essex	14	PS 1	0.4	2
Tappahannock VRS	Essex	10	PS 1	0.1	5
King and Queen VRS (Newtown)	King and Queen	20	PS 1	0.2	4
Mattaponi VRS	King and Queen	40	PS 1	0.3	3
King and Queen County Emergency Services	King and Queen	10	PS 1	0.4	2
King and Queen County Emergency Services (EM)	King and Queen	20	PS 1	0.4	2
Essex County Emergency Services (EM)	Essex	12			
Essex Schools	Essex	40 (New)	SV 2	0.25	6
King and Queen Schools	King and Queen	40 (New)	SV 2	0.25	6
Tappahannock Town	Essex	6	PW2	0.2	4
Essex DSS	Essex	5* New	LG2	0.1	5
King and Queen DSS	King and Queen	5* New	LG2	0.1	5
King and Queen Admin	King and Queen	5* New	LG2	0.1	5
Essex Admin	Essex	5* New	LG2	0.1	5
Tappahannock Admin	Essex	5* New	LG2	0.1	5
Riverside Tappahannock Hospital	Essex	1	HS	0.2	4
Riverside Walter Reed Hospital	Gloucester	1	HS	0.2	4
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