

170908A

Alachua County Public Safety Radio System Design and Engineering



System Analysis Review
October 9, 2018



Agenda



- **Current Public Safety/Public Service System Review**
- **Upgrade and Replacement Options**
- **Recommendations/Actions Items**
- **Q&A**



Current Systems Overview



- **GRUCom Trunked Radio System (TRS)**
 - Originally installed in 1999/2000
 - Upgraded in 2012
 - Upgrade in 2018 (in progress)
- **Operated by GRUCom as an enterprise operation**
- **User fees on a monthly, per device basis**
 - Intended to cover both capital and ongoing support costs



Current System Limitations



- **Limited in-building coverage**
- **System reliability**
- **System features and functions**
 - Further upgrades may be needed to support enhanced services
- **Governance and support model**
 - Current governance structure and support mechanisms do not fully support public safety and public service needs



System Alternatives



- **Alternative 1: Enhance GRUCom system**
 - Leverage existing investments
 - Highest level of interoperability
 - Revised governance and support model needed
 - Estimated capital costs ~ \$7M
- **Alternative 2: Standalone County system**
 - New sites and equipment
 - Similar sites to provide improved coverage
 - City and County interoperability reduced
 - New governance and support model
 - Estimated capital costs ~ \$15M



Recommendation



- **Alternative 1: Enhance GRUCom system**
 - Leverages existing system assets to achieve the most cost-effective alternative
 - Provides the highest levels of day to day operability and interoperability by keeping all users on a single, standards-based system
- **Redefine governance and support mechanisms**
 - In accordance with DHS guidelines and best practices
 - Development of effective governance and sustainable funding mechanisms is critical to the long-term future of public safety and public service communications in both the City and County



Action Items



- **Develop/implement ordinances and building codes requiring new or modified buildings to include coverage enhancements to ensure in-building coverage for public safety agencies**
- **Evaluate costs/benefits of deploying geo-diverse radio system core and/or prime sites**



Action Items (continued)



- Evaluate costs/benefits of connections to adjacent counties to allow for intersystem roaming, further enhancing coverage and interoperability
- Evaluate optional system features such as low speed data, over the air programming (OTAP), and over the air rekeying (OTAR) to enhance system performance and usability



Action Items (continued)



- Leverage existing City, County and other stakeholder facilities, including IP-based Wi-Fi networks, to create a network of Wi-Fi access points to augment TRS coverage in key buildings and facilities
- Evaluate costs versus benefits of extending fiber service versus deploying microwave backhaul to new or existing TRS sites



Discussion/Q&A

