



MCM
Consulting Group, Inc.
Solutions for an unsafe world.

ERIE COUNTY NEXT GENERATION PUBLIC SAFETY RADIO SYSTEM

APRIL 12, 2019

CONTRACT AWARD

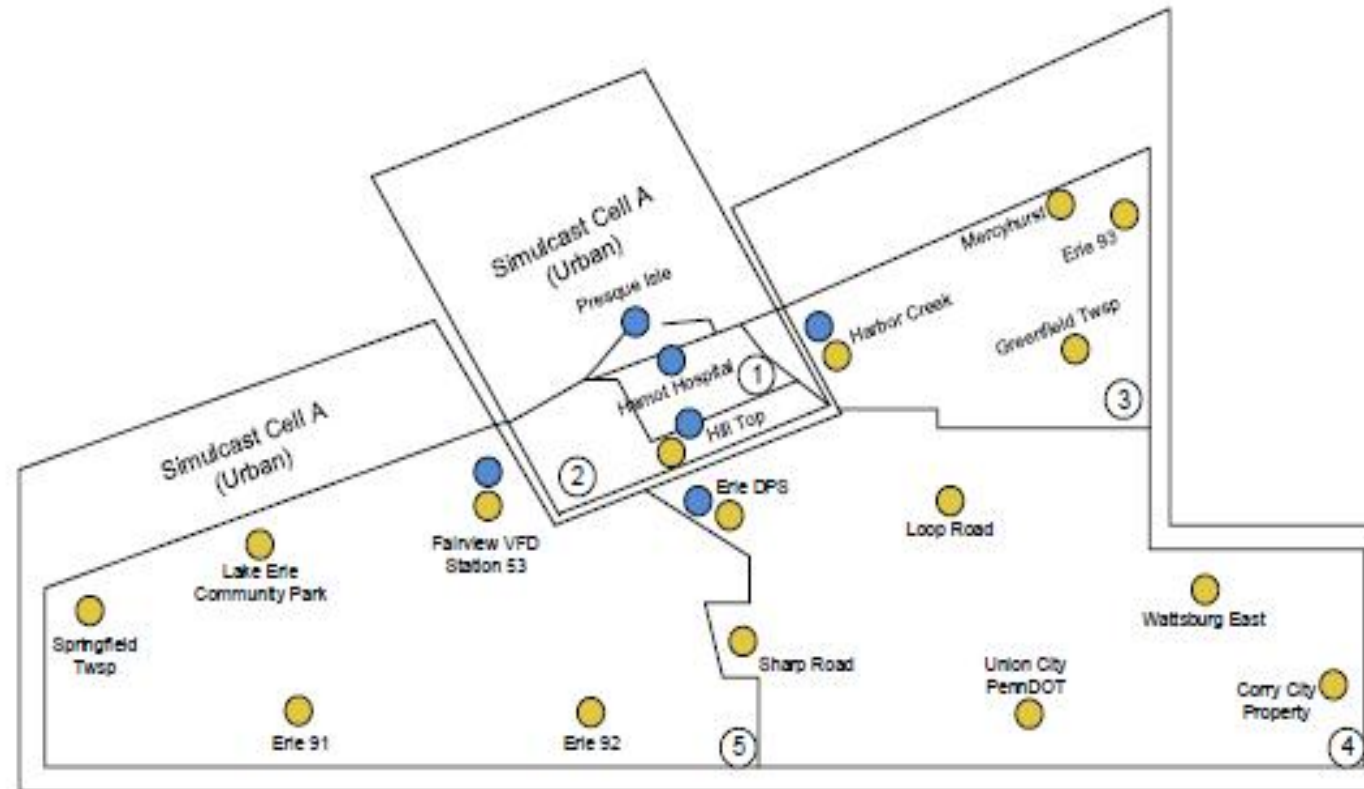
■ **August 16, 2016**

Contract award to **E. F. Johnson.**

E. F. Johnson was the only vendor to meet our technical specification as defined by our RFP and took no exceptions.

SYSTEM OVERVIEW

- E.F. Johnson design: 22 site (18 physical sites), UHF P25 Phase II Simulcast Trunked System consisting of TWO simulcast cells (A and B), FIVE (5) operational zones, as illustrated in the diagram below.



SYSTEM OVERVIEW

- 6 site, 6 channel P25 Phase 2 trunk Simulcast cell 1.
- 16 site, 6 channel P25 Phase 2 trunk Simulcast cell 2.
- 2 County-wide, analog UHF Simulcast Paging Frequencies (TX only).
 - Millcreek EMS / Fire
 - County EMS / Fire

SYSTEM OVERVIEW

- EMS / Fire Departments: (City of Erie)
 - EmergencyCare
 - 1 repeated trunked simulcast dispatch talk group
 - 1 repeated trunked simulcast operational talk group
 - Erie City Fire Department
 - 1 repeated trunked simulcast dispatch talk group
 - 2 repeated trunked simulcast operational talk groups

SYSTEM OVERVIEW

- EMS / Fire Departments: (County)
 - 1 County-wide repeated trunked simulcast operational talk group
 - 4 Zoned repeated trunked simulcast operational talk groups
 - 4 operational talk groups per zone
 - Portable and mobile equipment will have at least 2 low power simplex channels to conduct on the ground operations.
 - Note: There is no plan to monitor these channels at the 911 dispatch center.

SYSTEM OVERVIEW

- Hospitals: (Erie County)
 - 4 Hospital medical command repeated talk groups
 - Corry Memorial
 - Millcreek Community
 - Saint Vincent
 - UPMC Hamot

SYSTEM OVERVIEW

- Police Departments: (City of Erie)
 - Erie City Police Department
 - 1 repeated trunked simulcast dispatch talk group
 - 5 repeated trunked simulcast operational talk groups

SYSTEM OVERVIEW

- Police Departments: (Millcreek)
 - Millcreek Police Department
 - 1 repeated trunked simulcast dispatch talk group
 - 2 repeated trunked simulcast operational talk groups

SYSTEM OVERVIEW

- Police Departments: (County)
 - County-wide repeated trunked simulcast operational talk group
 - 3 Zoned repeated trunked simulcast dispatch talk groups
 - 3 Police zones with 2 operational talk groups per zone

SYSTEM OVERVIEW

- Police Departments: (County Detectives / Sheriff)
 - Erie County Detectives / Sheriff
 - 1 repeated trunked simulcast dispatch talk group
 - 1 repeated trunked simulcast operational talk group

SYSTEM OVERVIEW

- Police Departments: (University)
 - University Police Departments
 - 4 repeated trunked simulcast operational talk groups
 - Edinboro
 - Gannon
 - Mercyhurst
 - Penn State Behrend

SYSTEM OVERVIEW

- Emergency Management Agencies(s)
 - 2 County-wide repeated trunked simulcast talk groups
- Hazardous Materials Response Team
 - 2 County-wide repeated trunked simulcast talk groups

SYSTEM OVERVIEW

- Erie County and E.F. Johnson have agreed to provide the below interoperability:
 - Redundant ISSI connection = PA STARNET VHF, PA STARNET 800MHz.
 - Four (4) VHF Interop's = Chautauqua Co., Conneaut City Fire, Conneaut City PD, and Monroe Township Fire.
 - Three (3) UHF Interop's = Government West, Government North, and Government Northeast.
 - Warren County Low Band using Zetron ARG, will change to ISSI when they transition to the state-wide system.
 - Med 2 Corry (New E.F. Johnson Analog RPT) and Med 5 Erie (New E.F. Johnson Analog RPT) for out of county EMS agencies.

LICENSING

- **FCC Licensing**
- Successful licensing of 14 frequencies pairs to be distributed across 22 sites.
 - Twelve (12) paired frequencies for the trunked portion of the system.
 - The twelve paired frequencies operating in a Phase II configuration effectively provides twenty-two (22) talk paths and fifty-six (56) talk groups.
 - Two (2) analog frequencies for dispatch paging operations (TX only).
- Additional paired and simplex frequencies have been secured to conduct on-scene operations.
 - Note: There is no plan to monitor these channels at the 911 dispatch center.

TOWER INFRASTRUCTURE

- **Site Acquisition (RF & Microwave)**
 - Eight (8) new tower sites:
 - Corry City (Sciota Road)
 - Fairview Fire (Station 53)
 - Girard Township (Lake Erie Community Park)
 - Greenfield Fire (Station 70)
 - Harborcreek Township (Buffalo Road)
 - Waterford Township (Loop Road)
 - Springfield Township (Old Lake Road)
 - Union City (PennDOT)

TOWER INFRASTRUCTURE

- **Site Acquisition (RF & Microwave)**
 - Twelve (12) existing or co-located sites:
 - American Tower sites
 - Wattsburg East & Wattsburg Wheelock
 - Flower Road (Erie DPS)
 - Hilltop Road (City of Erie)
 - Mercyhurst University (North East Campus)
 - Sharp Road (Erie DPS)
 - State Tower Sites (ERIE 40, ERIE 82, ERIE91, ERIE 92, ERIE 93)
 - UPMC Hamot Hospital

TOWER INFRASTRUCTURE

- **Tower Construction (Phase I)**
 - Construction period: April 2018 – November 2018
 - Seven (7) new tower sites
 - Corry City Status: **completed**
 - Fairview Status: **completed**
 - Greenfield Status: **completed**
 - Harborcreek Status: **completed**
 - Loop Road Status: **completed**
 - Springfield Status: **completed**
 - Union City PennDOT Status: **completed**

TOWER INFRASTRUCTURE

- **Tower Construction (Phase II)**

- Construction period: September 2018 – February 2019
- One (1) new tower site:
 - Girard (LECP) Status: **completed**
- Five (5) existing or co-located sites:
 - American Tower Status: **completed**
 - American Tower Status: **completed**
 - Erie 82 Status: **completed**
 - Erie 91 Status: **completed**
 - UPMC Hamot Status: **completed**

FAIRVIEW FIRE



FLOWER ROAD



HILLTOP ROAD



LAKE ERIE COMMUNITY PARK



SPRINGFIELD TOWNSHIP



SUBSCRIBER EQUIPMENT

- **Subscriber Equipment**
- E. F. Johnson Technical Service Team inspected, tested and upgraded to latest software release.
 - E. F. Johnson subcontracted with Mobilcom to conduct installation of control stations and mobile radios.

SUBSCRIBER EQUIPMENT

- **Subscriber Equipment**
- Phase I (100% Completed)
 - Early distribution and installation of mobile radios (20 agencies)
 - Subscriber radios distributed to departments utilizing UHF conventional today
 - 19 EMS / Fire Departments and City of Erie Police Department

SUBSCRIBER EQUIPMENT

- **Subscriber Equipment – Mobile Radios / Control Stations**
- Phase II (95% Completed)
 - Installation of remaining mobile radios and control stations (April / May 2019)
 - Unless specifically requested by user agency for installation post cutover

SUBSCRIBER EQUIPMENT

- **Subscriber Equipment – Portable Radios**
- Program with P25 Templates (April / May 2019)
 - Mobilcom and Erie County Radio Division
 - Portable radios will be issued to every agency, prior to beginning field coverage testing, scheduled in May / June 2019.

SUBSCRIBER EQUIPMENT

- **Subscriber Equipment – Pagers**
- Program with analog dispatch paging frequencies (April / May 2019)
 - Mobilcom and Erie County Radio Division
 - Pagers will be issued to every agency, prior to beginning field coverage testing, scheduled in May / June 2019.

SIREN CONTROLLERS

- **Siren Controllers**
 - 27 fire stations or municipalities identified as having operable audible (siren) alert systems
 - Installation of remaining siren controllers (April 2019)

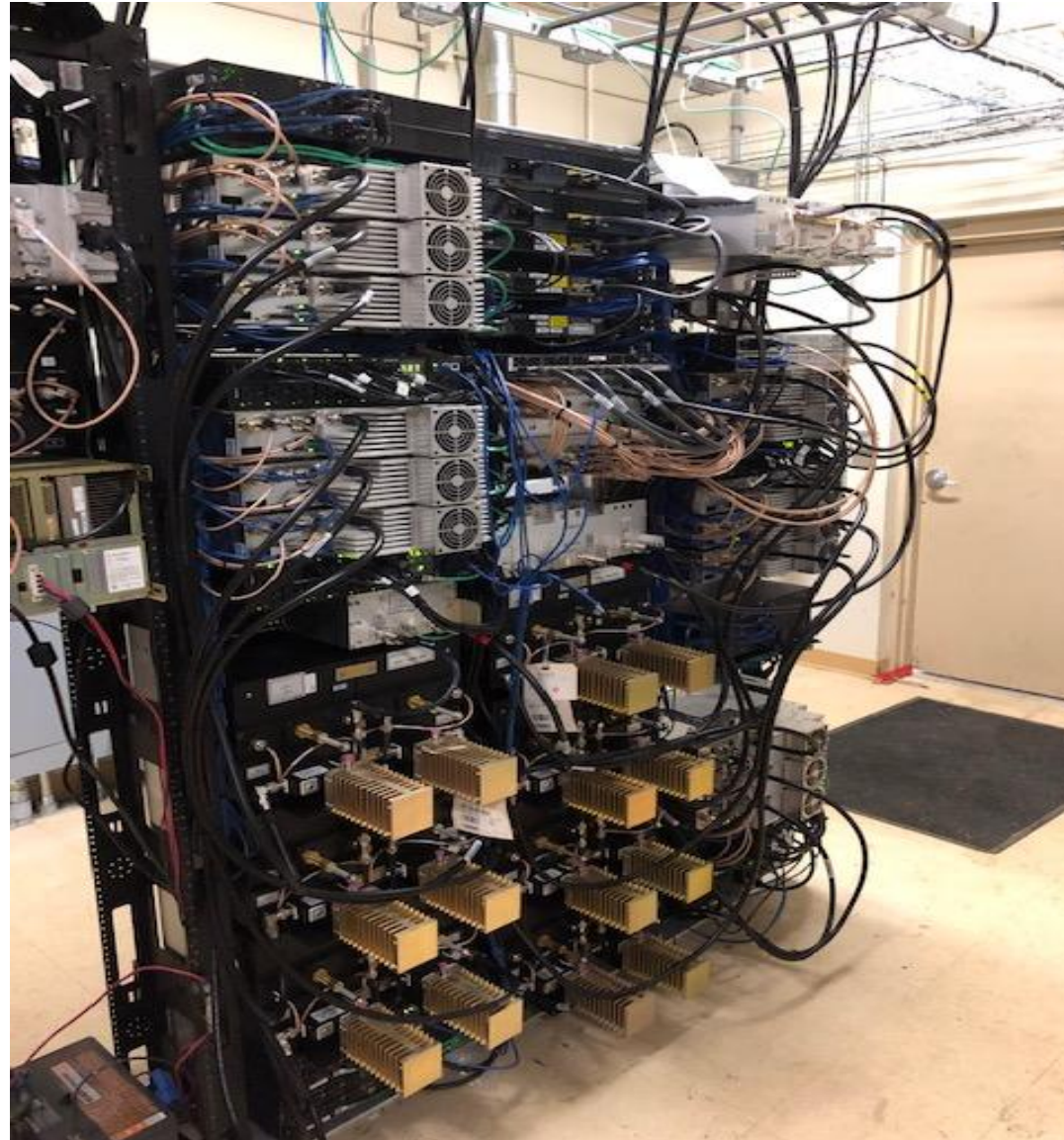
WHAT'S NEXT...

- Complete installation of microwave system by the end of April 2019.
 - Nokia began installation of microwave system in October 2018.
- Complete installation of radio system by the end of April 2019.
 - Mobilcom began installation of system infrastructure in September 2018.
- EF Johnson continues to provision new radio system
 - To be completed by the end of April / May 2019

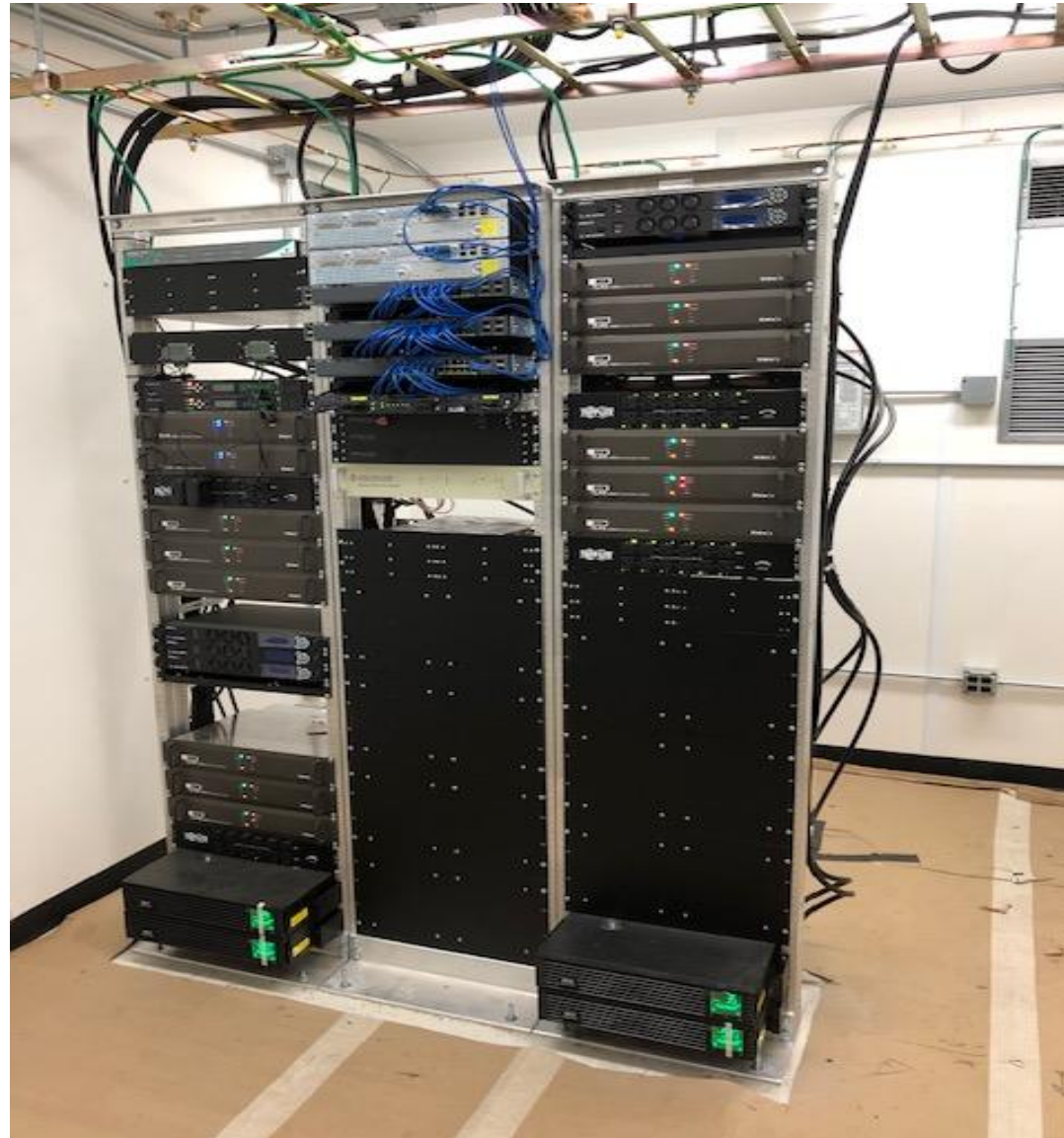
FLOWER ROAD



FLOWER ROAD



FAIRVIEW FIRE



LAKE ERIE COMMUNITY PARK



TECHNICAL TRAINING

- **Technical Training**
- IT Support Staff & Radio Division
 - Operation and Support of P25 Radio System (March 2019)
 - 2 weeks in Irving Texas (EF Johnson Facility)
 - Operation and Support of Microwave System (March 2019)
 - 2 weeks in Erie County (Erie County Public Safety Facility)
 - Management (Armada) of Subscriber Equipment (April 2019)
 - 1 week in Erie County (Erie County Public Safety Facility)

TECHNICAL TRAINING

- **Technical Training**
- IT Support Staff & Radio Division
 - Develop P25 Fleet Map / Templates (April 2019)
 - 1 week in Erie County (Erie County Public Safety Facility)
 - Begin programming of all subscriber equipment with P25 Templates
 - Mobilcom and Erie County Radio Division (April / May 2019)

TECHNICAL TRAINING

- **Technical Training**
- IT Support Staff & Radio Division
 - Site / Preventive Maintenance Training (May 2019)
 - 1 week in Erie County (Erie County Public Safety Facility)
 - System Level Training (June 2019)
 - 1 week in Erie County (Erie County Public Safety Facility)

TRAIN-THE-TRAINER TRAINING

- **Train-the-Trainer:**
- Train-the Trainer Sessions will be conducted over a three (3) day period beginning on May 7 – 9, 2019, to be held at the Department of Public Safety.
- In an effort to ensure your availability, three sessions, per day will be offered:
 - First Session: 10:00 AM – 12:00 PM
 - Second Session: 2:00 PM – 4:00 PM
 - Third Session: 6:00 PM – 8:00 PM
- Every user agency should send a member of your command staff as well as your training officer for continuing education purposes.

TRAIN-THE-TRAINER TRAINING

- **Train-the-Trainer: (Cont'd)**
- Train-the Trainer Sessions will provide instruction on the following topics:
 - Operation of P25 Radio System
 - Five (5) Zone Configuration
 - Talk Groups
 - Subscriber Equipment (control stations, mobiles, portables radios)
 - Operational Procedures
 - Law Enforcement Radio Procedures Manual
 - EMS / Fire Radio Procedures Manual

END-USER TRAINING

- **End-User Training:**
- Regional Training Sessions will be conducted over a five (5) day period beginning on May 13 – 17, 2019, to be held at various locations throughout Erie County.
- In an effort to ensure your availability, four sessions, per day (one day, per zone) will be offered.
 - Zone 1: City of Erie
 - Zone 2: Millcreek Township
 - Zone 3: East County
 - Zone 4: West County
 - Zone 5: South County
- All public safety users, from every agency should attend a minimum of at least one training sessions.

END-USER TRAINING

- **End-User Training: (Cont'd)**
- Regional Training Session: Zone 5 (South County)
- May 13: Union City Fire Department, 50 2nd Avenue, Union City, PA
 - First Session: 8:00 AM – 10:00 AM (Law Enforcement)
 - Second Session: 10:00 AM – 12:00 PM (EMS / Fire)
 - Third Session: 2:00 PM – 4:00 PM (Law Enforcement)
 - Fourth Session: 6:00 PM – 8:00 PM (EMS / Fire)
- In the event a member is not available to attend training in your zone, you may attend any other training sessions being offered throughout the week.

END-USER TRAINING

- **End-User Training: (Cont'd)**
- Regional Training Session: Zone 4 (West County)
- May 14: Awaiting confirmation on location; to be announced
 - First Session: 8:00 AM – 10:00 AM (Law Enforcement)
 - Second Session: 10:00 AM – 12:00 PM (EMS / Fire)
 - Third Session: 2:00 PM – 4:00 PM (Law Enforcement)
 - Fourth Session: 6:00 PM – 8:00 PM (EMS / Fire)
- In the event a member is not available to attend training in your zone, you may attend any other training sessions being offered throughout the week.

END-USER TRAINING

- **End-User Training: (Cont'd)**
- Regional Training Session: Zone 1 (City of Erie)
- May 15: Hirt Auditorium, Blasco Library, 150 East Front Street, Erie, PA
 - First Session: 8:00 AM – 10:00 AM (Law Enforcement)
 - Second Session: 10:00 AM – 12:00 PM (EMS / Fire)
 - Third Session: 2:00 PM – 4:00 PM (Law Enforcement)
 - Fourth Session: 6:00 PM – 8:00 PM (EMS / Fire)
- In the event a member is not available to attend training in your zone, you may attend any other training sessions being offered throughout the week.

END-USER TRAINING

- **End-User Training: (Cont'd)**
- Regional Training Session: Zone 3 (East County)
- May 16: Awaiting confirmation on location; to be announced
 - First Session: 8:00 AM – 10:00 AM (Law Enforcement)
 - Second Session: 10:00 AM – 12:00 PM (EMS / Fire)
 - Third Session: 2:00 PM – 4:00 PM (Law Enforcement)
 - Fourth Session: 6:00 PM – 8:00 PM (EMS / Fire)
- In the event a member is not available to attend training in your zone, you may attend any other training sessions being offered throughout the week.

END-USER TRAINING

- **End-User Training: (Cont'd)**
- Regional Training Session: Zone 2 (Millcreek Township)
- May 17: Millcreek Township Municipal Building, 3608 W. 26 Street, Erie, PA
 - First Session: 8:00 AM – 10:00 AM (Law Enforcement)
 - Second Session: 10:00 AM – 12:00 PM (EMS / Fire)
 - Third Session: 2:00 PM – 4:00 PM (Law Enforcement)
 - Fourth Session: 6:00 PM – 8:00 PM (EMS / Fire)
- In the event a member is not available to attend training in your zone, you may attend any other training sessions being offered throughout the week.

END-USER TRAINING

- **End-User Training: (Cont'd)**
- Regional Training Sessions will provide instruction on the following topics:
 - Operation of P25 Radio System
 - Five (5) Zone Configuration
 - Talk Groups
 - Subscriber Equipment (control stations, mobiles, portables radios)
 - Operational Procedures
 - Law Enforcement Radio Procedures Manual
 - EMS / Fire Radio Procedures Manual

FIELD TESTING

- Erie County, in conjunction with EF Johnson and our public safety community will be conducting extensive field testing to ensure coverage requirements have been met.
 - Per our specifications, a minimum of 2,000 points of interest to include outdoor and indoor coverage testing will be conducted.
- The date and time of the testing will be coordinated by the Department of Public Safety to ensure your availability to begin field testing of the new radio system.
 - Anticipate beginning field testing in late May / June.

ACCEPTANCE TESTING

- Three (3) Phases of Acceptance Testing:
 - Site acceptance testing
 - To confirm each site is performing to specifications
 - System acceptance testing
 - To confirm system across ALL sites is performing to specifications
 - Cutover or “Go Live” will occur after system acceptance testing
 - Final acceptance testing
 - To confirm system requirements meet or exceed required specifications
 - Anticipated in the late summer / early fall of 2019 with full foliage
 - To be conducted post-cutover, prior to sign off signifying project completion

CUTOVER PLAN

- Erie County Department of Public Safety will not transition users onto the new P25 Radio System until “system acceptance” testing has been successfully completed, training has been conducted and confidence in the operation and performance of our new radio system has been demonstrated to our public safety community, municipal and county officials.

CUTOVER PLAN

- **Cutover Plan**
- The cutover plan will allow users to smoothly transition to the new system without major disruptions. The plan will be divided into three phases:
 - Phase I - Pre-Cutover Preparation. Consists of careful planning that results in a comprehensive cutover plan with a timeline of events leading up to and following the transition to the new P25 system.
 - Phase II - Cutover Execution. The goal is to execute Phase I planning activities while maintaining current system operations. Site testing will occur with participation amongst public safety users to test the functionality of the full system.
 - Phase III - Post-Cutover. This final phase is focused on removing obsolete components that are no longer needed for new systems operations (i.e., legacy RF infrastructure, consoles, etc.).

CUTOVER PLAN

- **Cutover will occur across the five (5) zones:**
 - Zone 1: City of Erie
 - Zone 2: Millcreek Township
 - Zone 3: East County
 - Zone 4: West County
 - Zone 5: South County
- Note: The transition of public safety users, by zone will occur within days of each other.

CUTOVER PLAN

- Erie County will schedule the cutover or “go live” after all public safety users have been trained and confident in the operation and the functionality of the new radio system.
- Cutover or Go-live is anticipated no later than **mid-summer 2019**.

Questions?



➤ **John R. Grappy, Director**

➤ **814-451-7920**

➤ **jgrappy@eriecountypa.gov**

➤ **Michael C. McGrady, President / CEO**

➤ **412-580-7632**

➤ **MMcgrady@MCMConsultingGrp.com**

CONTACT INFORMATION