

## Radio System CIP Options

### **Hospital Microwave \$2,185,414:**

The existing Hospital Microwave was installed in 2008 (with an anticipated 10-year life span). This is a microwave network providing two-way radio transmissions between emergency responders and hospital and individual emergency departments. This allows crews to speak directly with the on call medical director and hospital/stand alone emergency departments to receive authorization to treat and medicate, as well as inform a hospital of patient conditions and anticipated arrival for optimal preparation and outcome. This system is simulcast, which allows it to function the same as other talkgroups and is redundant.

Some of the microwave equipment is past end-of-life in that parts are no longer available and some cannot be repaired. Therefore, keeping this system 'live' is a challenge and cannot be maintained for any length of time.

### **North Zone/700MHz Aircraft Site \$2,925,684:**

This project includes replacing the existing 10 channel 800MHz aircraft site with 700MHz frequencies to reallocate them back to the 'main' radio system for voice functionality. The aircraft Astro Site Repeater provides radio coverage for the PCSO helicopters and aircraft transports receiving patients from the field and transporting them to trauma centers. PCSO pilots are in the air daily and need radio communication with deputies/officers on the ground to assist with critical incidents. Upgrading this ASR with 700MHz frequencies is a better use of resources and will provide for coverage for 10+ years. Taking the 800MHz frequencies from the Aircraft ASR and returning them to the overall system allows us the ability to create a North Zone, which increases talk groups (channels), redundancy and functionality (and will allow for Clearwater PD to utilize the system in the event that determination is made).

### **HPD at Toytown \$125,769:**

High Performance Data is a subsystem of the overall radio system that allows us to pass data on dedicated channels. This system allows over 400 EMS/Fire apparatus to receive dispatch information via our mobile data application and to track their status, enter notes, transport information, view maps and apparatus, etc. Running this application on HPD allows this critical functionality to run on the radio system so that there is no reliance on commercial cellular vendors. This technology proved to be extremely reliable during Hurricane Irma. Fire/EMS apparatus were able to communicate when agencies relying on cellular technology could not. Installing a 4-site system at the Toytown site enhances coverage and capacity for this important functionality.

### **Upgrade Mutual Aid at all Sites \$1,156,559:**

The Florida 800 MHz Region 9 Plan for Public Safety Radio Communications requires mutual aid radio capability (interoperability) when units from other counties/municipalities respond outside of their normal geographic boundaries to provide short or long-term assistance. A recent example of this functionality was the many ambulances that responded to assist Pinellas County before, during and after Hurricane Irma to assist with transporting patients outside the area of concern. The current system is approximately 15 years old and in need of replacement/upgrade.

### **Location on PTT Option \$188,936:**

This is new Push-To-Talk functionality developed by Motorola to automatically provide the specific location of a radio upon transmission. This technology has long been requested to provide a level of security for emergency responders without negatively impacting voice transmissions. Necessary equipment will be installed in a redundant fashion at each master/prime site. Radio & Technology will take the latitude and longitude of each transmission and make them available on our ESRI map technology within the Regional 9-1-1 Center. Each Law Enforcement agency can do the same to provide for additional officer safety or reach out to R&T for access to appropriate map data.

These projects are all encompassing in that they are components of the overall Hospital Microwave project currently on the 2025 Penny wish list. We recommend addressing them now, as it is appropriate to upgrade/replace these systems while work is already being done at each radio site. Necessary engineering and technical staff will already be on site, and it is likely that costs will increase. For example: steel is 30% higher now than when the tower quote was originally received). If this work is not completed as each shelter is constructed, we risk the possibility of systems experiencing problems simply by being unplugged and relocated. As stated before, it is challenging to repair or replace many components and each of them are extremely important.