



North Carolina Department of Public Safety

State Highway Patrol

Roy Cooper, Governor
Erik A. Hooks, Secretary

Glenn M. McNeill, Jr.
Commander

MEMORANDUM

To: Chairs of Joint Legislative Oversight Committee on Justice and Public Safety

From: Erik A. Hooks, Secretary, DPS *EAH*
Glenn M. McNeill, Jr., Commander, State Highway Patrol *GMN*

Subject: VIPER Annual Summary Report

Date: March 1, 2018

Pursuant to Session Law 2016-94, Section 17B.1, The Department of Public Safety shall report annually no later than March 1 and quarterly thereafter to the chairs of the Joint Legislative Oversight Committee on Justice and Public Safety on the progress of the State's VIPER-system.

Network Status - 241 total sites planned for statewide coverage of which 221 sites are constructed and on-the-air representing 92% completion. Twenty (20) sites require funding (\$7M legislative funds began FY14-15). These additional sites represent \$23,254,316 in additional site construction funding. Five (5) additional new sites are being added by counties joining VIPER to increase coverage required by local users. 103,710 users are currently on the VIPER Network consisting of more than 350 Emergency Responding agencies (including federal, state and local agencies).

During CY2017, we added just over 10,000 radios to the system and have already added an additional 3,465 radios since 1 January, 2018.

We have received word that seven counties intend to replace their current radio systems with VIPER during the upcoming year. Currently, Davidson, Lincoln, McDowell, Macon, Nash, Person and Wilson counties are in in some stage of the transition, and four other counties are evaluating VIPER as an alternative to their current radio systems.

A total of four (4) new tower sites were constructed during CY2017. Mt. Tirzah expanded coverage in Person County. Mt. Toxaway added coverage in Jackson and Transylvania Counties. Additionally, Lambert added coverage in Stanly County. The final site added for the year was Chimney Rock located in Rutherford County and also providing coverage in Polk County which will host the World Equestrian games later this year. Chimney Rock represents a significant achievement and has taken almost seven years to complete.

MAILING ADDRESS:
4231 Mail Service Center
Raleigh, NC 27699-4231
www.ncdps.gov
www.ncshp.org



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OFFICE LOCATION:
512 N. Salisbury St.
Raleigh, NC 27604
Telephone: (919) 733-7952
Fax: (919) 715-4059

Challenges for the Upcoming Year – VIPER has no less than three (3) significant funding needs that have now reached a Critical level. The VIPER system consists of tower sites and host controllers, referred to as “Zone Controllers” that are strategically located across the state. These controllers, like any computer require constant software and firmware upgrades to remain operational and supportable. Currently our Zone Controllers are now four years-worth of firmware out of date. VIPER has been seeking a Service Upgrade Assurance (SUA) Plan with the manufacturer for some years and we have now reached a point that we must first perform a one-time upgrade to bring the controllers current. VIPER is seeking non-recurring funds in the amount of \$5M for the one time upgrade as well as the commencement of \$2.5M recurring funds to allow us to enter into the SUA Plan.

In addition to the SUA funding, VIPER has reached a point where as of 31 December, 2018 we will no longer be able to purchase repair parts for the majority of the base stations used at tower sites across the state. The Quantar Base Stations reach end of life this year and funding is required to replace the stations with GTR Base Stations. This funding need totals \$28,500,530.

Finally, with the conversion of the base stations from Quantar to GTR comes a need to replace the system that we use to monitor the health of the VIPER network. In CY2017, our Network Operations Center logged over 11,200 entries related to system operation issues. These ranged from simple radio deactivations for lost or stolen radios, all the way through site outages. Being able to continuously monitor site activity and operational status, in real time, remains one of the most important components of the overall success of the VIPER network.

Moving Forward - Beyond our current funding needs, VIPER will need to address the replacement of our statewide microwave network that we share parts of with the University of North Carolina (UNC) System. We anticipate needing \$4.5M per year for four years beginning in the FY2021 period. Furthermore, we anticipate the continued growth in subscribers consistent with what we have seen in CY2017 and with that there may come the need to further expand our capabilities.

Overall, VIPER remains a tremendous resource to the emergency responders of our state. It represents the largest (by total number of users) public safety voice radio system in the nation and its adoption by so many agencies demonstrates the highest level of commitment to not only the State of North Carolina’s communications strategy, but also to achieving the best possible levels of communications interoperability amongst the participating emergency responders.