



# North Carolina Department of Public Safety

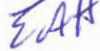
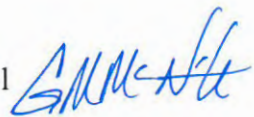
*Prevent. Protect. Prepare.*

Roy Cooper, Governor

Erik A. Hooks, Secretary

## MEMORANDUM

**To:** Joint Legislative Oversight Committee on Justice and Public Safety

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

**Subject:** VIPER In-Kind Contributions Report

**Date:** July 1, 2019

*Pursuant to Session Law 2018-5, Section 16B.1.(a) "The Department of Public Safety (Department) shall determine the value of all in-kind contributions made by units of local government, the federal government, and nongovernmental entities to support the North Carolina Voice Interoperability Plan for Emergency Responders (VIPER) system. As used in this subsection, an in-kind contribution includes cash, land, buildings, towers, and equipment for VIPER sites. The Department shall report its findings to the Joint Legislative Oversight Committee on Justice and Public Safety by July 1, 2019."*

**MAILING ADDRESS:**  
4201 Mail Service Center  
Raleigh, NC 27699-4201  
[www.ncdps.gov](http://www.ncdps.gov)



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**OFFICE LOCATION:**  
512 N. Salisbury Street  
Raleigh, NC 27604  
Telephone: (919) 733-2126

# VIPER In-Kind Contribution Evaluation Report



**May 16, 2019**

**Prepared By:**

**Lloyd McCarthy**



**326 Tryon Road  
Raleigh, North Carolina 27603  
(919) 661-6351**

## **Project Contacts**

John Goins, P.E.  
Tower Engineering Professionals, Inc  
326 Tryon Road, Raleigh, NC 27603-3530  
Office: (919) 661-6351, ext. 4104  
Direct: (919) 703-4129/Mobile: (919) 349-8465  
Email: [jgoins@tepgroup.net](mailto:jgoins@tepgroup.net)  
[www.tepgroup.net](http://www.tepgroup.net)

Captain Michael W. Warren  
North Carolina Department of Public Safety  
North Carolina State Highway Patrol  
4231 Mail Service Center, Raleigh, NC 27699  
Office: (984) 349-6013  
Direct: (919) 624-0711  
Email: [Michael.Warren@ncdps.gov](mailto:Michael.Warren@ncdps.gov)  
[www.ncdps.gov](http://www.ncdps.gov)

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## **I. Overview: Background and objectives**

Per North Carolina Senate Bill 99, subpart XVI-B, Section 16B.1(a), the Department of Public Safety – VIPER Unit is to determine the value of In-Kind contributions made by various entities toward the cost of the State’s Voice Interoperability Plan for Emergency Responders (“VIPER”) system. The stated goal is to make a reasonable assessment of the value of the In-Kind contributions that entities offer to VIPER in terms of its infrastructure, and operation. In-Kind contributions as offered by entities were determined to include cash, land, buildings, towers, and other contributions such as equipment, and services.<sup>1</sup> The targeted entities in this report are those in which infrastructure for the VIPER system is established. This report summarizes the findings of the VIPER In-Kind Contributions Survey of the Counties, by confirming their contributions, substantiating the type of In-Kind contributions extended, identifying the frequency of their contributions, exploring how they assessed contributions offered, and providing estimates of the value of their In-Kind contributions to the VIPER system.

## **II. Survey Period and Method**

The survey was conducted between November 14, 2018 and January 14, 2019. It was administered to the seventy-four (74) counties in which wireless communications infrastructure for the VIPER system is established. The list of seventy-four counties was generated by the VIPER Unit. Letters inviting the counties to participate in the survey were submitted by email from Tower Engineering Professionals (“TEP”) to county managers in the respective counties on November 14<sup>th</sup> and 15<sup>th</sup> 2018. To ensure that the questionnaire was received, given the appropriate attention and completed, the initial submission was followed up by phone calls, and emails, to the county managers, assistants to the county managers as well as to coordinators of the emergency management system for the relevant counties. TEP was contracted to conduct the survey of the tower mounted and ground mounted equipment installed at the VIPER system cell sites.

The questionnaire was comprised of one (1) page, with six questions, organized as follows:

- Confirmation of the county’s contribution to VIPER,
- Verification of the type of In-Kind contribution made by the county,
- Determination of the frequency of the In-Kind contribution,
- Assessment of the value of In-Kind contribution,
- Method or approach used to make the assessment of the In-Kind contribution.

The seventy-four (74) counties targeted in the survey are those in which there is known VIPER infrastructure and corresponds to a list provided by the VIPER Unit. Hence the report is neither a survey of all of the 100 counties in the State of North Carolina nor is it a statistical sample of the 100 counties. Hence there is no statistical error associated with data sampling (random, stratified or other) to be reported.

The response to the survey by the counties was extremely positive. Seventy (70) of the seventy-four (74) counties which received the questionnaire responded in time for the writing of the report, representing an overall response rate of 94.6%.

### III. Confirmation of In-Kind Contributions

When asked to respond to the question: “Has your county made or is your county making any contributions to North Carolina’s Voice Interoperability Plan for Emergency Responders (VIPER)”, fifty-four (54) of the seventy-four (74) counties included in the survey or 73% responded “Yes.” Sixteen (16) counties or 21.6% responded “No.” Four counties (4) or 5.4% did not respond to the survey prior to the finalization of this report, although the counties did advise that they were still working to complete the survey (for reference, those counties are Bladen, Madison, Mitchell and Randolph). The responses are shown in Table 1, below.

Table 1. Has your county made or is making any contributions to VIPER?	Counties
Yes	73% (54)
No	21.6% (16)
No Response to survey	5.4% (4)

Table 1. Note: “No response to survey” in this table is a reference to six (4) counties to which the questionnaire was sent but did not provide their response within the timeframe required to be included in this report. In this table, percentages are computed from the total of 74 counties to which the survey was sent.

For the sixteen (16) counties or 21.6% which responded “No,” TEP gathered through telephone discussion with county representatives that although a VIPER tower site may be in their county, such sites may neither be located on county owned property nor on structures leased by the county. Instead the VIPER facility may be installed on the property of another unit of government, such as the Federal Government.

#### IV. Type of In-Kind Contributions

The wireless communications infrastructure sustaining the operation of the VIPER network encompasses, but is not limited to, land for the construction of new towers and shelters, existing towers or structures for the installation of antennas, or buildings housing electronics and radios. Other supporting systems and services are included.

Table 2. What type of contribution has your county made or is making to VIPER?	Yes	No
Land	37.1% (26)	62.9% (44)
A tower or tower space	31.4% (22)	68.6% (48)
A building for VIPER radio equipment	15.7% (11)	84.3% (59)
Other (services, equipment...)	40% (28)	60% (42)

Table 2. Note: In this table, percentages are computed from the total of 70 counties which responded to the survey. The question in this table is a multiple response question, therefore the percentages and numbers in the columns add to more than 100% and 70 responding counties respectively. Among the counties which have responded that they are making contributions to the VIPER system, some are making more than one type of contribution in terms of land, tower, building and other.

Counties which confirmed that they have made or are making contributions to the VIPER system (54 counties) were asked to identify the type of In-Kind contributions they have made. Thirty-seven-point one percent (37.1%) or 26 counties (of the 70 which responded to the survey) indicated that they have provided land for the construction of a tower. An inference drawn from the response is that 62.9% or 44 counties did not provide land to the VIPER system. The responses are shown in Table 2 above.

Twenty (22) counties or 31.4% pointed out that they have provided tower space to the VIPER system. This suggests that forty-eight (48) counties or 68.6% did not provide structure space for the installation of VIPER antennas.

Eleven counties (11) or 15.7% contributed a building while 28 counties or 40% indicated that they have made other contributions to the VIPER network. Counties which indicated that they have provided

“other” In-Kind contributions were asked to elaborate on “other.” Their explanations included supporting the VIPER system with the following:

- County-owned microwave paths used by the VIPER system;
- Upgrading of the “simulcast system;”
- Provision of “additional channel capacity;”
- Provision of funding for construction works, and operational costs;
- Generators, and electricity;
- Preparing, obtaining and passing through of federal grants for the VIPER system;
  - It is important to note, a limitation of the survey is that counties which have obtained and passed through federal grants to the VIPER system may have included it as a one-time contribution, others may not have mentioned it at all. These grants are shown in the appendix of this report and can be compared to the In-Kind contributions reported by the counties respectively.
- Maintenance of compounds, and access/utilities easements;
- Equipment, and equipment maintenance;
- Security for sites;
- Rent payment, and insurance cost for VIPER infrastructure sites.

## V. Frequency of In-Kind Contributions

The findings of the survey showed that some counties have made a one-time contribution to the VIPER system while others are making annual contributions or both.

<b>Table 3. How do you assess your county's In-Kind contribution to VIPER?</b>	<b>Yes</b>	<b>No</b>
As an annual contribution	58.6% (41)	41.4% (29)
As a one-time contribution	30% (21)	70% (49)

Table 3. Note: Multiple responses are provided by some counties which indicated that they have made both annual and one-time contributions to VIPER. Thus far, eight (8) counties have indicated that they made both one-time contributions and annual contributions: Alamance, Brunswick, Caldwell, Dare, Edgecombe, Granville, Harnett and Wake. This explains the number and percentage difference between Table 3 and Table 4 (below). In this table, percentages are computed from the total of 70 counties which responded to the survey.

As shown in Table 3 above, forty-one (41) counties (of the 70 counties which have completed the survey) or 58.6% responded that they are making annual contributions to the VIPER system. A one-time contribution was made by 21 counties or by 30% of the counties which participated in the survey.

## VI. Assessment of In-Kind Contribution Value

A total of approximately \$18.8 million are the estimated contributions for all counties to VIPER for 2018, which includes annual contributions for 2018 only, and one-time contributions since counties commenced their In-Kind contributions to the VIPER system. Thirty-three (33) counties or 47.1% assessed their annual In-Kind contributions, for 2018 only, at around \$942,957.00. However, a limitation of the survey is that counties which indicated they are making annual contributions did not say for how long they have been making annual In-Kind contributions to VIPER, therefore the estimated value of their annual contribution reported in the survey is only for one year, which is assumed to be 2018 (see Table 4 below).

Table 4. Frequency and Estimated Value of the value of In-Kind contributions	Respondents	Estimate of Value of In-Kind contribution	Average
Annual	47.1 % (33)	\$942,957.00	\$28,574.00
One-time	18.6% (13)	\$13,499,564.00	\$1,038,428.00
Annual & one-time	11.4% (8)	\$4,377,293.00	\$547,161.00
No Response	22.9% (16)	-	-

Table 4. Note: Annual county contributions for 2018 are grouped with their one-time contributions; annual contributions made for prior years are not included in the number provided. "No response" in this table is a reference to counties which participated in the survey but indicated that they have made no contribution to VIPER. In this table, percentages are computed from the total of 70 counties which responded to the survey.

The average estimated value of counties making annual contributions is \$28,574.00. Thirteen (13) counties or 18.6% reported that they have made only a one-time contribution. These thirteen (13) counties assessed the value of their total one-time In-Kind contributions at \$13,499,564.00 or an average of \$1,038,428.00 per county. Eight (8) counties or 11.4%, advised that they have made both a one-time contribution and annual contributions. Sixteen (16) counties or 22.9% (see Table 4) which did not respond to the question are those counties which indicated that they have made no contributions to VIPER.

## VII. Approach to the Assessment of the In-Kind Contribution Value

In the survey, when asked what approach was used to assess the value of their In-Kind contributions, twenty-six (26) counties or 37.1% reported that their estimate was based on their county administration's idea about market rate paid by carriers. Thirteen (13) counties or 18.6% indicated that their assessment was formed by their county administration's best guess of the value of the property donated (See Table 5 below).

<b>Table 5. Approach used to assess value of In-Kind contribution</b>	
a. A formal valuation	14.3% (10)
b. County's opinion of market value	37.1% (26)
c. County's best estimate of the value	18.6% (13)
d. A value determined by the County's Board	7.1% (5)
e. No Response	22.9% (16)

Table 5. Note: In this table, percentages are computed from the total of 70 counties which responded to the survey.

Only ten (10) counties or 14.3% suggested that they used a formal valuation of the real estate contributed. Respondents represented in the table, above, as offering "no response" (22.9%) to the question are those which completed the survey advising that they have made no contribution.

In the wireless communications industry, the acquisition of a raw-land site for the construction of a new cell tower or the leasing of space on an existing structure for the collocation of the equipment of a wireless carrier is typically determined by a process of negotiations between the landlord and the carrier, and typically not based on a formal valuation of the property. Carriers often have a set price range that they are willing to pay for a tower site which is determined by the market, the nature of the coverage issue that they are seeking to address, and the rent ranges acceptable by competing landlords. When counties are approached by a carrier for a site, if their property is considered a prime candidate, the agreed upon rent between the parties are often within the range that the carriers are willing to pay. If not, either the carrier or the county will walk away from the deal. Hence all four methods of assessment used by the

counties in the survey are considered valid. Nevertheless, TEP surmised from the range of valuation methods reported, that the market approach to negotiations was not used by the counties at the time when their properties were initially acquired for construction of the VIPER infrastructure. The contribution of real property by units of government, at zero rent, was determined to be a critical element for the cost-effective construction of VIPER's infrastructure. Hence, at the time, the successful implementation of VIPER was decided to be dependent on partnerships with the "state and local agencies." As North Carolina Department of Public Safety wrote, in response to the question, "Will there be a cost to use the VIPER network?" in their "VIPER—Frequently Asked Questions":

The success of VIPER depends on our partnerships with state and local agencies, and the sharing of existing resources which may range from property to build the towers on to re-use of existing towers. These In-Kind contributions will help keep the overall cost of construction lower than if we had to buy property and build new towers where state owned towers are not available.

It was those partnerships that allowed the state to build the statewide mobile data network for less than \$20 million as compared to the estimate in 1993 of more than \$100 million for the state to build infrastructure.

Our goal is not to ask the locals for free use of their land and/or towers and then require them to pay to use the system. We don't want to find ourselves in a situation where all our partners demand that we pay them for their resources so they can pay a users fee. Additionally, there are many rural area departments that would not be able to pay a user fee and therefore would not be able to participate in VIPER at all.<sup>2</sup>

Furthermore, since county or government owned lands were targeted as a priority for the VIPER infrastructure using the principle of "partnerships" to reduce cost, the negotiation process used by wireless service providers to acquire property for their communications infrastructure would not be applicable to

the VIPER process except for application to the task of estimating the value of In-Kind contributions today which is a stated objective of the survey. Thus, as one county insisted, the property that it contributed was provided “quid pro quo.” Others have indicated that when they were handing over real property for the construction of the VIPER infrastructure, market value was not considered because their contributions were deemed to be for the public good and in the interest of public safety.

During the survey process, most counties reconsidered the value of the property donated and attempted to provide an estimate based on their thought of the market value. For seven (7) counties, TEP made a slight adjustment to their estimate of value, either because their estimates were considered extremely low or way above the value that would be entertained by any carrier in those counties.

## **VIII. Conclusion**

Tower Engineering Professionals considers the counties' response to the survey to be extremely positive, with a response rate of 94.6%. Our survey data shows that the counties' cumulative contribution is approximately \$18,819,814.00, while annual contributions are \$1,269,924.00 to the VIPER network. These numbers were provided by the counties and may not have included their one-time federal grant pass-through funding totaling \$78,776,685.00. The contributions have been in the form of:

- Local government-owned land
- Local government-owned tower
- Local government-owned tower building
- Other local government owned assets (i.e. generator, etc.)

All contributions from local governments have formed the basis for strong partnerships as the VIPER Unit strives to complete the tower construction of the network.

The survey findings provide an estimate of the value of In-Kind contributions made to VIPER by the counties and explain how they arrived at their estimate of the value. It highlighted important limitations which can be used in future surveys to obtain greater clarity on how contributions made in the past and in the future, can be better accounted for, such as in the case of annual contributions.

Counties which were unable to respond in time for completion of the report were alerted to the state's interest in their VIPER contributions. They were also advised of the importance of collecting and reporting their data to depict the investments made by local governments to the VIPER network. The Department of Public Safety – VIPER Unit, for future surveys may wish to offer their recommendations on how all contributions should be tracked by the counties for future reporting purposes.

## Appendix 1: Copy of survey questionnaire

Original Date: 11/12/2018

Dates Revised: 1/12/2018. Rv-1

### VIPER In-Kind contribution Questionnaire "VIPER" is North Carolina's Voice Interoperability Plan for Emergency Responders

Name (Last, First, M.I.):	County:
Job Title:	Date:
<b>1. Has your county made or is making an In-Kind contribution to North Carolina's Voice Interoperability Plan (VIPER)?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>If no, why not (Explain):</b>	
<b>2. If yes, what kind (Please indicate all applicable contributions made from the list below)?</b> a). Land for the construction of a tower <input type="checkbox"/> b). A Tower <input type="checkbox"/> c). Building <input type="checkbox"/> d). Other (please explain):	
<b>3. How do you assess the county's In-Kind Contribution to VIPER?</b> a). As a onetime contribution <input type="checkbox"/> b). As an annual contribution <input type="checkbox"/>	
<b>4. If you assess your county's In-Kind contribution (s) to VIPER as a <u>one-time contribution</u>, please provide your assessment of the value of the contribution indicated at question 2. above, in \$ (dollar) terms?</b> a). Land for the construction of a tower \$ _____ b). A Tower \$ _____ c). Building \$ _____ d). Other \$ _____	
<b>5. If you assess your county's In-Kind contribution (s) to VIPER as an <u>annual contribution</u>, please provide your assessment of the value of that contribution, indicated at question 2. above, in \$ (dollar) terms?</b> a). Land for the construction of a tower \$ _____ b). A Tower \$ _____ c). Building \$ _____ d). Other (As you explained at question 2 above): \$ _____	
<b>6. What is your approach used to assess the value assigned to the county's In-Kind contribution to VIPER?</b> a). The county's formal (prepared by a Valuer) valuation of the property contributed <input type="checkbox"/> b). The County Administration's idea about market rate paid by carriers <input type="checkbox"/> b). The County Administration's best guess of the value of the property <input type="checkbox"/> d). The value determined by the Board of County Commissioners <input type="checkbox"/>	

Appendix 2: Spreadsheet with responses and totals (See the next 2 pages below)

County	Tower	Bldg.	Land	Other	Total (County's Est.)	TEP's Est.	Annual Contribution	One Time Contribution	Total	Contribution Frequency	How Assessed
Alamance <sup>3</sup>	\$0.00	\$153,400.00	\$0.00	\$345,440.00	\$498,840.00	\$498,840.00	\$48,840.00	\$450,000.00	\$498,840.00	A+OT	b
Alexander <sup>4</sup>	\$0.00	\$0.00	\$6,000.00	\$0.00	\$6,000.00	\$6,000.00	\$6,000.00	\$0.00	\$6,000.00	A	c
Ashe	\$0.00	\$0.00	\$18,000.00	\$0.00	\$18,000.00	\$18,000.00	\$18,000.00	\$0.00	\$18,000.00	A	b
Avery <sup>5</sup>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Beaufort	\$0.00	\$0.00	\$0.00	\$14,000.00	\$14,000.00	\$14,000.00	\$14,000.00	\$0.00	\$14,000.00	A	b
Bertie	\$24,000.00	\$0.00	\$0.00	\$0.00	\$24,000.00	\$24,000.00	\$24,000.00	\$0.00	\$24,000.00	A	b
Brunswick <sup>6</sup>	\$60,000.00	\$0.00	\$100,000.00	\$800,000.00	\$960,000.00	\$960,000.00	\$10,000.00	\$950,000.00	\$960,000.00	A+OT	c
Buncombe	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Burke <sup>7</sup>	\$14,400.00	\$0.00	\$6,000.00	\$0.00	\$20,400.00	\$20,400.00	\$20,400.00	\$0.00	\$20,400.00	A	c
Caldwell	\$392,266.00	\$0.00	\$447,270.00	\$6,000.00	\$845,536.00	\$845,536.00	\$26,700.00	\$818,836.00	\$845,536.00	A+OT	a
Camden <sup>8</sup>	\$0.00	\$0.00	\$2,760.00	\$720.00	\$3,480.00	\$6,720.00	\$6,720.00	\$0.00	\$6,720.00	A	a
Carters	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Caswell <sup>9</sup>	\$0.00	\$0.00	\$7,500.00	\$0.00	\$7,500.00	\$7,500.00	\$7,500.00	\$0.00	\$7,500.00	A	d
Chatham <sup>10</sup>	\$1,949,768.00	\$0.00	\$127,895.00	\$2,866,263.00	\$4,943,926.00	\$4,943,926.00	\$0.00	\$4,943,926.00	\$4,943,926.00	OT	c
Cherokee	\$0.00	\$9,919.00	\$0.00	\$1,200.00	\$11,119.00	\$11,119.00	\$11,119.00	\$0.00	\$11,119.00	A	b
Chowan <sup>11</sup>	\$0.00	\$0.00	\$15,000.00	\$0.00	\$15,000.00	\$15,000.00	\$15,000.00	\$0.00	\$15,000.00	A	d
Clay <sup>12</sup>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Cleveland <sup>13</sup>	\$96,000.00	\$24,000.00	\$0.00	\$0.00	\$120,000.00	\$120,000.00	\$120,000.00	\$0.00	\$120,000.00	A	b
Columbus	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Currutuck	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Dare <sup>14</sup>	\$90,000.00	\$0.00	\$0.00	\$200,000.00	\$290,000.00	\$290,000.00	\$90,000.00	\$200,000.00	\$290,000.00	A+OT	b
Davidson <sup>15</sup>	\$0.00	\$0.00	\$0.00	\$3,515,701.00	\$3,515,701.00	\$3,515,701.00	\$0.00	\$3,515,701.00	\$3,515,701.00	OT	a
Davie <sup>16</sup>	\$0.00	\$0.00	\$13,407.00	\$0.00	\$13,407.00	\$13,407.00	\$13,407.00	\$0.00	\$13,407.00	A	a
Duplin	\$0.00	\$0.00	\$0.00	\$315,900.00	\$315,900.00	\$315,900.00	\$0.00	\$315,900.00	\$315,900.00	OT	a
Durham <sup>17</sup>	\$90,000.00	\$10,000.00	\$0.00	\$0.00	\$100,000.00	\$100,000.00	\$100,000.00	\$0.00	\$100,000.00	A	b
Edgecombe <sup>18</sup>	\$0.00	\$0.00	\$30,000.00	\$500,000.00	\$530,000.00	\$530,000.00	\$14,400.00	\$500,000.00	\$514,400.00	A+OT	b

North Carolina Department of Public Safety  
VIPER Unit

APPENDICES

VIPER In-Kind Contribution Evaluation Report

County	Tower	Bldg.	Land	Other	Total (County's Est.)	TEP's Est.	Annual Contribution	One Time Contribution	Total	Contribution Frequency	How Assessed
Forsyth <sup>19</sup>	\$20,000.00	\$0.00	\$0.00	\$5,000.00	\$25,000.00	\$25,000.00	\$25,000.00	\$0.00	\$25,000.00	A	b
Franklin	\$31,774.00	\$0.00	\$0.00	\$0.00	\$31,774.00	\$31,774.00	\$31,774.00	\$0.00	\$31,774.00	A	a
Gaston <sup>20</sup>	\$54,000.00	\$0.00	\$30,000.00	\$0.00	\$84,000.00	\$72,000.00	\$72,000.00	\$0.00	\$72,000.00	A	b
Graham	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Granville <sup>21</sup>	\$318,000.00	\$25,000.00	\$16,477.00	\$58,945.00	\$418,422.00	\$418,422.00	\$76,945.00	\$341,477.00	\$418,422.00	A+OT	a
Guilford <sup>22</sup>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Halifax <sup>23</sup>	\$3,600.00	\$0.00	\$0.00	\$0.00	\$3,600.00	\$14,400.00	\$14,400.00	\$0.00	\$14,400.00	A	b
Harnett <sup>24</sup>	\$18,000.00	\$75,700.00	\$25,800.00	\$81,395.00	\$180,895.00	\$180,895.00	\$40,882.00	\$140,013.00	\$180,895.00	A+OT	b
Henderson <sup>25</sup>	\$0.00	\$0.00	\$0.00	\$6,000.00	\$6,000.00	\$6,000.00	\$6,000.00	\$0.00	\$6,000.00	A	b
Hertford	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Hyde	\$0.00	\$0.00	\$6,600.00	\$0.00	\$6,600.00	\$6,600.00	\$6,600.00	\$0.00	\$6,600.00	A	c
Iredell <sup>26</sup>	\$0.00	\$0.00	\$0.00	\$193,500.00	\$193,500.00	\$193,500.00	\$0.00	\$193,500.00	\$193,500.00	OT	b
Jackson <sup>27</sup>	\$0.00	\$0.00	\$0.00	\$500.00	\$500.00	\$6,000.00	\$6,000.00	\$0.00	\$6,000.00	A	c
Johnston	\$12,000.00	\$12,000.00	\$0.00	\$0.00	\$24,000.00	\$24,000.00	\$24,000.00	\$0.00	\$24,000.00	A	b
Jones	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Lee <sup>28</sup>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Lenoir	\$34,778.00	\$0.00	\$0.00	\$0.00	\$34,778.00	\$34,778.00	\$34,778.00	\$0.00	\$34,778.00	A	b
Lincoln	\$0.00	\$93,727.00	\$0.00	\$1,122,297.00	\$1,216,024.00	\$1,216,024.00	\$0.00	\$1,216,024.00	\$1,216,024.00	OT	d
Macon <sup>29</sup>	\$0.00	\$0.00	\$10,000.00	\$265,203.00	\$275,203.00	\$275,203.00	\$0.00	\$275,203.00	\$275,203.00	OT	d
Martin	\$0.00	\$0.00	\$0.00	\$500,000.00	\$500,000.00	\$500,000.00	\$0.00	\$500,000.00	\$500,000.00	OT	c
McDowell	\$6,000.00	\$600.00	\$0.00	\$8,574.00	\$15,174.00	\$15,174.00	\$15,174.00	\$0.00	\$15,174.00	A	c
Mecklenburg	\$108,000.00	\$0.00	\$0.00	\$4,800.00	\$112,800.00	\$112,800.00	\$112,800.00	\$0.00	\$112,800.00	A	b
Montgomery	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Moore <sup>30</sup>	\$0.00	\$0.00	\$0.00	\$326,301.00	\$326,301.00	\$326,301.00	\$0.00	\$326,301.00	\$326,301.00	OT	c
Nash <sup>31</sup>	\$0.00	\$0.00	\$0.00	\$900,000.00	\$900,000.00	\$900,000.00	\$0.00	\$900,000.00	\$900,000.00	OT	a
New Hanover	\$0.00	\$0.00	\$0.00	\$30,900.00	\$30,900.00	\$30,900.00	\$30,900.00	\$0.00	\$30,900.00	A	b
Northampton <sup>32</sup>	\$0.00	\$0.00	\$12,000.00	\$0.00	\$12,000.00	\$12,000.00	\$12,000.00	\$0.00	\$12,000.00	A	d
Orange	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Pasquotank	\$30,000.00	\$0.00	\$0.00	\$0.00	\$30,000.00	\$30,000.00	\$30,000.00	\$0.00	\$30,000.00	A	b
Pender	\$35,000.00	\$0.00	\$24,000.00	\$0.00	\$59,000.00	\$59,000.00	\$59,000.00	\$0.00	\$59,000.00	A	B
Perquimans	\$0.00	\$0.00	\$9,000.00	\$0.00	\$9,000.00	\$9,000.00	\$9,000.00	\$0.00	\$9,000.00	A	b
Person <sup>33</sup>	\$0.00	\$0.00	\$63,000.00	\$0.00	\$63,000.00	\$63,000.00	\$0.00	\$63,000.00	\$63,000.00	OT	c

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County	Tower	Bldg.	Land	Other	Total (County's Est.)	TEP's Est.	Annual Contribution	One Time Contribution	Total	Contribution Frequency	How Assessed
Pitt <sup>34</sup>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Rockingham	\$175,000.00	\$0.00	\$0.00	\$0.00	\$175,000.00	\$175,000.00	\$0.00	\$175,000.00	\$175,000.00	OT	c
Rutherford	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Sampson <sup>35</sup>	\$1,000.00	\$1,000.00	\$0.00	\$0.00	\$2,000.00	\$14,000.00	\$14,000.00	\$0.00	\$14,000.00	A	b
Stanley	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A	N/A
Stokes	\$0.00	\$0.00	\$125,000.00	\$0.00	\$125,000.00	\$125,000.00	\$0.00	\$125,000.00	\$125,000.00	OT	a
Surry	\$0.00	\$0.00	\$5,185.00	\$22,000.00	\$27,185.00	\$27,185.00	\$27,185.00	\$0.00	\$27,185.00	A	c
Swain	\$0.00	\$0.00	\$7,200.00	\$0.00	\$7,200.00	\$7,200.00	\$7,200.00	\$0.00	\$7,200.00	A	b
Union	\$0.00	\$0.00	\$43,000.00	\$0.00	\$43,000.00	\$43,000.00	\$43,000.00	\$0.00	\$43,000.00	A	b
Wake <sup>36</sup>	\$0.00	\$19,200.00	\$0.00	\$650,000.00	\$669,200.00	\$669,200.00	\$19,200.00	\$650,000.00	\$669,200.00	A+OT	c
Warren	\$0.00	\$0.00	\$27,500.00	\$922,509.00	\$950,009.00	\$950,009.00	\$0.00	\$950,009.00	\$950,009.00	OT	a
Watauga <sup>37</sup>	\$0.00	\$0.00	\$3,090.00	\$0.00	\$3,090.00	\$6,000.00	\$6,000.00	\$0.00	\$6,000.00	A	b
<b>Total</b>	<b>\$3,431,586.00</b>	<b>\$424,546.00</b>	<b>\$1,181,684.00</b>	<b>\$13,643,148.00</b>	<b>\$18,812,964.00</b>	<b>\$18,835,414.00</b>	<b>\$1,269,924.00</b>	<b>\$17,549,890.00</b>	<b>\$18,819,814.00</b>		

LIST OF COUNTIES FROM WHICH NO RESPONSE TO THE SURVEY WAS RECEIVED

Bladen	-	-	-	-	-	-	-	-	-	-	-
Madison	-	-	-	-	-	-	-	-	-	-	-
Mitchell	-	-	-	-	-	-	-	-	-	-	-
Randolph	-	-	-	-	-	-	-	-	-	-	-

Notes

- Contribution Frequency: A=Annual contribution (2018 estimate); OT= One Time contribution; A+OT=Both Annual and One-Time contributions.
- How Assessed: a=A formal valuation by the county; b=County's idea of value based on market rate; c=County's best guess of the value; d=Value determined by the county's board.

**Appendix 3: Local Contributions to VIPER Tower sites via Federal Grant Funds (See the next 3 pages below)**

County	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Alamance		\$592,000								\$236,309					
Alexander		\$27,306													
Alleghany					\$750,000										
Anson															
Ashe					\$750,000				\$825,000						
Avery									\$300,000						
Beaufort															
Bertie															
Bladen		\$460,000													
Brunswick															
Buncombe	\$1,500,000							\$47,335							
Burke			\$350,000												\$344,786
Cabarrus															
Caldwell			\$700,000												
Camden															
Carteret	\$1,184,000									\$448,000					
Caswell															
Catawba		\$1,175,000								\$224,000					
Chatham			\$300,000												
Cherokee	\$1,821,000	\$842,000					\$679,332								
Chowan	\$978,000	\$500,000													
Clay															
Cleveland	\$737,000			\$150,000											
Columbus			\$400,000												
Craven	\$592,000														
Cumberland	\$417,000	\$842,000													

County	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Currituck			\$400,000												
Dare		\$2,147,500	\$700,000												
Davidson						\$706,000									
Davie															
Duplin	\$2,026,000														
Durham															
EBCI															
Edgecombe		\$592,000													
Forsyth															
Franklin							\$187,000								
Gaston		\$250,000			\$250,000			\$375,000				\$230,735			
Gates			\$200,000												
Graham															
Granville	\$1,465,000	\$592,000													
Greene										\$224,000					
Guilford					\$650,000										
Halifax		\$1,329,000					\$12,200								
Harnett	\$1,696,050						\$406,400	\$285,000							
Haywood						\$706,000		\$287,000							
Henderson				\$1,500,000											
Hertford			\$200,000												
Hoke															
Hyde		\$1,884,000													\$245,000
Iredell	\$472,000						\$789,979			\$224,000					
Jackson															
Johnston	\$592,000														
Jones					\$507,100										
Lee		\$842,000													
Lenoir	\$659,000														
Lincoln	\$717,000														

## VIPER Unit

## VIPER In-Kind Contribution Evaluation Report

County	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Macon															
Madison															
Martin															
McDowell			\$350,000												
Mecklenburg					\$172,000										
Mitchell															
Montgomery						\$705,000									
Moore															
Nash						\$306,250									
New Hanover															
Northampton			\$170,394		\$750,000									\$330,798	
Onslow															
Orange	\$2,384,000														
Pamlico															
Pasquotank		\$1,826,000													
Pender		\$858,000	\$300,000					\$1,050,000							
Perquimans															
Person						\$706,000	\$330,000								
Pitt	\$1,159,000														
Polk				\$600,000											
Randolph						\$706,000	\$130,000			\$224,000					
Richmond					\$750,000	\$706,000									
Robeson			\$400,000												
Rockingham		\$2,811,000													
Rowan						\$226,113	\$1,008,919	\$750,000							
Rutherford															
Sampson	\$1,184,000														
Scotland			\$400,000												
Stanly		\$842,000													
Stokes															

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County	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Surry	\$1,724,000	\$2,446,000					\$175,000								
Swain					\$332,000			\$279,105							
Transylvania				\$150,000											
Tyrrell															
Union				\$150,000	\$250,000							\$225,000			
Vance		\$792,000													
Wake	\$500,000	\$500,000													
Warren					\$750,000		\$433,000								
Washington															
Watauga			\$300,000		\$2,182,000										
Wayne	\$396,018														
Wilkes		\$725,000					\$740,758								
Wilson															
Yadkin						\$706,000									
Yancey							\$364,298								

Notes

- i. Figures are based on Federal award and NOT actual amount spent
- ii. Any grants that were for 2 Counties, the funds were split in half
- iii. Figures include site construction and upgrade funds

## Endnotes

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<sup>1</sup> General Assembly of North Carolina (2017). *Viper In-Kind Contributions/User Survey/Increase Outreach*. [online] Ncleg.net. Available at: <https://www.ncleg.net/PED/LegislativeTracking/VIPER.pdf> [Accessed 20 Jan. 2019].

<sup>2</sup> North Carolina Department of Public Safety. VIPER - Frequently Asked Questions. “Q: Will there be a cost to use the VIPER network?” Retrieved from <https://www.ncdps.gov/our-organization/law-enforcement/viper/faq>. [Accessed 28 Jan. 2019].

<sup>3</sup> Alamance County explained in their response to Question #2. “Other” that 1). DHS Grant in 2006 of approximately \$695,000.00 dollars (2). Co-location project of VIPER site 1 and site 34 of approximately \$450,000.00 in cost (3). Approximately 3 million dollars to purchase 800 MHz radios for local end users. (4). Recently upgraded existing radios at a cost of 3.1 million dollars. For question #4.c) Building, the county pointed out that they “purchased building, generator, UPS etc. for VIPER Site 34” at a cost of \$145,000.00. In response to question #4.d) Building, the county wrote “Question # 2 section “D” minus the cost of the building, grant and radios,” the estimated cost is \$305,000.00. For question#5, c) Building, the county indicated that, “[a]nnual utility cost, maintenance / service contract for generator and UPS equipment,” is estimated at \$8,000.00. And for question #5, d) the county advised that, “annual rental/lease/lease cost for tower sites” is estimated at \$40,000.00.

<sup>4</sup> Alexander county, in response to question #4, b). A Tower, pointed out that they “assigned federal grant to state for construction of Barret Mtn tower.”

<sup>5</sup> Avery County wrote: “Avery County Did not contribute to the viper towers currently in Avery county. [O]ne came from pbs television, and the other one was state owned property they built on.”

<sup>6</sup> Brunswick county, question 3, a), wrote that they made a one-time contribution for “Channel capacity enhancements, Pea Landing site location, Southport construction, Bolivia Site tower/space.” The county elaborated, and made it clear in their response that they have also provided “Additional channel capacity at all

sites (Pea Landing, Supply, Bolivia, Southport) throughout the county, Use of the County tower at the Bolivia site, Construction and operational expenses of Southport site, and additional resources for the Delco site.”

<sup>7</sup> Burke County: The county indicated that it provided both land for the construction of a tower, and a tower, but did not provide their estimate of the cost. Hence TEP offered its opinion of the value with land, estimated at \$6000.00 annually, and \$14,000.00 for the tower. In TEP’s opinion these valuations are within the range that a carrier would be willing to offer for a “raw-land” site, and for leasing space on a county owned water tank or a tower.

<sup>8</sup> Camden County’s estimated that their contribution of land for a tower is \$2,760.00, as an annual contribution. In TEP’s opinion the annual value of the contribution is about \$6,000.00.

<sup>9</sup> Caswell County suggested that the value of its one-time contribution for land is \$7,500.00. In TEP’s opinion, a carrier would be willing to pay approximately \$7,500.00 annually.

<sup>10</sup> Chatham County advised that the county provided Land, a tower, a building and RF equipment at 6 sites, all as a one-time contribution. The county wrote: “These amounts are estimates and include projected costs for a system upgrade we are in the process of completing.” TEP accepted their opinion of the value with the consideration that six (6) sites are involved.

<sup>11</sup> Chowan County indicated that they have contributed land, tower, and equipment shelter, but did not say if any of that cost was funded by a federal grant, and not a direct county cost. If a federal grant is involved, both the county, and the state should decide how such grants should be accounted for in the evaluation of In-Kind contributions, since according to the General Assembly of North Carolina (2018)—see note I0, above—the survey will be annual, tracking and measuring users feedback and satisfaction over time, including “local, State, and federal users of North Carolina’s Voice Interoperability Plan for Emergency Responders (VIPER).” TEP deduced that In-Kind contributions by these entities is also implied and will be tracked in future surveys. Hence when Chowan county proposed for its land contribution, an In-Kind value of \$292,070.00 for one site, TEP

concluded that the estimate was too high for the market and proposed an annual contribution of \$15,000.00. If the county disagrees with the assessment and provides additional information, the estimate can be adjusted in future surveys.

<sup>12</sup> Clay County, Valerie Flanagan, wrote: "I spoke to our County Manager and he said that the only VIPER site currently in the county is located at an area called, "Chunky Gal." The State apparently owns this land so there was no contribution by the County. We are currently considering possible sites for the tower, but we would not be able to confirm any proposed location until after the 7th of February."

<sup>13</sup> Cleveland county in the survey advised that its estimate for annual contributions is for four (4) tower sites and buildings for five (5) sites. Mark Dellinger of the county pointed out that, "Cleveland County currently owns and maintains a Motorola 5-Site 10-Channel Simulcast trunking system within our County. Our 5 sites include (4) 400' county owned self-supporting towers and (1) collocated tower, Cleveland County also owns the 5 equipment shelter buildings. The NC VIPER system currently has 4 full sites located within Cleveland County and collocate on our towers and house equipment within our buildings. We have a tremendous partnership with the NCSHP and the VIPER system. We look forward to maintaining that relationship in the future."

<sup>14</sup> Dare County, in its response to the survey suggested that they have contributed land, tower, building and made "other" contributions to at least five (5) VIPER sites, both as a one-time contribution, and annual contributions. Notwithstanding, the county did not assign a dollar value estimate for their contributions. The county only cited its contribution for each category of one-time and annual contributions as "Quid Pro Quo. Hence with TEP being asked by the VIPER Unit to offer its opinion in special cases, TEP observing the geographic location of the county, the environment for the siting of some of the towers assigned the In-Kind values shown for the county in the table. It could well be that the estimated contributions suggested may

be higher or lower. Perhaps in the future date when the county is more comfortable with the purpose and objectives of the survey, and with enough time may be more comfortable in providing their own estimate of the value of their seemingly extensive In-Kind contributions.

<sup>15</sup> Davidson County advised that it contributed equipment to VIPER for which it placed the estimated value of \$3,515,701.75 under the annual contributions' category of the questionnaire, question #5, d).

This may be an oversight as the county also ticked under question #3, a) of the survey that its contribution is a one-time contribution. Hence TEP assigned the county's estimated contribution as a one-time contribution.

<sup>16</sup> Davie County wrote that they provided land to VIPER for the construction of a tower, placing the value of its contribution under two category occurrences, annual and one-time. TEP's records show that only one VIPER site is in the county, therefore TEP assigned the frequency of the county's contribution as annual contributions.

<sup>17</sup> Durham County pointed out that they have offered to VIPER, at two (2) sites a tower, and buildings with environmental services, generator(s) and security. For each site, the estimate of its annual contribution is \$50,000.00 each. TEP accepted the value suggested by the county. However, the cost per site could be lowered, if the towers are not exclusively used by VIPER, and are available for collocation by other carriers.

<sup>18</sup> Edgecombe County responded that they have made a one-time contribution of \$500,000.00, explaining that the funds are "[r]eturned money from grant to upgrade existing towers in the county." TEP included the county's estimate of its one-time contribution because the source of the grant was not explained. If the source is a federal grant both the county and the VIPER Unit can decide how to accurately reflect the funds for accounting purposes in a future survey. For its annual contribution, the county assigned an annual value of \$30,000.00 for land for tower construction. Although there are two (2) tower VIPER sites, in our records, in the county, no explanation was provided in the survey response to clarify if the value of \$30,000.00 is for both sites or only one. Without removing the county's estimate of its annual contributions for land, TEP lowered the contribution in the total contributions to \$14,400.00. In TEP's opinion, a "raw-land" site for the construction of a cell tower in the county

could garner a monthly rent of \$500.00 to \$1,200, depending on the market conditions—including the availability of multiple competing sites.

<sup>19</sup> Forsyth County answered that it provided “land for VIPER radio shelter...inside a secure compound” with the estimated annual value of \$5,000.00. They also provided a tower at \$20,000.00 annually. TEP accepted the both estimates, with the view that a tower owned by the county could command a monthly rent of \$1,600.00 depending on market conditions.

<sup>20</sup> Gaston County indicated that a tower was offered to VIPER at an estimated annual value of \$54,000.00. In TEP’s view, if no collocation is allowed on the tower except for VIPER equipment and depending on the structural capacity of the tower, the county under certain market conditions could demand that estimated rent. TEP is aware of four (4) VIPER sites in the county. The scope of the survey did not include or require research of the land ownership of the sites. The county also did not say if their estimated annual value for land was for more than one VIPER sites. So, TEP adjusted the county’s annual contribution for land to \$18,000.00. The rate would be for three (3), \$6000.00 yearly for each or at a very high value of \$18,000.00 for a raw-land site. In the county, most carriers would not pay a monthly rent of \$1,500.00 for a raw land site. For collocation on a water tank, an existing building or a cell tower, some carriers would be willing to consider such rent but simultaneously look for alternatives.

<sup>21</sup> Granville County revealed in their estimated value of contribution that they considered the fact that the county pays annual leases on three (3) other tower sites. Included in their value of one-time contribution is the cost of a tower for \$300,000.00.

<sup>22</sup> Guilford County, Lewis Cheatham, advised that while no contributions are being made at this time, a proposed collocation for VIPER at “Triad Park” is being completed which hopefully will be reflected in the next survey.

<sup>23</sup> Halifax County included in their estimate of annual contribution, a tower for \$3,600.00 yearly. In TEP's opinion, this figure is low. In the county, a carrier would be willing to consider paying about \$1,200.00 to collocate on a county owned tower or building, depending on the location and market condition.

<sup>24</sup> Harnett County answered that they provided a tower to VIPER at an annual estimated In-Kind contribution of \$54,300.00. TEP adjusted the contribution to \$18,000.00 because this figure is more in line with the market for collocation on a tower. If the county argues that their rate considered that the tower has collocation potential but are unable to lease the extra base due to special VIPER constraints, they could make the case for the \$54,300.00 estimate. The county has made other one-time and annual contributions with their estimate of value accepted by TEP.

<sup>25</sup> Henderson County, James Brissie wrote: "I listed two types of contributions: One Time – This represents the original Homeland Security Grant signed over from Henderson County to NCSHP for the original build out of the sites in Henderson County. SHP should have records of this as well. I have tried to locate the original values, but they precede me by about ten years. Recurring Costs – This includes our annual maintenance of all the roads to each VIPER tower sites. We have a service agreement with a contractor for maintaining these roads." TEP included the value of the annual contribution reported by the county but not the one-time contribution since the county did not provide an estimate, and guidance is required from the state to clarify how federal grants for Homeland Security handed over to the NCSHP should be accounted for in the survey.

<sup>26</sup> Iredell County explained their estimate of the value of their "Other" contribution with the following statement: "Additional equipment was necessary for Iredell EMS and Sheriff's Office responders to move over to Viper in order for the Viper system to handle the additional users on the system. Iredell county purchased 6 GTR SITE Additions for three state tower locations that would service this area; 2 for Fox Mountain, 2 for Barium Springs and 2 for Mooresville. A GTR 8000 Motorola radio base station, 6 Port Combiner, Astro 25 Site Repeater

and Cabinet were purchased. The equipment was given to the State and installed at the aforementioned tower sites, the Purchase Order total was 193,500.00.”

<sup>27</sup> Jackson County clarified that its annual contribution of \$500.00 is for a sublease with Duke Energy. TEP is of the opinion that for such a sublease by a carrier, Duke could ask up to \$6,000.00 annually depending on market conditions. Hence the county’s contribution is adjusted to \$6,000.00 annually, unless the agreement is for a small cell site.

<sup>28</sup> Lee County, Shane Seagroves, offered the following explanation: “Lee County made no In-Kind contribution in regard to the construction and completion of the Lee County Viper Site which is more commonly known as the Tramway Viper Site. The tower, building, and infrastructure was constructed on a grant facilitated by the NC State Highway Patrol in the amount of \$842,000. The land use for the site was granted by Central Carolina Community College and is located at 3000 Airport Rd, Sanford, NC 27330.”

<sup>29</sup> Macon County, Warren Cabe, expounded: “The equipment was an actual purchase that we made to contribute infrastructure to the VIPER system, especially at the Franklin Water Tank site so we would have capacity to utilize as we rolled more units onto the VIPER system. Those are actual dollars spent. The In-Kind property was an estimate based on ½ acre that is tax valued from the entire 6 acre parcel where we made an agreement to allow the Franklin Water Tank site tower to be constructed. Please adjust as needed if you don’t want to include the actual equipment costs. We sent that money this year and the tower site was set up I think in 2012.”

<sup>30</sup> Moore County, Janet Parris, elaborated: “[P]lease note that there were additional costs which are not included as part of the survey - as these costs were associated with the County’s change over to narrowbanding (and therefore also associated with the VIPER transition) - including such items as mobile radios, portable radios, and microwave links.”

<sup>31</sup> Nash County argued its estimated \$900,000.00, as a one-time contribution includes the cost of equipment to be installed at VIPER sites.

<sup>32</sup> Northampton County advised that the county provided land at two sites with an In-Kind contribution of \$1.00 per site. Ronald Storey, EM Director for the county wrote: "I would like to note that the questions as pertain to our situation were a little "grey". We have provided two one-acre sites for NCHP VIPER towers that were built here in Northampton. The agreement was for \$1.00 per sight for 15 years." TEP's proposal as shown in the table is that the In-Kind value should be adjusted to \$12,000.00 annually for both sites.

<sup>33</sup> Person County, Sybil Tate expounded: "I chose to use the amount that the tax office would charge a private tower owner, not the actual sq footage. We normally assign a one acre building site to all towers in the county and value that one acre the same as we would an acre on the surrounding properties. I will give you values for the one acre building site and the smaller leased area. Keep in mind that one acre equals 43,560 sq. ft. Critcher-- 1 acre building site = \$32,000; 2400 sq. ft. or .06 acre = \$1920 (assumed to be the same size as Mt Tirzah). Woodland--1 acre building site = \$15,000; 2000 sq. ft. or .05 acre = \$750 (Measured on GIS). Mt Tirzah--1 acre building site = \$16,000; 2400 sq. ft. or .06 acre = \$960 (Calculated from survey that you provided and measured on GIS)."

<sup>34</sup> Pitt County, Scott Elliott, advised: "Pitt County does not have any VIPER In-Kind contributions; however, as we mentioned on the phone, a tower is located within the City of Greenville. We understand that you are contacting all jurisdictions (counties and municipalities) regarding the In-Kind survey." As pointed out under "Survey Method" of the report, the survey was submitted only to counties and not to any other unit of government.

<sup>35</sup> Sampson County wrote that they offered to VIPER a building and a tower with the estimated value of \$1,000.00 each as annual contributions. TEP adjusted the estimated contributions to \$14,000.00 annually for both sites. The assumption is that the building for the sheltering of equipment could be valued at \$200.00 monthly. This figure is closer to our estimate of the cost of equipment shelter space such as 2 rack space in an

existing building for a small cell site, while the annual rent for space on a tower is estimated at \$11,500.00. In a future survey, the county could adjust its estimate depending on the capacity of the tower space provided.

<sup>36</sup> Wake County wrote that the county provided the following to VIPER:

- C&L Blue Ridge Tower – NCSHP equipment collocated in Wake County tower shelter for radio and microwave equipment (6 rack spaces)
- South Tower - NCSHP equipment collocated in Wake County tower shelter for radio and microwave equipment (6 rack spaces)
- North Tower - NCSHP equipment collocated in Wake County tower shelter for radio and microwave equipment (6 rack spaces)
- NCSHP Training Center Tower - NCSHP equipment collocated in Wake County tower shelter for radio and microwave equipment (6 rack spaces)
- Little River Tower - NCSHP equipment collocated in Wake County tower shelter for radio and microwave equipment (6 rack spaces)
- Wake Forest Tower - NCSHP equipment collocated in Wake County tower shelter for microwave equipment (3 rack spaces)
- Fuquay Varina Tower - NCSHP equipment collocated in Wake County tower shelter for microwave equipment (3 rack spaces); Also using tower space for NCSHP owned microwave path to Duncan
- Creedmoor Tower - NCSHP equipment collocated in Wake County tower shelter for radio and microwave equipment (6 rack spaces)

And,

The following Wake County owned microwave paths are used by the NCSHP VIPER radio system.

- Blue Ridge tower to North tower site
- Blue Ridge tower to South tower site
- Blue Ridge tower to NCSHP Training tower site
- NCSHP Training Center tower to Fuquay Varina tower site
- NCSHP Training Center tower to Little River tower site
- Little River tower to Wake Forest tower site
- North tower to Creedmoor tower site
- Wake Forest tower to Creedmoor tower site

No value was initially offered by the county for their contributions. After a telephone interview with the County, TEP adjusted the value of the county's contribution as a one-time contribution for shelter space, and "other" equipment and services to a total annual and one-time contribution of \$669,200.00.

<sup>37</sup> Watauga county advised that the county's annual contribution of land for a tower is estimated at \$3,090.00. William Holt, EMS director for the county elaborated, we should note "that this contribution is a lease

that we maintain with the land owner that is increased by the CPI or 3% (which ever is greater) every 10 year term.” Notwithstanding, TEP recommended that the contribution be adjusted to \$6,000.00 annually.

## References

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