

**AGENDA**  
**NELSON COUNTY BROADBAND AUTHORITY**  
**November 8, 2016**

**THE MEETING CONVENES AT 1:00 P.M. IN THE  
GENERAL DISTRICT COURTROOM, OF THE COURTHOUSE, LOVINGSTON**

- I. Call to Order**
- II. Public Comments**
- III. Consent Agenda**
  - A. Resolution – R2016-07** Minutes for Approval
- IV. New/Unfinished Business**
  - A.** Network Operator's Report
  - B.** Treasurer's Report
  - C.** County Administrator's Report
- V. Other Business (As May Be Presented)**
- VI. Adjournment**

**RESOLUTION R2016-07  
NELSON COUNTY BROADBAND AUTHORITY  
APPROVAL OF MEETING MINUTES  
(September 13, 2016 & October 6, 2016)**

**RESOLVED**, by the Nelson County Broadband Authority that the minutes of said Board meetings conducted on **September 13, 2016 and October 6, 2016** be and hereby are approved and authorized for entry into the official record of the Broadband Authority meetings.

Approved: November 8, 2016

Attest: \_\_\_\_\_, Secretary  
Nelson County Broadband Authority

September 13, 2016

**Virginia:**

AT A REGULAR MEETING of the Nelson County Broadband Authority Board at 1:00 p.m. in the General District Courtroom located on the third floor of the Nelson County Courthouse, Lovingston Virginia.

Present: Thomas H. Bruguire, Jr. West District  
Allen M. Hale – Chair  
Thomas D. Harvey, North District – Vice Chair  
Larry D. Saunders, South District – South  
Gary W. Strong – Central District  
Stephen A. Carter, County Administrator  
Candice W. McGarry, Secretary  
Debra K. McCann, Treasurer  
Susan Rorrer, Director of Information Systems

Absent: None

**I. Call to Order**

Mr. Hale called the meeting to order at 1:04 PM with four (4) members present to establish a quorum and Mr. Harvey joining the meeting shortly thereafter.

**II. Public Comments**

1. Clay Stewart SCS, AcelaNet LLC

Mr. Stewart noted that SCS changed its goal in 2015 to become Central Virginia's premier wireless and fiber provider and they have made progress towards this goal; with Nelson as its base for operations. He then noted that the Sugar Loaf tower site was fully activated with several frequencies on line and that the Wood Farm Brewery was the first connection there. He added that the tower would produce new territory and that Faber and Schuyler were waiting for service. He reported that SCS had the Herd's Mountain Tower and it would be activated by the end of the week to provide service along Route 29 and to Afton relays. Mr. Stewart then noted that the Afton tower at Royal Orchard would also be activated and would provide services for Nelson and Albemarle Counties.

Mr. Stewart reported that they had been officially accepted to respond to Central Virginia Electric Cooperative's RFI and they hoped to move forward with that. He also noted that they were acquiring a company that would add 50% more resources, which would help everyone. He added that contiguous counties were helping each other and they were partnering with them and others. He advised that they were implementing a plan in Powhatan that would be a combination of wireless and fiber services and there were other central Virginia projects in process.

Mr. Stewart then requested a segment of time with the Broadband Authority and the Board of Supervisors to present a PowerPoint on what they had available in the County. He noted that a ten (10) minute block of time would be sufficient and Lon Welchel would present.

Authority members then agreed by consensus to follow up with scheduling the presentation.

2. Philip D'Ambola, Afton

Mr. D'Ambola questioned who did the advertising for the County's network considering the subscription numbers were low. He also questioned how many customers were needed in order to break even and the County could step away from this. He then advised that he had never seen any advertising and that there were many people out there that did not know about it.

Mr. Hale advised that this was an opportunity to comment and they would try to address his questions as the meeting progressed.

**III. Consent Agenda**

Mr. Harvey moved to approve the consent agenda and Mr. Saunders seconded the motion. There being no further discussion, Members voted unanimously (5-0) by roll call vote to approve the motion and the following resolution was adopted:

**A. Resolution – R2016-05 Minutes for Approval**

**RESOLUTION R2016-05  
NELSON COUNTY BROADBAND AUTHORITY  
APPROVAL OF MEETING MINUTES  
(July 12, 2016)**

**RESOLVED**, by the Nelson County Broadband Authority that the minutes of said Board meeting conducted on **July 12, 2016** be and hereby are approved and authorized for entry into the official record of the Broadband Authority meetings.

**IV. Presentation – Broadband Planning Project, Design Nine (A. Cohill)**

Dr. Andrew Cohill of Design Nine noted that his firm had done a break-even analysis and the goals was to help the NCBA look at this. He then gave the following PowerPoint presentation:

Slide 1: Growth is the Way Forward

- ▶ Opportunities
  - ▶ NCBA has a state of the art, modern network
  - ▶ NCBA has excellent support from County staff
  - ▶ More customers can be added easily
  - ▶ New fiber extensions near Wintergreen have great potential for businesses in that area
  - ▶ SCS has joined the network, Nelson Cable marketing more
  
- ▶ Challenges
  - ▶ More customers are needed to achieve sustainability
  - ▶ Improved network operations will help with growth targets

- ▶ Need to support wireless outside of fiber areas

Dr. Cohill noted that it was important to work with wireless ISPs like SCS to make the network more available.

#### Slide 2: Prioritized Build Plan

- ▶ Encourage increased use of County towers
  - ▶ Improved pricing for WISPs
- ▶ Use market-based demand to accelerate fiber customer growth
  - ▶ Increased awareness of survey
  - ▶ Promote neighborhood projects
- ▶ Continue to finance drop costs
- ▶ Renegotiate or re-bid network operator work with enhanced Scope of Work

Dr. Cohill noted that Nelson County was way ahead of others and he referenced the collecting of data by Maureen Kelly's department and that expansion of the network would increase awareness. He added that the strategy has been to let ISPs bring customers in and that was a slow growth path. He suggested that the network use a market based demand approach to accelerate this.

#### Slide 3: Rate Structure Adjustments

- ▶ Offer residential Gigabit wholesale rate
- ▶ Residential Gigabit is important to compete against competitive FTTH offerings
- ▶ Gives providers a premium service to offer
- ▶ Give WISPs affordable access to County towers
  - ▶ One price for all towers improves revenue, creates incentives for providers to offer wireless in more areas

#### Slide 4: Network Operations

- ▶ De-couple current dual role of network operator/ISP
  - ▶ Other providers don't want a competitor managing their customers
- ▶ Update Scope of Work for Network Operator
  - ▶ Require improved reporting

Dr. Cohill reiterated his suggestion that the network operations be separated out from service provision; noting that having an ISP also perform network operations was a barrier to getting more ISPs on the network.

#### Slide 5: Last Mile Installations:

- ▶ Increase marketing of "pay for drop over time" option
- ▶ Increase marketing of the network using "Wild and Wired" branding
- ▶ Develop "rural road" and "neighborhood" focused campaigns to aggregate new customers
  - ▶ Initial focus on clusters near existing backbone

- ▶ Identify clusters that could be served with wireless back to fiber network
- ▶ Continue to meet with CVEC

Dr. Cohill noted that the ability for customers to pay for last mile installations over time helped in getting more customers. He suggested the need for increased marketing and the need for "branding". He then noted the benefit of having yard signs made etc. and having the Board talk about it more regularly. He added that with wireless backhaul from the County, towers could take fiber to the home to others without having to build the fiber ten (10) more miles to clusters of customers. He then advised that the County should continue to meet with CVEC on their free pole attachment RFI offer.

#### Slide 6: Funding

- ▶ CAF2 funding rules still under development
- ▶ Will require ETC status (Eligible Telecommunications Carrier)
  - ▶ Filing with the State Corporation Commission
  - ▶ Will require assistance of a telecom attorney
- ▶ To date, CAF funds have been distributed only to incumbent telcos
- ▶ CVEC offer of no attachment fees very attractive

Dr. Cohill noted that CAF2 and other grant funding was tied to having Eligible Telecommunications Carrier (ETC) status; and the Authority may want to think about achieving this going forward. He noted he thought the process would take 90-120 days and would require working with an attorney. He added he was pessimistic about getting CAF funds; however they should keep an eye on it.

#### Slide 7: ISP/WISP Attraction

- ▶ Decouple network operator and ISP roles
- ▶ Offer wholesale Gigabit service
- ▶ Make County tower access affordable

Dr. Cohill noted that in order to attract more ISPs and WISPs, the NCBA should decouple network operations and ISP roles, offer wholesale Gigabit service, and make County tower access affordable.

#### Slide 8: Staffing and Operations

- ▶ County staff does a great job, but over-worked
- ▶ Update of network operator roles and responsibilities should move some County staff work to operator
- ▶ Ten year financial pro forma shows a path to sustainability if customer growth targets are met
  - ▶ Break even begins at about 500-700 customers
  - ▶ Need to add about 100-150 new customers per year
  - ▶ Achievable with market demand cluster approach
- ▶ Bringing 12-50 customers on at a time instead of one at a time.

Dr. Cohill then noted that County staff did a great job, however they were overworked. He added that updating the network operator role should shift some responsibilities from staff to them. He then noted that

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embracing the market demand approach; bringing on clusters of customers, could achieve adding 100 new customers per year to get to a 500 customer break-even point.

Dr. Cohill then showed a final slide showing 10-year pro-forma financials that showed positive net income at year 4.

Following the presentation Members had the following questions/discussion:

Mr. Strong asked Dr. Cohill for his impression of the susceptibility of aerial vs underground fiber in Nelson County given that power was lost at least once per month in winter. Dr. Cohill, noted that aerially hung fiber would be hung below the electric line. He noted that they managed a New Hampshire network and they had extreme winter weather, the area was heavily wooded, and they had rare outages. He noted that the most common issue was a tree falling on a drop cable that interrupted service at the house; however transformers could catch on fire and burn through both the electric and fiber cables. He added that all things being equal, underground deployment was ideal; but aerial deployment had significantly less cost of construction. Dr. Cohill further noted that CVEC may not have easements where poles were located on private property, which could be an issue unless they would work with property owners as part of the broadband strategy. He noted this would need to be discussed with CVEC.

Mr. Strong then noted that in western Nelson County, Verizon was not required to provide service over land lines anymore and the phone lines were down a lot. He noted that he was worried that if fiber deployments were aerial, they would have the same path to follow as Verizon and Verizon had decided it did not work. Dr. Cohill noted that copper phone lines were heavier and most of those reports related to DSL were water related; where cables were old and the sheath had deteriorated. He then advised that they had deployed aerial cable in Montana and no issues were expected.

Mr. Harvey then spoke to the marketing of the network and that he thought this had to be done in person; not from an office. He noted that in his area, there were many people subscribing already and he attributed this to him meeting and speaking with people in getting easements for the expansion project. He added that it helped when people were familiar with the person knocking on their door. Dr. Cohill noted that the Authority's role was creating awareness and that the ISPs needed to do sales and market their products. He noted that in the cluster approach, local champions were identified and they would go door to door for the Authority. He added that the Authority should use residents and businesses in the community to start the conversations.

Mr. Hale noted being discouraged by the current marketing approach because the network was not reaching to certain areas. Mr. Harvey stated that it could get there by using towers to distribute services. Mr. Hale acknowledged it was a slow process and would not happen overnight. Dr. Cohill then advised that the Authority had to manage expectations. It was suggested that the Authority look beyond fiber and look to improving wireless access. It was noted that for clusters that were well off of the fiber, homes could pay to put up a utility pole to mount wireless radio relays to get to those houses. It was noted that there were strategies that WISPs could use with assistance from the clusters to improve things. Dr. Cohill reiterated that the Authority's role was to say that it could not be done right away; however they had a strategy and plan and they had to be part of the plan. It was noted that it was a tough problem and would take years to solve. Mr. Harvey noted that they could not keep at same snail's pace right now and they needed to

concentrate on wireless deployment and getting information out there. He added that they could make something happen quickly if 15-20 people got together.

Mr. Clay Stewart was recognized by the Chair and he noted that they had 145 customers and were an ISP with 60 customers coming on over two months. He advised that ISPs must market their services, they were doing that, and would be doing more. Mr. Harvey noted that the best marketing that could be done was to have your customers market it for you. He added that what had hurt was people were getting their own quotes and no one had taken the time to explain to them the cluster approach. Mr. Stewart added that Shannon Farm was a good example of that; it was what they would be doing.

Mr. Carter then advised that the report generated by staff indicated that the network went from serving 146 in July to 203 presently with another 60 customers were in the works; not counting those who lived up the Route 6 expansion area. He added that the network could hit over 300 customers by the end of the year. He then advised that they were trying to expedite the clustering strategy.

Mr. Bruguire then asked if Design Nine had mapped the areas of the county that were best suited for wireless and those that were best suited for fiber Dr. Cohill advised that Nelson was a mountainous county and those best suited for fiber in the short term were close to the existing fiber. He added that areas further away were better suited to wireless and the strategy was to take fiber to the home using wireless. He noted that it would take another 7-8 years for everyone to have fiber and he did believe the County should continue to install fiber while using wireless solutions in the meantime. Dr. Cohill then noted that fiber did increase property values per those who worked in real estate.

Mr. Hale then noted that the next step was to meet with ISPs and or conduct a work session to go over this in more detail. He noted that he thought the proposals had merit and the Authority would move forward as soon as possible.

**V. New/Unfinished Business**

**A. Network Operator's Report**

Mr. Carter noted that Ms. Rorrer had prepared the following report:

**I. Operational**

**Installations:**

July	20
August	10
In Process	14

**Active Circuits:**

Ting	152
Shentel	3
Nelson Social Services	1
Nelson County Cable	29
SCS Broadband	18

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TOTAL 203

II. Administrative

New Contracts 29

Currently working with two neighborhoods that would add an estimated 35 customers on the initial neighborhood builds.

III. Financial

Attached

B. Treasurer's Report

Ms. McCann reported the following:

**BROADBAND FUND @ 8/31/16**

**OPERATIONS**

Beginning Balance 7/1/2016	\$ 406,277.36
July-August 2016 Expenditures	\$ (60,401.45)
July-August 2016 Revenues	\$ 42,493.00
Subtotal	\$ 388,812.35
General Fund Transfer	\$ <u>100,000.00</u>
Ending Balance 8/31/2016	\$ 488,812.35

Current Year Revenue Exceeds Expenses by \$ 82,091.55

**EXPANSION PROJECT**

Beginning Balance 7/1/2016	\$ (4,730.14)
July-August 2016 Expenditures	\$ (18,244.75)
July-August 2016 Revenues	\$ 30,436.94
Ending Balance 6/30/2016	\$ 7,462.05

**SUMMARY OF FUND BALANCE**

Project Funds	\$ 7,462.05
Amortized Installation Fund	\$ 40,111.62
Operational Funds	\$ <u>448,700.73</u>
Available Bank Balance @ 8/31/2016	\$ 496,274.40

Ms. McCann noted that there was still \$20,000 in grant funds to draw down to complete project.

Ms. McCann also provided a report that showed the following regarding the Broadband Network Operating Fund:

The Broadband Network Operations report showed year-to-date expenditures (July – August) of \$60,401.45 for Network Operations, with there being an unencumbered balance of \$360,302.55 and a Contingency Reserve remaining of \$69,524.00. The Revenue Summary for Network Operations showed year-to-date revenues of \$42,493.00 and a balance of \$246,702.00. The report also showed the revenues transferred in from the General Fund of \$100,000.00 and the transfer in from the CDBG fund of \$30,496.34 and a balance of \$19,985.06. The Year Ending Balance was shown at \$100,611.00.

### C. County Administrator's Report

1. Broadband Planning Project: The planning project is nearing completion. Specific outcomes/recommendations will be presented to the Authority on 9-13 by Dr. Andrew Cohill of Design Nine, the project's Blacksburg based consultant firm. The agenda includes a five page Executive Summary, which Dr. Cohill will reference in his presentation. The project has been a significant, multi-faceted undertaking. It is recommended that the Authority schedule a work session(s) (through a continuation of the 9-13 meeting) to discuss in detail the project's recommendations and to provide County staff with direction/guidance on next steps associated with the completion of the planning project. The proposed work session is deemed a critical next step in completing the planning project and, more importantly, in the Authority's ensuing operations.
2. Middle Mile Expansion (CDBG) Project: Phase 1 and, most recently, Phase 2 have been completed with requests for service being received and addressed. The VDOT permit for Phase 3 (Intersection of Route 6 and 151 at Avon west on Route (Afton Mountain Road) to Saddleback Farm (entrance to Veritas Winery and Saddleback Subdivision) was approved on 9-7. CCTS the project's installation contractor will begin work to complete Phase on 9-13. A 2 to 4 week completion schedule is anticipated.
3. Subscription Levels: Staff will endeavor to report on current and projected subscriber levels at the session on 9-13.
4. Shentel: The company has not provided any additional information on its previous phone and email inquiries proposing to lease space in the fiber network's conduit infrastructure. The most recent communication was 2+ weeks ago and pertained to input from Shentel staff that they would be conferring with CCTS, NCBA's Outside Plant Contractor, on the capacity of the conduit infrastructure to contain two additional 144 count fiber optic cables. Input from County staff to Shentel was to caution them on concluding that the company's proposal (a formal proposal has not been received) would be accepted and to remind Shentel staff that the amount of the cost per foot proposal to utilize the local network's conduit was much lower than what the County had proposed to Shentel.
5. CVEC RFI: The Central VA Electric Cooperative issues a Request for Information on July 25th to solicit input from providers of internet/broadband services for a possible partnership that would provide universal broadband network services "for the membership of CVEC" (some 38,000 possible subscribers within the Cooperative's multi-jurisdictional service area). County staff submitted on 9-8 the RFI's initial request for

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“Letters of Intent” from interested providers. The deadline for a full (and very detailed, in-depth) and final response to the RFI is November 11, 2016. The letter drafted by County staff included a request for a meeting with CVEC staff to discuss possible strategies for a partnership between NCBA and CVEC with the input received from the discussion a determining factor in a decision to submit a final response to the Cooperative’s RFI, which is more than a significant undertaking. Next steps, if any, are TBD.

**D. Proposed Modifications to Wholesale Rate Structure (R2016-06)**

Mr. Carter reported that staff had been working with Dr. Cohill on this and two different copies of rate schedules had been distributed. He noted that after further review, Dr. Cohill indicated a key item was the need to tighten up dark fiber leasing. He noted that Dr. Cohill was supportive of the rates provided by staff, which were similar to his. He noted that he wanted to get the Authority to go to public hearing on the rates and would like to have a work session as soon as possible.

Mr. Strong agreed that a work session was becoming critical at this point and in developing the rates. Mr. Hale agreed and noted he would like to continue to a work session date and invite the local service providers. Mr. Carter advised that they could also have a called meeting.

Members then discussed a date for the work session and agreed by consensus to continue the meeting until Thursday, October 6, 2016 at 4pm and no action was taken on proposed resolution **R2016-06**.

**I. Other Business (As May Be Presented)**

There was no other business discussed by the Board.

**II. Adjournment**

At 2:01 pm, Mr. strong moved to continue the meeting until Thursday, October 6, 2016 at 4pm and Mr. Brugiare seconded the motion. There being no further discussion, Members voted unanimously by voice vote to approve the motion and the meeting adjourned.

**Virginia:**

AT A CONTINUED MEETING of the Nelson County Broadband Authority Board at 4:00 p.m. in the Old Board of Supervisors Room located on the fourth floor of the Nelson County Courthouse, Lovingson Virginia.

Present: Thomas H. Bruguire, Jr. West District  
Allen M. Hale – Chair  
Thomas D. Harvey, North District – Vice Chair  
Larry D. Saunders, South District – South  
Gary W. Strong – Central District  
Stephen A. Carter, County Administrator  
Candice W. McGarry, Secretary  
Debra K. McCann, Treasurer  
Susan Rorrer, Director of Information Systems  
Andrew Crane, Information Systems Technician  
Dr. Andrew Cohill, Design Nine, Inc.

Absent: None

**I. Call to Order**

Mr. Hale called the meeting to order at 4:05 PM with four (4) members present to establish a quorum and Mr. Bruguire and Mr. Harvey joining the meeting shortly thereafter.

**II. Work Session – Broadband Planning Project, Design Nine, Inc.**

**A. Overview of Proposed Buildout Plan**

Mr. Carter noted that Design Nine had done an extensive build out plan throughout the County including most areas in Faber, Shipman, Piney River, Tyro, Arrington, and Afton. He noted that including Wintergreen, this entailed 75 miles of construction and a total buildout cost was provided. Mr. Carter advised that the build out plan had initially included Wintergreen and then it was taken out. Mr. Carter noted the overall footprint of the network, including Wintergreen and a network ring built along Route 56 north and south on Route 151 could be built for an estimated total cost of \$7,842,552.60. He added that the Authority could do the build out incrementally by location and a plan of finance could be put together. He also noted that an extensive pro-forma financial model had been provided that would not be discussed in detail during the present work session. He then noted that without Wintergreen, the rest of the build out cost was approximately \$4.6 Million. He added that the ring provided redundancy, they would construct the major extensions, and then would build out through neighborhood builds.

Mr. Strong questioned the maps noting that Arrington showed fiber going down Route 29 and he thought there was fiber already there. Mr. Carter noted that this line would be from Colleen South to the County line.

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Members questioned the deployment of wireless expansion and Dr. Cohill noted that cost estimates had been provided to upgrade towers and the first page of the Executive Summary recommended doing wireless.

Ms. Rorrer noted that nothing was set in stone on the proposed builds and when the Authority and County was ready to proceed; these could be tweaked based on exact areas to be served.

Dr. Cohill then advised that a quick win would be to do towers as soon as possible. Mr. Strong noted he did not see those in the build out plan and Mr. Carter noted those would be added.

Mr. Hale then suggested that they concentrate on reviewing the Executive Overview and not dig into the maps.

Dr. Cohill then noted that they recommended that the fiber build out was demand based in approach. He noted that the routes were selected for estimation purposes and to develop a baseline of what fiber elements would cost. He added that he was not recommending the only places that fiber should be built and he referenced that the County was collecting demand data. Mr. Carter added that this was all subject to more work and the Authority was seeing an uptick in subscriptions due to the current extensions being built and neighborhoods collaborating to get connected. He reiterated that they could see customers increase to 300 plus by January.

Mr. Saunders inquired as to there being any interest from other areas of the county and Ms. Rorrer noted that right now, people needed to be in close proximity to the fiber in order to organize and get connected. Mr. Carter noted that the interest had been all over the county and that a record was being kept of those who were interested. Mr. Harvey noted that the initial problem was that the installation cost estimates were too much and now individuals could figure out how to band together as a group in order to get those costs down. He added that he thought that going tower to tower was the way to go and Mr. Saunders suggested that they start looking to expand first where the interest was.

Mr. Harvey then noted that they had to start some of these legs going into other areas and Mr. Carter advised that the build out plan had been developed so that it could be done all at once or they could choose areas to do in phases. He noted that they could prioritize building those by who had the most people that would subscribe at day one. He added that the risk taken was building out and getting the subscriptions to support it.

Mr. Bruguere noted that a major issue was that school kids now had computers at home and could not get internet.

Mr. Carter reiterated that the buildout plan did not reach everyone in the county but it extended extensively so that it could be built out further. Mr. Harvey added that they would have to reach pockets of people which was their goal and they had to do it.

Mr. Saunders then questioned if towers could reach more people more quickly and Ms. Rorrer noted that they could use GIS to show the more densely populated areas. She then passed around a current map showing yellow areas of population. She then noted that it was safe to say that the interest would be

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uniform across the county and it would be a matter of how knowledgeable they were about what was available.

Mr. Harvey then asked how many people were being served off of NCBA towers and Ms. Rorrer noted that there were two towers out of the five in use. Mr. Carter noted there were six with Gladstone and Hight Top could be a seventh. Mr. Saunders asked if the NCBA could use the Woods Mill tower through an agreement with AT&T and Ms. Rorrer noted that any ISP could lease space from them; however they were typically built for their own use.

Dr. Cohill advised that companies like SCS were already going directly to those companies for use. He added that they used point to point to go from tower to tower and then used fiber near the tower to light it up. He noted that this worked very well and was less expensive than fiber.

Mr. Hale then noted that the Authority has consistently said it would like to expand the network with towers and Mr. Bruguere added that they could reach more people in a shorter time and it was less expensive than fiber.

Members and staff discussed who would do this and Mr. Carter then advised that the County had greater financial ability to do it and it owned the network. Mr. Bruguere then asked if the Board of Supervisors could borrow funds and loan it to the Authority to be repaid and Mr. Carter noted that the payback may take a long time. Dr. Cohill then noted that there were a number of projects where an enterprise fund was created, funds were loaned, and paid back.

Mr. Hale noted that the prioritized build out plan in the executive overview was what they wanted to do, as well as make changes to the existing towers, adjust rates.....etc. as noted in the plan.

Mr. Saunders then asked if the Authority could lease towers and Mr. Bruguere added that there were Ordinance provisions that reserved space for the County. Mr. Carter confirmed this but noted that the County would still have to bear the costs. Mr. Hale then noted that they were all in agreement that if there was an existing tower and it was economically feasible, they should explore it.

Mr. Harvey then supposed that it would help ISPs get on the towers and Ms. Rorrer noted there was no reason to be involved in leasing when the ISPs could do it.

Mr. Strong then asked if the Authority needed to ask the County to create a detailed plan for the use of towers and Mr. Hale stated he thought so. Mr. Carter then advised that Design Nine could update the plan to include towers with costs etc. and then they could make decisions.

Mr. Harvey then challenged other Board members to find pockets of subscribers and suggested sending information out about the network through the schools.

Mr. Saunders then inquired how long it took to build a tower and put it into operation and Dr. Cohill noted sixty days if the site acquisition was done; if not 120 days including public procurement. Mr. Harvey added that engineering was also needed on sites.

Mr. Hale gave Shipman as an example and questioned how it could be reached by tower. Dr. Cohill noted a line of sight study would be done and then a determination would be made on where to put the towers. He added that sometimes it took a couple of hops. It was noted that the County had fiber to Oak Ridge and a tower at the Co-op that could reach a tower that would reach the entire Shipman area.

Ms. Rorrer noted that another important consideration may be where the wireless was already deployed versus where it was not.

Members then questioned next steps and Mr. Carter noted he thought it was to have Dr. Cohill come back with a plan and cost including towers with recommendations on where to go first. Mr. Hale noted that the question was how to connect the backbone with towers to serve other areas.

Mr. Bruguire questioned whether or not they should enlist input from the ISPs on this and Members thought potentially so, however it was noted that there was no one better than Supervisors to go out and talk to people in their districts. Mr. Carter reiterated that those registering interest were sent to all of the ISPs. Mr. Harvey added that there was a need to make personal contact. Mr. Carter then confirmed that SCS was following up on leads.

Mr. Hale then suggested that a next step was to look and see where there was service and where there wasn't and use the consultants and local ISPs to determine where they could expand. Mr. Harvey noted that the ISPs could give the best information on this. Ms. Rorrer confirmed that SCS had a very good database of who was looking for service.

Mr. Hale suggested that they offer to support efforts to meet their demand and that they state that the Authority was willing to add towers that would help. He added that they could bring areas that were undeserved the staff's attention.

Mr. Harvey noted that if they set up a community meeting on this, they would get a lot of interest. Mr. Bruguire supposed that there were many people on some type of service; however they could be shown what the Authority could provide and at what rates.

**B. Proposed Wholesale Rate Structure Changes & Pro Forma Financials**

The proposed rate structure was distributed as follows:

**Local Wholesale Access Rates (Rates for Providers to Utilize the Network for Transport to an End User):**

NCBA Proposed Service Types				
Service Tier	Service Class	Service Type	Recommended Wholesale Cost	Comment
Tier 1	Residential GPON	25/5 Mbps	\$25	Best Effort (maximum 32:1 split)
	Residential GPON	1000/1000	\$37	Best Effort, symmetric

		Mbps		(maximum 32:1 split)
Tier 2	Business GPON	25/25 Mbps	\$75	higher priority than Best Effort (maximum 16:1 split)
	Business GPON	50/50 Mbps	\$150	higher priority than Best Effort (maximum 16:1 split)
	Business GPON	100/100 Mbps	\$300	higher priority than Best Effort (maximum 16:1 split)
	Dedicated Business	250/250 Mbps	\$450	Active Ethernet, higher priority than Best Effort
	Dedicated Business	500/500 Mbps	\$850	Active Ethernet, higher priority than Best Effort
	Dedicated Business	1000/1000 Mbps	\$1000	Active Ethernet, higher priority than Best Effort
Tier 3	Wide Area LAN Service	100/100 Mbps	\$800	Active Ethernet, highest priority, supports QinQ (two or more connections may be needed)
	Wide Area LAN Service	500/500 Mbps	\$1280	Active Ethernet, highest priority, supports QinQ (two or more connections may be needed)
	Wide Area LAN Service	1000/1000 Mbps	\$1660	Active Ethernet, highest priority, supports QinQ (two or more connections may be needed)

**Service Types:**

- **Tier 1** – Transport service from the service provider’s port in the data center to a single customer location. Traffic is untagged at the customer. Circuit is typically asymmetric and priority is set at Best Effort across the core network. NCBA will observe a maximum 32:1 split.
- **Tier 2** - Transport service from the carrier or provider’s port in the colo to a single customer location. Traffic is untagged at the customer. GPON circuits are symmetric and the priority is set higher than Tier 1 for better performance across the core network. NCBA will observe a maximum 16:1 split on this service tier for GPON connections. Active Ethernet connections are symmetric and have a higher traffic priority than Tier 1 services. An example of this is a package of Internet access for a business with regular use of videoconferencing, heavy cloud-based service use, and large file uploads.
- **Tier 3** – Transport service between the carrier or provider’s port in the colo as well as between multiple customer locations (fee applies for each end-point outside of provider’s NNI). Passed traffic can be tagged or untagged as well as supporting Q-in-Q. The circuit is symmetric and traffic has the highest priority across the core network. An example of this would be a transparent LAN service to link two customer locations.

**Non-Recurring Charges:**

Non-recurring charges (NRC) are those costs incurred in connection with the installation of the fiber drop and ONT. The customer will be responsible for the payment of these cost on the following terms.

NRC not exceeding \$1500 will be discounted as follows:

<u>Term of Contract</u>	<u>Discount</u>
12 months	none
24 months	10%
36 months	20%
48 months	35%
60 or more months	50%

The undiscounted balance of NRC together with any NRC in excess of \$1500 may be amortized over the term of the original contract.

**Colocation Charges for Providers within NCBA shelters:**

Quantity	Monthly Cost
2 RU	\$75.
One-half rack	\$200.
Full Rack	\$350.

All rentals are based on a space available basis. Rental will include access to one 20 amp, 120 volt circuit. Redundant CC power (-48 volt) will be available as well. The Colocation charges include up to 20 amps of DC power. Additional DC power, subject to availability, will be priced at \$6.25 per amp in 10 amp increments.

**Tower Access:**

***Option 1:***

Location on Tower	Price per Month per Customer
Top thirty feet in 10 foot sections	\$275 per antenna for first three antennas (includes cables and ancillary equipment such as tower mounted amplifiers) \$150 per additional antenna installed by the same lessee.
Next thirty feet in 10 foot sections	\$175 per antenna for first three antennas (includes cables and ancillary equipment such as tower mounted amplifiers) \$90 per additional antenna installed by the same lessee.
Remaining access in 10 foot sections	\$50 per antenna (includes cables and ancillary

	equipment such as tower mounted amplifiers)
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All tower access charges are in addition to a site access fee of \$200 per month. Site access fee entitles lessee access to electric power (contracted for by lessee) and ground space for cabinet (10 square feet). Shelter colocation charges and local transport charges are additional as are lease space for placing shelters, generators or other equipment. Items not specifically addressed will be priced on an individual basis.

Preference will be given to providers wishing space higher on the towers. The NCBA may limit the size of antennas or duration of leases for antennas located below the top 80 feet.

Tower leases will be accepted based on maximum allowable loading of a tower. If, in the sole discretion of the NCBA, an analysis of the structural integrity of the tower is deemed necessary, then the costs of the analysis will be borne by the lessee.

**Option 2:**

**WIRELESS INTERNET SERVICE PROVIDERS (WISPs)** may enter a master lease for tower space on all NCBA owned or operated towers. The tower access charge under the master lease (the “Master Tower Access Charge”) shall be \$2,000 per month. For each tower the NCBA adds to its system subsequent to the adoption of this rate schedule, the Master Tower Access Charge shall automatically increase by \$250 per month. The Master Tower Access Charge also includes any colocation charges in available shelters and cabinets located at the tower sites as well as 10 square feet of ground space for lessee’s cabinet. The location of the tower space leased pursuant to this paragraph shall be determined in the sole discretion of the NCBA. If, in the sole discretion of the NCBA, an analysis of the structural integrity of a tower is deemed necessary, then the costs of the analysis will be borne by the lessee.

These rates apply to towers operated by the NCBA. Rates for towers leased by the NCBA may be subject to approval by the lessor.

**Increase in Rates:**

Rates are firm for a contract or lease term which does not exceed five years.

For contract and lease terms exceeding five years, the contract or lease shall provide for either of the following payment adjustments: (a) if an extension of an original term is month-to-month or year-to-year, then beginning with the first month of the extension, payment shall be increased 3%, and thereafter by 3% on each subsequent annual anniversary, or (b) if the term is for five years with a right of renewal in five year increments, then upon each renewal payment shall be increased 12%.

**Penalty and Interest:**

Any sum due NCBA and unpaid by the due date shall be assessed a 10% penalty and carry interest at the rate of 12% *per annum*.

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Ms. Rorrer noted that staff had taken Dr. Cohill's recommendations and had shaped up the rate schedule to address residential vs business class and active vs passive services; including a description of these services. She noted that they had added a one circuit residential GPON 1GB that would allow 1GB service to be marketed and sold. It was noted that 1GB = 1000 MB. She added that they still may want to tweak the prices of each circuit. Ms. Rorrer then noted that the amended schedule added a second option for tower access leasing providing an option for WISPS to lease all towers for one monthly fee. She noted that this allowed them to deploy on all towers and not to have to pick and choose; getting more bang for their buck.

Ms. Rorrer noted that there was previously a tower discount; however this pricing brought 7-8 towers into play for \$250 per tower at \$2000 per month with a provision to increase the fee by \$250 should new towers be added.

Mr. Strong then asked what was meant by "best effort" and he understood that there was a fixed bandwidth pool and capacity was divided.

Dr. Cohill noted that "best effort" referred to the given priority to data as it traversed the network. He noted that 25/5 service was provisioned to rate limit for ISPs. He added that for example, a 25/5 circuit was sold and it was delivered over a 1GB GPON connection with no more than a 32 bit split. He noted that all 32 users would have to be on at the same time for it to be limited.

Mr. Strong then questioned whether or not with a 1GB best effort 32:1 split, you had to have more than a 1GB for that to work. Dr. Cohill, noted you would not, that was the bandwidth of the connection to the network then there was a rate limited amount of IP connection. It was noted that one provider wanted to sell 1GB that was delivered over the same connection as the 25/5.

Mr. Strong added he was struggling with that and Ms. Rorrer noted she thought it was important that when the Authority sold a circuit of a certain size, that the Authority was not the limiting factor, the speed was limited by the ISP's backhaul. It was noted that 1GB was an extreme amount of bandwidth and it was difficult to define and prioritize these without there being some limitation based on traffic.

Mr. Strong then confirmed that the 1GB service was not throttled if nobody else was using the circuit.

Dr. Cohill noted that the NCBA rate structure denoted what services the Authority would be delivering and it explained that it would be shared and at what levels. He added that cable companies split 200:1 sometimes and that the 1GB bandwidth would work very well. He noted that nothing deceptive was being proposed and the difference between 25/5 and 1GB was not what NCBA was promising, it was what the ISPs were telling people they were delivering. He added that it was the difference between the IP connection coming through the ISP versus the hauling of the bits across the NCBA network and one had little to do with the other. He noted that every ISP, unless paying business class, would sell services to many subscribers and all users were competing for bandwidth.

Mr. Strong then related that he had a fiber connection and was experiencing intermittent frames when viewing a sports channel. Dr. Cohill noted that this was a provider backhaul problem and had nothing to do

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with the physical network. Dr. Cohill then noted that was why the Authority wanted an open access network so people had service choices.

Mr. Hale then questioned whether or not in Option 2 of Tower Access, the location was at the discretion of the Authority and the WISPs could be put at the bottom. Ms. Rorrer noted that only the space below the top 30 ft. of space would be available for use. She noted that it was really a WISP rate and it was questioned whether or not if the top space was open were they free to have it. Mr. Bruguiere noted that the Authority should make WISP services a priority and he asked if the Authority built towers, who had the prime spot, WISPs or Cellular Providers. Mr. Hale noted that this had been discussed before and the Authority wanted to provide wireless Internet service, not cell services. Ms. Rorrer noted that they could distinguish between those that supported cellular. Mr. Bruguiere then noted that his area was dying for cell service and that Verizon had four (4) permitted towers in his area and had not built any of them.

Dr. Cohill noted that from a revenue perspective, the Authority would do better with at least one cellular carrier on the towers. He noted this was a marketing issue and if they restricted WISPs, none would locate on the towers.

Mr. Hale then supposed that this could easily be resolved when signing up. Mr. Bruguiere then stated that providing Internet service should be made a priority on towers. Ms. McCann related that the Authority currently only had one (1) cellular carrier on a tower and most of them preferred to have their own towers.

Mr. Carter then noted that staff had extensively discussed the leasing of dark fiber and it had been removed from the rate schedule because it was not in the Authority's best interest to do this. He added that it was removed with concurrence from Dr. Cohill and Phil Payne. He added that it was a NTIA requirement that only a small amount be available and Ms. Rorrer added that it was thought that the dark fiber should be retained for the Authority's own use.

Mr. Bruguiere then asked how the dark fiber would be utilized and Mr. Carter noted that the fiber would be lit by the person leasing it; and Ms. Rorrer noted it became very complicated and it took away the Authority's ability to provide more services.

Mr. Strong then asked if symmetric service required two (2) fibers and Dr. Cohill noted it did not, it used two (2) different colors of light.

Ms. Rorrer noted that only at the 1GB level would the service be best effort.

Dr. Cohill noted a distinction between IP back-haul and circuits. He noted that the Authority had no control over the oversubscription rate for actual internet. He added that it did not matter what the Authority did, they had no control over the actual quality of the service to the customer. He agreed it was important to be truthful on what was promised to be delivered.

Mr. Harvey then noted that the Authority network was open access and subscribers could make a change if they were not satisfied with their service.

Mr. Hale then suggested that the Authority adopt the proposed resolution and authorize a public hearing on the proposed rates.

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Staff then noted the timeline for public hearing notices as follows:

**Minimum Timeline per Code of VA §15.2-5431.25**

**October 6, 2016:** Adopt Resolution **R2016-06** Authorizing Public Hearing

**October 13, 2016:** First Publication of Notice of Public Hearing in NC Times

**October 20, 2016:** Second Publication of Notice of Public Hearing in NC Times

**October 20, 2016 to December 19, 2016:** Sixty (60) Day Notice Period per Code of Virginia §15.2-5431.25 (B)

**December 20, 2016 thereafter:** Conduct the Public Hearing

In response to questions, Dr. Cohill noted that if Ting charged \$89.95 for 1GB service, they would pay \$25 to the Authority and then it would be up to them on what they charged the customer.

Mr. Hale supposed that this would vary depending on the services obtained. It was noted that this was open for discussion after the public hearing and the limitation was that the Authority could not raise the rates if lower rates were advertised.

Ms. Rorrer then noted that the Tier 3 pricing needed to be corrected due to a math mistake. She noted that those prices needed to be cut in half.

Mr. Strong then asked if things could be added to the schedule after it was advertised and Mr. Hale reiterated that they could make changes after the public hearing and Mr. Harvey added that the pricing could be less, but not more. Ms. Rorrer noted that they could give more but could not take anything away.

Mr. Strong then moved to approve resolution **R2016-06** as amended and Mr. Bruguiere seconded the motion.

Members then discussed a date for the public hearing and decided upon 6:00 PM, January 10, 2017.

There being no further discussion, Members voted unanimously (5-0) by roll call vote to approve the motion and the following resolution was adopted:

**RESOLUTION R2016-06**  
**NELSON COUNTY BROADBAND AUTHORITY**  
**REVISION OF ESTABLISHED SCHEDULE OF RATES, FEES AND CHARGES AND**  
**AUTHORIZATION FOR PUBLIC HEARING**

**WHEREAS**, Pursuant to §15.2-5431.25 (B) and (C) of the Virginia Wireless Service Authority Act, the Nelson County Broadband Authority may fix and revise rates, fees and other charges after a public hearing at which all of the users of such facilities; the owners, tenants or occupants of property served or to be served thereby; and all others interested have had an opportunity to be heard concerning the proposed rates, fees and charges; and

**WHEREAS**, after the adoption by the authority of a resolution setting forth the preliminary schedule or schedules fixing and classifying such rates, fees and charges, notice of a public hearing, setting forth the

proposed schedule or schedules of rates, fees and charges, shall be given by two publications, at least six days apart, in a newspaper having a general circulation in the area to be served by such systems at least 60 days before the date fixed in such notice for the hearing.

**NOW, THEREFORE, BE IT RESOLVED**, by the Nelson County Broadband Authority that the revised schedule fixing and classifying proposed rates, fees, and charges is as follows:

**Local Wholesale Access Rates (Rates for Providers to Utilize the Network for Transport to an End User):**

NCBA Proposed Service Types				
Service Tier	Service Class	Service Type	Recommended Wholesale Cost	Comment
Tier 1	Residential GPON	25/5 Mbps	\$25	Best Effort (maximum 32:1 split)
	Residential GPON	1000/1000 Mbps	\$37	Best Effort, symmetric (maximum 32:1 split)
Tier 2	Business GPON	25/25 Mbps	\$75	higher priority than Best Effort (maximum 16:1 split)
	Business GPON	50/50 Mbps	\$150	higher priority than Best Effort (maximum 16:1 split)
	Business GPON	100/100 Mbps	\$300	higher priority than Best Effort (maximum 16:1 split)
	Dedicated Business	250/250 Mbps	\$450	Active Ethernet, higher priority than Best Effort
	Dedicated Business	500/500 Mbps	\$850	Active Ethernet, higher priority than Best Effort
	Dedicated Business	1000/1000 Mbps	\$1000	Active Ethernet, higher priority than Best Effort
Tier 3	Wide Area LAN Service	100/100 Mbps	\$400	Active Ethernet, highest priority, supports QinQ (two or more connections may be needed)
	Wide Area LAN Service	500/500 Mbps	\$640	Active Ethernet, highest priority, supports QinQ (two or more connections may be needed)
	Wide Area LAN Service	1000/1000 Mbps	\$830	Active Ethernet, highest priority, supports QinQ (two or more connections may be needed)

**Service Types:**

- **Tier 1** – Transport service from the service provider’s port in the data center to a single customer location. Traffic is untagged at the customer. Circuit is typically asymmetric and priority is set at Best Effort across the core network. NCBA will observe a maximum 32:1 split.
- **Tier 2** - Transport service from the carrier or provider’s port in the colo to a single customer location. Traffic is untagged at the customer. GPON circuits are symmetric and the priority is set higher than Tier 1 for better performance across the core network. NCBA will observe a maximum 16:1 split on this service tier for GPON connections. Active Ethernet connections are symmetric and have a higher traffic priority than Tier 1 services. An example of this is a package of Internet access for a business with regular use of videoconferencing, heavy cloud-based service use, and large file uploads.
- **Tier 3** – Transport service between the carrier or provider’s port in the colo as well as between multiple customer locations (fee applies for each end-point outside of provider’s NNI). Passed traffic can be tagged or untagged as well as supporting Q-in-Q. The circuit is symmetric and traffic has the highest priority across the core network. An example of this would be a transparent LAN service to link two customer locations.

**Non-Recurring Charges:**

Non-recurring charges (NRC) are those costs incurred in connection with the installation of the fiber drop and ONT. The customer will be responsible for the payment of these cost on the following terms.

NRC not exceeding \$1500 will be discounted as follows:

<u>Term of Contract</u>	<u>Discount</u>
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36 months	20%
48 months	35%
60 or more months	50%

The undiscounted balance of NRC together with any NRC in excess of \$1500 may be amortized over the term of the original contract.

**Colocation Charges for Providers within NCBA shelters:**

Quantity	Monthly Cost
2 RU	\$75.
One-half rack	\$200.
Full Rack	\$350.

All rentals are based on a space available basis. Rental will include access to one 20 amp, 120 volt circuit. Redundant CC power (-48 volt) will be available as well. The Colocation charges include up to 20 amps of

DC power. Additional DC power, subject to availability, will be priced at \$6.25 per amp in 10 amp increments.

**Tower Access:**

***Option 1:***

Location on Tower	Price per Month per Customer
Top thirty feet in 10 foot sections	\$275 per antenna for first three antennas (includes cables and ancillary equipment such as tower mounted amplifiers) \$150 per additional antenna installed by the same lessee.
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Remaining access in 10 foot sections	\$50 per antenna (includes cables and ancillary equipment such as tower mounted amplifiers)

All tower access charges are in addition to a site access fee of \$200 per month. Site access fee entitles lessee access to electric power (contracted for by lessee) and ground space for cabinet (10 square feet). Shelter colocation charges and local transport charges are additional as are lease space for placing shelters, generators or other equipment. Items not specifically addressed will be priced on an individual basis.

Preference will be given to providers wishing space higher on the towers. The NCBA may limit the size of antennas or duration of leases for antennas located below the top 80 feet.

Tower leases will be accepted based on maximum allowable loading of a tower. If, in the sole discretion of the NCBA, an analysis of the structural integrity of the tower is deemed necessary, then the costs of the analysis will be borne by the lessee.

***Option 2:***

**WIRELESS INTERNET SERVICE PROVIDERS (WISPs)** may enter a master lease for tower space on all NCBA owned or operated towers. The tower access charge under the master lease (the “Master Tower Access Charge”) shall be \$2,000 per month. For each tower the NCBA adds to its system subsequent to the adoption of this rate schedule, the Master Tower Access Charge shall automatically increase by \$250 per month. The Master Tower Access Charge also includes any colocation charges in available shelters and cabinets located at the tower sites as well as 10 square feet of ground space for lessee’s cabinet. The location of the tower space leased pursuant to this paragraph shall be determined in the sole discretion of the NCBA. If, in the sole discretion of the NCBA, an analysis of the structural integrity of a tower is deemed necessary, then the costs of the analysis will be borne by the lessee.

These rates apply to towers operated by the NCBA. Rates for towers leased by the NCBA may be subject to approval by the lessor.

**Increase in Rates:**

Rates are firm for a contract or lease term which does not exceed five years.

For contract and lease terms exceeding five years, the contract or lease shall provide for either of the following payment adjustments: (a) if an extension of an original term is month-to-month or year-to-year, then beginning with the first month of the extension, payment shall be increased 3%, and thereafter by 3% on each subsequent annual anniversary, or (b) if the term is for five years with a right of renewal in five year increments, then upon each renewal payment shall be increased 12%.

**Penalty and Interest:**

Any sum due NCBA and unpaid by the due date shall be assessed a 10% penalty and carry interest at the rate of 12% *per annum*.

**BE IT FURTHER RESOLVED**, that the Nelson County Broadband Authority does hereby authorize a public hearing to be held on the proposed revised schedule of rates, fees, and charges at 6:00 PM on January 10, 2017 as prescribed by §15.2-5431.25 (B) of the Virginia Wireless Service Authority Act and hereby resolves that the proposed revised schedule of rates, fees, and charges shall be in effect for the interim period until formally approved.

C. Network Operator & Outside Plant Services

Network Operator:

Mr. Carter recommended that the Authority Board authorize the issuance of a Request for Proposals (RFP) for the same or revised scope of Network Operator services. It was noted that it was not in the Authority's best interest to have an ISP providing these services and they were currently not receiving the services that they were contracted to provide. He added that Ting had expressed an interest in not serving in that role in the future and preferred to be an ISP only.

Mr. Bruguire noted that being the network operator was too much for the Authority to do itself and Mr. Carter agreed; noting that it may be possible in the future if the Authority wanted to add staff. Mr. Hale noted that he thought that should be a long term objective and that they should proceed with an RFP. It was noted that the network operator contract was annually renewable on December 1st and it was questioned if the Authority could even find another one before then. Ms. Rorrer advised that they should just start the process and Ting would provide the services as long as they were needed. She added that concern had been expressed from the other ISPs that Ting may have an unfair advantage. She noted that Rockbridge just hired one and there were people out there that were willing to do it.

Mr. Strong asked if there would be an opportunity for Authority members to edit the RFP and Mr. Carter noted there would be and he would send it out for comment.

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With no objections noted, Members agreed by consensus to move forward with Issuing the RFP for Network Operations.

Mr. Hale then reiterated that this was a recommendation of Design Nine.

OSP (Outside Plant) Services:

Mr. Carter noted that staff has had an issue identifying other companies to provide this service and CCTS had picked up the pace recently. Dr. Cohill noted the need for emergency break fixes and that a firm was needed that had a splice truck etc. for this. He noted that drop work was more easily done by somebody local. It was noted that there was a firm in Bedford looking for work, they could be an option, and this needed to be explored before a solid recommendation was made.

Mr. Strong inquired if restoration was in the contract with the installer and Mr. Carter noted it was in the contract with CCTS. Dr. Cohill noted that this should be in both contracts.

Mr. Bruguere asked who was responsible if a property was not properly restored, and Mr. Carter noted that CCTS was and they would be notified until the problem was fixed.

#### D. Network Incentives- Discounts, Amortization of NRCs & Neighborhood Builds

Mr. Carter advised that the proposed rate structure just endorsed by the Board maintained the discounts and the ability to amortize over five (5) years. He noted that these had been continued and last year, the discount was to be re-evaluated in one year.

In discussing the neighborhood build policy, it was noted that \$4,000 applied to an individual. It was also noted that they were allowed to amortize up to that cost and in a neighborhood situation that added up; therefore it was cut back to \$2,500 for amortization. Ms. Rorrer noted that they also got a discount of up to \$1,500 from the Authority. She added that a person in a neighborhood build who was not in on the build initially, would have to pay the same build cost in the future; however they could amortize up to \$4,000 dollars.

Mr. Carter reiterated that they could still get discounts of up to \$1,500 if they got both the ISP discount and the Authority discount.

Ms. McCann then noted that the rate structure did not limit the amount that could be amortized and Mr. Harvey noted he thought a person could only amortize up to a certain amount beyond the discounted amount.

In response to questions on how this was handled, Ms. McCann noted that the Authority billed the installs to the ISP and they got a \$750 discount and then the customers were billed the balance of the install over whatever their contract term was. She added that how the ISP got it from their customer was up to them. Ms. Rorrer added that they paid this monthly and it did not cost them anything up front.

#### E. Network Marketing

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Mr. Carter noted the schedule of the marketing plan and stated that an insert would be sent out with the tax bills. Members and Staff briefly discussed edits that could be made to the insert and Mr. Carter noted that it would already be sent out as is. Mr. Crane noted that there had been a lot of interest generated from the last insert.

**F. Central Virginia Electric Cooperative (CVEC) Broadband RFI**

Mr. Carter noted that he had sent in a response letter to the CVEC Request for Interest (RFI) and had asked for a meeting to discuss the possibility of the Authority responding on a more limited scale. He noted that he had received no response from them thus far. It was noted that the deadline for final submittal was the end of November and he would call them if he did not hear anything soon. He added that the RFI was for service to 38,000 of their customers and that was beyond the Authority's reach right now. Mr. Hale suggested that not much time be spent on that right now and Mr. Carter agreed. He added that he would propose to use the infrastructure in the County to provide services; however they wanted this to be CVEC system wide.

**III. Other Business (As May Be Presented)**

There was no other business considered by the Authority Board.

**IV. Adjournment**

At 5:50 PM, Mr. Strong moved to adjourn and Mr. Brugiere seconded the motion. There being no further discussion, Members voted unanimously by voice vote to approve the motion and the meeting adjourned.

Report to Nelson County Broadband Authority

Meeting Date: 11/8/2016

Prepared by Susan Rorrer

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I. Operational

Total Number of Customers on 8/31/16: 187

Installations for September and October: 33

Pending Installations: 23

Total Number of Customers on 10/31/16: 240

II. Administrative

Currently working with two neighborhoods that would add an estimated 52 customers on the initial neighborhood build. There are approximately 35 individuals to date seeking service along the Afton Mountain Road fiber extension.

III. Financial

attached

**BROADBAND FUND @10/31/2016****OPERATIONS**

Beginning Balance 7/1/2016	\$ 406,720.80
July-August 2016 Expenditures	\$ (60,401.45)
July-August 2016 Revenues	\$ 42,493.00
September-October 2016 Expenditures	\$ (86,536.59)
September-October 2016 Revenues	\$ 58,085.84
Subtotal	\$ 360,361.60
General Fund Transfer	\$ 100,000.00
Ending Balance 10/31/2016	\$ 460,361.60

Current Year Revenue Exceeds Expense by \$ 53,640.80

**EXPANSION PROJECT**

Beginning Balance 7/1/2016	\$ (4,730.14)
July-August 2016 Expenditures	\$ (18,244.75)
July-August 2016 Revenues	\$ 30,436.94
September-October 2016 Expenditures	\$ (5,073.00)
September-October 2016 Revenues	\$ 12,406.43
Ending Balance 10/31/2016	\$ 14,795.48

**SUMMARY OF FUND BALANCE**

Project Funds	\$ 14,795.48
Amortized Installation Fund	\$ 22,841.40
Operational Funds	\$ 437,520.20
Available Bank Balance @10/31/2016	\$ 475,157.08

MAJOR ACCT#	DESCRIPTION	BUDGET AMOUNT	APPR. AMOUNT	CURRENT AMOUNT	Y-T-D AMOUNT	BALANCE	% REMAIN.
999	***Revenues-Broadband Network***						
1502	***Revenue from Use of Property***						
0020	Fiber Leases	4,000.00	4,000.00	2,950.95	3,951.90	48.10	1.20
0030	Tower Leases	88,521.00	88,521.00	1,756.76	6,331.76	82,189.24	92.84
	***Revenue from Use of Property***	92,521.00	92,521.00	4,707.71	10,283.66	82,237.34	88.88
1620	***Charges for Services***						
0001	Network Access Charges	118,125.00	118,125.00	23,469.80	46,980.81	71,144.19	60.22
0100	Other Network Charges	16,000.00	16,000.00	1,642.95	5,355.45	10,644.55	66.52
	***Charges for Services***	134,125.00	134,125.00	25,112.75	52,336.26	81,788.74	60.97
1803	***Charges for Services***						
0001	Expenditure Refunds	.00	.00	.00	1,292.56	1,292.56	100.00-
	***Charges for Services***	.00	.00	.00	1,292.56	1,292.56	100.00-
1899	***Installation Reimbursements***						
0110	Installation Upfront Payments	25,000.00	25,000.00	17,614.36	21,036.86	3,963.14	15.85
0115	Installation Amortized Payments	37,549.00	37,549.00	7,163.52	15,629.50	21,919.50	58.37
	***Installation Reimbursements***	62,549.00	62,549.00	24,777.88	36,666.36	25,882.64	41.37
	***Revenue from Use of Property***	289,195.00	289,195.00	54,598.34	100,578.84	188,616.16	65.22
3201	***Grants & Transfers***						
4101	***Non-Revenue Receipts***						
4105	***Transfers***						
0100	Transfer from General Fund	100,000.00	100,000.00	.00	100,000.00	.00	.00
0503	Transfer from CDBG Fund	50,422.00	50,422.00	.00	42,843.37	7,578.63	15.03
	***Transfers***	150,422.00	150,422.00	.00	142,843.37	7,578.63	5.03
	***Non-Revenue Receipts***	150,422.00	150,422.00	.00	142,843.37	7,578.63	5.03
9999	***Year Ending Balance***						
0001	Year Ending Balance	100,611.00	100,611.00	.00	.00	100,611.00	100.00
	***Year Ending Balance***	100,611.00	100,611.00	.00	.00	100,611.00	100.00
	***Year Ending Balance***	100,611.00	100,611.00	.00	.00	100,611.00	100.00
	--FUND TOTAL--	540,228.00	540,228.00	54,598.34	243,422.21	296,805.79	54.94

MAJOR ACCT#	DESCRIPTION	BUDGET AMOUNT	APPR. AMOUNT	CURRENT AMOUNT	Y-T-D AMOUNT	ENCUMBRANCE AMOUNT	UNENCUMBERED BALANCE	% REMAIN.
94100	***Broadband Network***							
94200	***Network Operations***							
1011	Remuneration-Broadband Authority	2,625.00	2,625.00	750.00	1,125.00	.00	1,500.00	57.14
3002	Professional Services (NetOp)	81,600.00	81,600.00	9,540.00	29,320.00	.00	52,280.00	64.06
3003	Professional Services	15,000.00	15,000.00	720.00	9,427.50	.00	5,572.50	37.15
3004	Repair & Maintenance	7,400.00	7,400.00	410.00	2,972.42	.00	4,427.58	59.83
3005	Insurance	2,500.00	2,500.00	.00	2,357.00	.00	143.00	5.72
3006	Utilities Including Locates	45,000.00	45,000.00	382.44	11,765.85	.00	33,234.15	73.85
3007	Advertising	4,000.00	4,000.00	500.00	500.00	.00	3,500.00	87.50
3009	Installation Expense (Discount)	63,750.00	63,750.00	3,704.00	17,271.00	.00	46,479.00	72.90
3010	Installation Expense	25,000.00	25,000.00	.00	9,852.88	.00	15,147.12	60.58
3011	Installation Expense (Amortized)	86,549.00	86,549.00	2,233.00	27,023.80	.00	59,525.20	68.77
3012	Service Contracts	10,000.00	10,000.00	.00	.00	.00	10,000.00	100.00
5401	Office Supplies	300.00	300.00	.00	17.59	.00	282.41	94.13
5501	Travel (Mileage)	450.00	450.00	39.53	59.29	.00	390.71	86.82
7007	Equipment	45,000.00	45,000.00	15,102.75	31,179.63	.00	13,820.37	30.71
8112	Tower Leases	9,530.00	9,530.00	.00	.00	.00	9,530.00	100.00
8500	Network Strategic Plan	22,000.00	22,000.00	.00	4,066.08	.00	17,933.92	81.51
	***Network Operations***	420,704.00	420,704.00	33,381.72	146,938.04	.00	273,765.96	65.07
94500	***CDBG EXPANSION 2015***							
3140	Design Drawings	402.00	402.00	.00	.00	.00	402.00	100.00
3160	Construction	47,958.00	47,958.00	5,073.00	20,368.00	.00	27,590.00	57.52
3170	Permit Fees & Misc.	1,640.00	1,640.00	.00	.00	.00	1,640.00	100.00
8203	Materials	.00	.00	.00	2,949.75	.00	2,949.75	100.00
	***CDBG EXPANSION 2015***	50,000.00	50,000.00	5,073.00	23,317.75	.00	26,682.25	53.36
	***Broadband Network***	470,704.00	470,704.00	38,454.72	170,255.79	.00	300,448.21	63.82
999000	***Contingency***							
9901	Contingency Reserve	69,524.00	69,524.00	.00	.00	.00	69,524.00	100.00
	***Contingency***	69,524.00	69,524.00	.00	.00	.00	69,524.00	100.00
	***Contingency***	69,524.00	69,524.00	.00	.00	.00	69,524.00	100.00
	--FUND TOTAL--	540,228.00	540,228.00	38,454.72	170,255.79	.00	369,972.21	68.48

7 November, 2016

IV C

To: Nelson County Broadband Authority  
From: S. Carter, County Administrator  
Re: County Administrator's Report (November 8, 2016 Meeting)

**A) Expansion Project** – CCTS has advised Phase 3 will be complete by 11-4 (and therefore the overall project) with the company then working on new service connections that have resulted from the project.

**B) Broadband Planning Project** – County and Design 9 staffs are working to complete the outcomes of the Authority's work session on 10-6 (final build out plan & cost estimate, including identification of served & unserved areas, issuance of an RFP for network operation services, and follow up on outside plant work.

**C) CVEC RFI** – per input with CVEC staff, a County/NCBA proposal to the Co-Op's Broadband RFI will not be submitted.

**D) NCBA Customer Base:** See Net Op Report.