



Office: 270.542.4121
Fax: 270.542.4800
10725 Bowling Green Road, P.O. Box 97
Auburn, KY 42206

RECEIVED

JAN 07 2015

PUBLIC SERVICE
COMMISSION

January 5, 2015

Jeff R. Derouen, Executive Director
KY Public Service Commission
211 Sower Boulevard
P.O. Box 615
Frankfort, KY 40602-0615

Re: In the Matter of the Application of Logan Telephone Cooperative, Inc. for a Certificate of Public Convenience and Necessity for Construction of a Fiber-to-the-Premise Network

Dear Mr. Derouen,

Attached for your review is an Application for a Certificate of Public Convenience and Necessity for the construction of a fiber-to-the-premise (FTTP) network in a specific operating area of Logan Telephone Cooperative, Inc.

Enclosed are one (1) original application and ten (10) copies. Also enclosed are one (1) copy of the maps, plans, specs and drawings of the proposed construction in pdf format on compact disk and two (2) copies on paper.

If you have any questions about this application please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Gregory A. Hale". The signature is written in a cursive style with a large, prominent "G" and "H".

Gregory A Hale
General Manager/Executive Vice President
ghale@loganphone.com
Main: 270.542.4121
Fax: 270.542.4800

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

RECEIVED

AN 07 2015

PUBLIC SERVICE
COMMISSION

In the Matter of:

THE APPLICATION OF LOGAN TELEPHONE)
COOPERATIVE, INC. FOR A CERTIFICATE)
OF PUBLIC CONVENIENCE AND NECESSITY)
FOR THE CONSTRUCTION OF FIBER-TO-THE-)
PREMISE IN A PORTION OF LOGAN COUNTY,)
KENTUCKY)

Case No. _____

**APPLICATION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND
NECESSITY FOR CONSTRUCTION OF FIBER-TO-THE-PREMISE**

Logan Telephone Cooperative, Inc.(Logan), pursuant to KRS 278.020 and 807 KAR 5:001, hereby submits this application for a certificate of public convenience and necessity (CPCN) for the construction of Fiber-to-the-Premise (FTTP) in a portion of Logan County, Kentucky.

1. Pursuant to 807 KAR 5:001 Section 14(1) The full name, address and email address of Logan is Logan Telephone Cooperative, Inc., P.O. Box 97, 10725 Bowling Green Road, Auburn, KY 42206, ghale@loganphone.com.
2. Pursuant to 807 KAR 5:001 Section 14(2) Logan is a Kentucky Cooperative Corporation in good standing and our Articles of Incorporation are attached as Exhibit A.
3. Pursuant to 807 KAR 5:001 Section 15(2)(a) we provide the following facts relied upon to show that the proposed construction will be required by public convenience and necessity.
 - a. Currently Logan members are requesting higher speed broadband services than are available through Logan's existing copper/fiber hybrid network.
 - b. In the FCC's 2014 Measuring Broadband Report¹ the FCC found that the average speed subscribed had reached 21.2 Megabytes, an increase of 36% over the previous year. This type of speed, and the speeds Logan members will need in the future, will require a FTTP network.

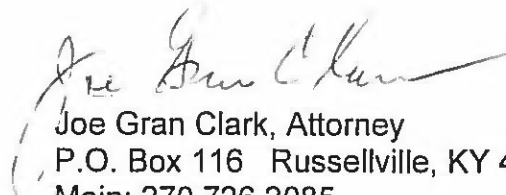
¹ <http://data.fcc.gov/download/measuring-broadband-america/2014/2014-Fixed-Measuring-Broadband-America-Report.pdf> pages 13-14 See Exhibit B

- c. It is generally known that fiber will be an economic engine for long term growth and will create new opportunities in employment, education, health care and entrepreneurship. Quality of life for members will increase as work-from-home opportunities, entertainment services, cloud computing, and other IP offerings require very high speed broadband only available through FTTP networks like those proposed in this application.
4. Pursuant to 807 KAR 5:001 Section 15(2)(b) Logan does not require franchise approval from any public authority to deploy the facilities described herein. Any highway or railway permits will be obtained prior to start of construction. The majority of this construction will be on private right-of-way.
5. Pursuant to 807 KAR 5:001 Section 15(2)(c) Logan provides the following description of the proposed location, construction manner and identifies any competitors.
 - a. The proposed location for this construction is an area in and around the area known as the Dennis Community that Logan currently serves by copper cable coming from a number of remote sites. Maps showing the proposed area and the effected routes are included with this application. This area is located in our Auburn exchange.
 - b. This project will enable Logan to provide enhanced broadband services to an additional 455 customers. Initially Logan will offer members service up to 100 megabits per second through this active fiber network. The proposed project will provide members with the most advanced broadband infrastructure available. This infrastructure will allow for the offering of other advanced services in the future.
 - c. Fiber optic cable will be placed between Logan's Auburn Central Office and each inhabitable premise that desires service on the proposed routes. The cable will be direct buried at a depth of at least 30 inches. The interface between the buried main line cable and the subscriber cable or drop will be in a below ground level handhole or an above ground pedestal.
 - d. In addition to the fiber-optic cable facilities, Logan will place electronic equipment in their Auburn central office to transport the optical signal from the central switch and central network to each customer. This optical signal will be converted at the customer's premise to an electrical signal for service to the customer's telephone, computer or other network device.
 - e. Even though this project will not use RUS financing, the construction will be performed under Rural Utilities Service (RUS) specifications for direct buried plant and for customer premise cable.

- f. Logan has competition in fixed broadband services from Suddenlink Communications in very small portions of the proposed construction area but no other companies provide basic voice services in our service areas. No other companies have deployed FTTP networks in our service areas.
 - g. Logan expects construction to begin in March 2015 and be completed in November 2015 with customers cutover to the new network beginning in November 2015 and ending in the first quarter of 2016.
6. Pursuant to 807 KAR 5:001 Section 15(2)(d), two copies of the required maps, plan, specs and drawings are being included with this application as well as one copy in pdf format on compact disk.
 7. Pursuant to 807 KAR 5:001 Section 15(e) Logan plans to finance all proposed construction, engineering and electronics through the use of existing capital assets. Logan currently holds zero debt and has enough cash on hand to meet the financial requirements of this project.
 8. Pursuant to 807 KAR 5:001 Section 15(f) Logan estimates that annual operational costs will significantly decline in the areas where FTTP is deployed. While it is difficult to identify costs savings in just a portion of our network, A FTTP Council study² reports that survey respondents estimate an average of over 20 percent savings in operational costs due to Active FTTP deployment.
 9. At this time, Logan does not anticipate any local telephone rate adjustments associated with this project. As the commission is well aware, Logan may be required by the Federal Communications Commission to raise rates in the future to meet federal urban benchmarks in order to receive Logan's full share of Universal Service or Connect America Fund dollars.

Based on the foregoing, and in accordance with KRS 278.020, Logan Telephone Cooperative respectfully requests that the Commission issue a CPCN to deploy a FTTP network in the included service area.

Respectfully submitted,



Joe Gran Clark, Attorney
P.O. Box 116 Russellville, KY 42276
Main: 270.726.2085
Fax: 270.726.2081
jgclarklaw@bellsouth.net

² <http://www.ftthcouncil.org/d/do/1136> page 10 See Exhibit C

LOGAN TELEPHONE
COOPERATIVE
EXHIBIT A

ARTICLES OF INCORPORATION OF LOGAN
COUNTY RURAL TELEPHONE COOPERATIVE CORPORATION

KNOW ALL MEN BY THESE PRESENTS: that the following persons do associate themselves together to form a corporation under the laws of the Commonwealth of Kentucky: W. Gaston Coke, Auburn, Kentucky; Loyd Johns, R. F. D., Lewisburg, Kentucky; John McCarley, R. F. D., Russellville, Kentucky; R. B. Porter, Quality, Kentucky; Buford Campbell, R. F. D., Adairville, Kentucky; R. H. Bailey, R. F. D., Homer, Kentucky; H. L. Barnes, Lewisburg, Kentucky; A. G. Johnson, R. F. D., Adairville, Kentucky; T. I. Mobley, R. F. D., Auburn, Kentucky.

ARTICLE I. The Logan County Rural Telephone Cooperative Corporation, Inc. is formed pursuant to provisions of KRS 279.310 to KRS 270.600.

ARTICLE II. The name of the corporation shall be Logan County Rural Telephone Cooperative Corporation, Inc.

ARTICLE III. The address of its principal office shall be Russellville, Kentucky, and the incorporators are as follows: W. Gaston Coke, Auburn, Kentucky; Loyd Johns, R. F. D., Lewisburg, Kentucky; John McCarley, R. F. D., Russellville, Kentucky; R. B. Porter, Quality, Kentucky; Buford Campbell, R. F. D., Adairville, Kentucky; R. H. Bailey, R. F. D., Homer, Kentucky; H. L. Barnes, Lewisburg, Kentucky; A. G. Johnson, R. F. D., Adairville, Kentucky; T. I. Mobley, R. F. D., Auburn, Kentucky.

ARTICLE IV. The trustees shall be the same as the incorporators and they shall have the power to adopt by-laws for this corporation.

ARTICLE V. The corporation shall operate in parts of Logan, Todd, Muhlenberg, Butler, Warren, and Simpson counties, Kentucky.

ARTICLE VI. The private property of the trustees and members of the cooperative shall not be subject to the payment of the debts of the corporation.

ARTICLE VII. The corporation shall have perpetual existence.

ARTICLE VIII. W. Gaston Coke, Auburn, Kentucky, shall be process agent.

IN TESTIMONY WHEREOF, witness the hands of the parties
hereto this 15th day of May, 1954.

R. H. Bailey
Loyd Johns
H. L. Barnes
A. G. Johnson
T. I. Mobley

J. B. Campbell
John D. McCarley
R. B. Porter
W. Gaston Coke

STATE OF KENTUCKY
COUNTY OF LOGAN

I, J. Cranville Clark, a notary public in and for the
county and state aforesaid, do hereby certify that the foregoing
Articles of Corporation of Logan County Rural Telephone Cooperative
Corporation, Incorporated were this day produced to me in my
office by W. Gaston Coke, Loyd Johns, John McCarley, R. B. Porter,
Buford Campbell, R. H. Bailey, H. L. Barnes, A. G. Johnson,
T. I. Mobley, and acknowledged and delivered by said parties to
be their act and deed.

Witness my hand this 15th day of May, 1954.

J. Cranville Clark
Notary Public, Logan County, Ky.
Comm Exp 20 Jan 1958

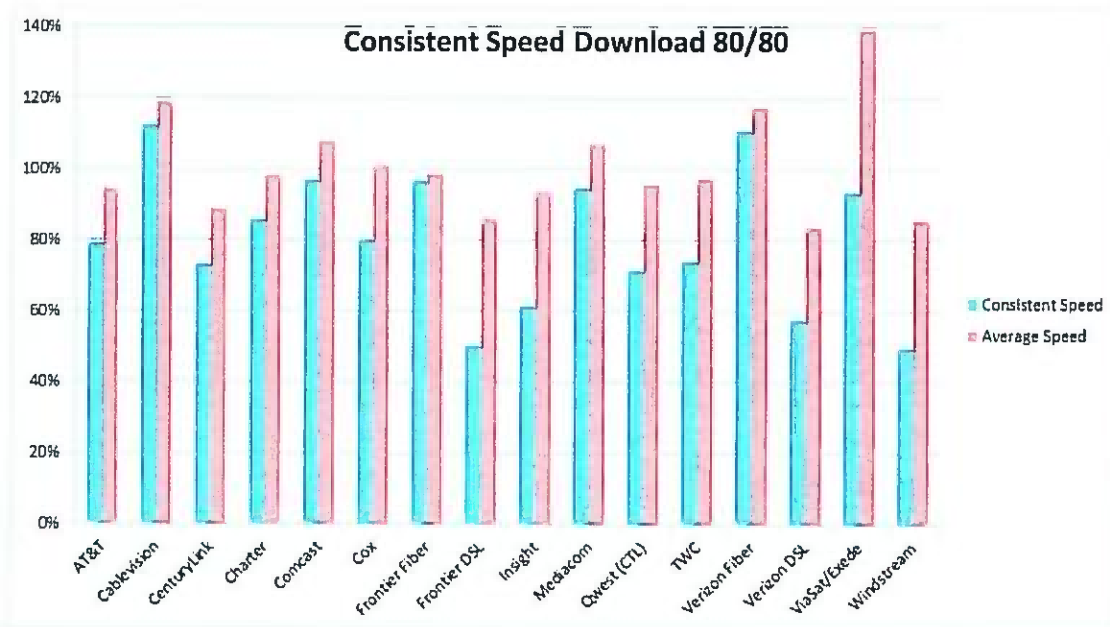
ORIGINAL COPY
FILED AND RECORDED

MAY 24 1954

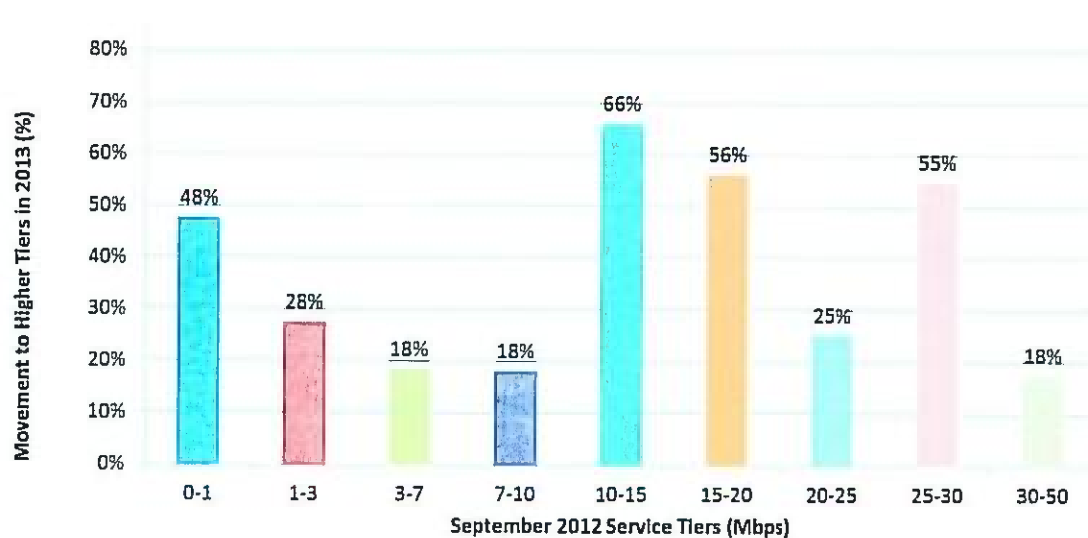
Charles K. Connell
SECRETARY OF STATE OF KENTUCKY
FRANKFORT, KENTUCKY
BY D. L. Davis
CHIEF CORP. CLERK

LOGAN TELEPHONE EXHIBIT B

Measuring Broadband America



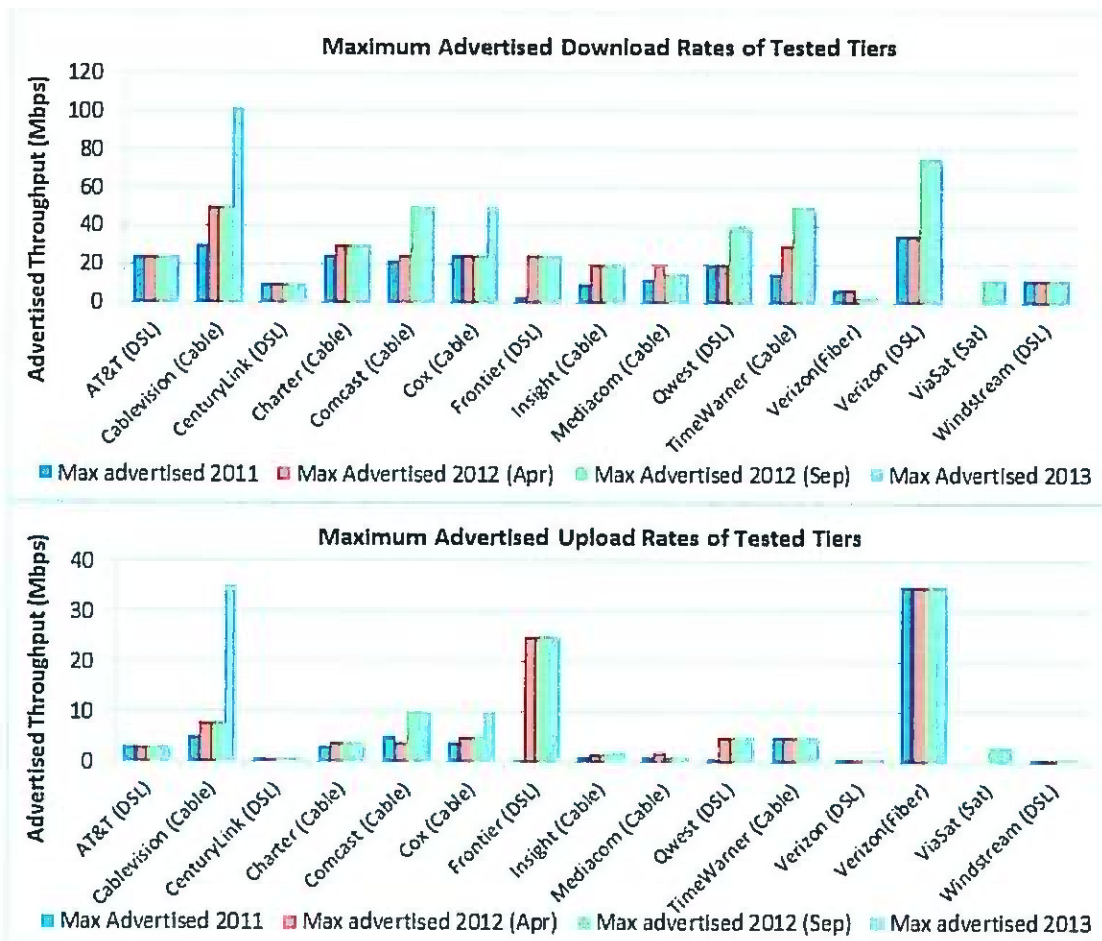
3. Consumers are continuing to migrate to faster speed tiers.



This chart shows that consumers are moving to faster speed tiers, continuing the trend that we highlighted both in the February 2013 Report and the July 2012 Report. Specifically, the bars represent the percentage of volunteers from each of the September 2012 tested speed tiers that moved to a higher speed tier by the September 2013 testing period. Movement to a higher speed tier can occur in two ways: 1) a consumer can subscribe to a higher tier from the

same or competing ISP or 2) an ISP can upgrade service for all consumers within a specific service tier. In our tests of download speed, we added five new tiers above 30 Mbps from the last testing period,²⁰ and our tests of upload performance included one additional offering above 8 Mbps.²¹ In this Report, we find the average subscribed speed is now 21.2 Mbps, representing an average annualized speed increase of about 36 percent from the 15.6 Mbps average of 2012.

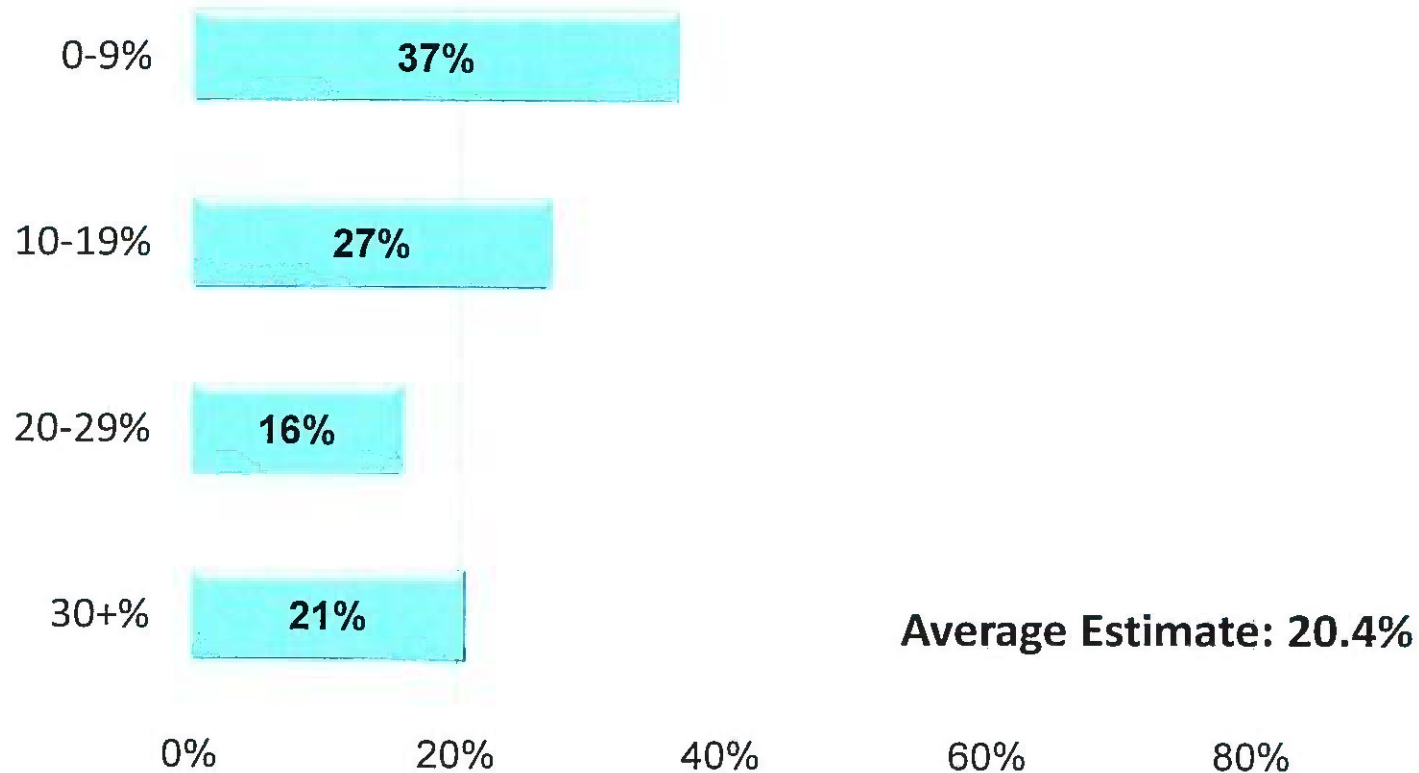
4. Improvements in Speed are not Uniform Across Speed Tiers Tested



Our report focuses on the most popular speed tiers offered by an ISP – that is, the maximum speed used by a major percentage of an ISP’s consumers. We note that a particular ISP may offer faster speed tiers either throughout their territory or in specific portions of their territory that are not as popular as the speed tiers we tested. However, as the Commission’s goal is to advance high speed Internet access to all Americans, we believe highlighting the maximum speed *among the popular speed tiers*, is the most effective way to demonstrate the spread of high speed Internet access.

FTTH Reduces Operations Costs

Estimated Opex Savings among Those with Active FTTH Customers



**Building Fiber-to-the-Home
Communities Together**



5-1-2015
10:30 AM
10:30 AM
10:30 AM

Logan Telephone Cooperative
2015 Auburn West Plans and Specs

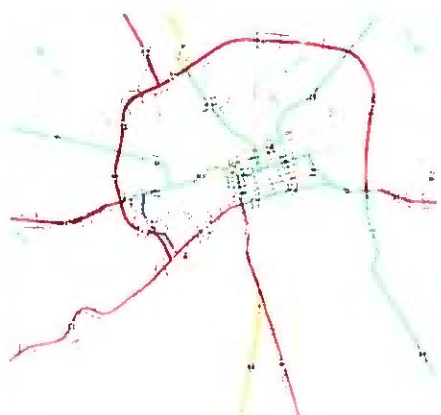
Logan Telephone Cooperative (Logan) plans to construct Fiber-To-The-Premise (FTTP) facilities to 455 premises in the Western portion of the Auburn exchange of Logan County. Plans are to deploy this active FTTP system to increase the broadband speeds available to customers. This construction will afford this portion of Logan County with State of the Art broadband facilities.

The only other communications provider in this area is Sudden Link Cable TV. Sudden Link has limited fiber-optic facilities and coaxial cable facilities in small portions of the area.

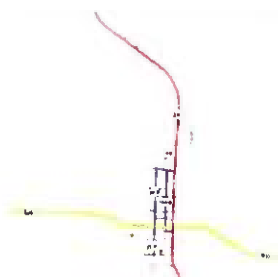
Logan's fiber optic cable will be placed between our Auburn Central Office and each inhabitable residential premise and each business premise on the proposed routes. This cable will be direct buried at a depth of 30 inches. The interface between the buried main line cable and the subscriber cable will be either in a below ground level handhole or an above ground pedestal.

In addition to the fiber-optic cable facilities, Logan will place electronic equipment in the Auburn Central Office to transport the optical signal from the central office to each premise. Calix will be the primary manufacturer for this equipment. This optical signal will be converted at the customer's premise to an electrical signal in Internet Protocol (IP) format for service to the customer's computer or network device.

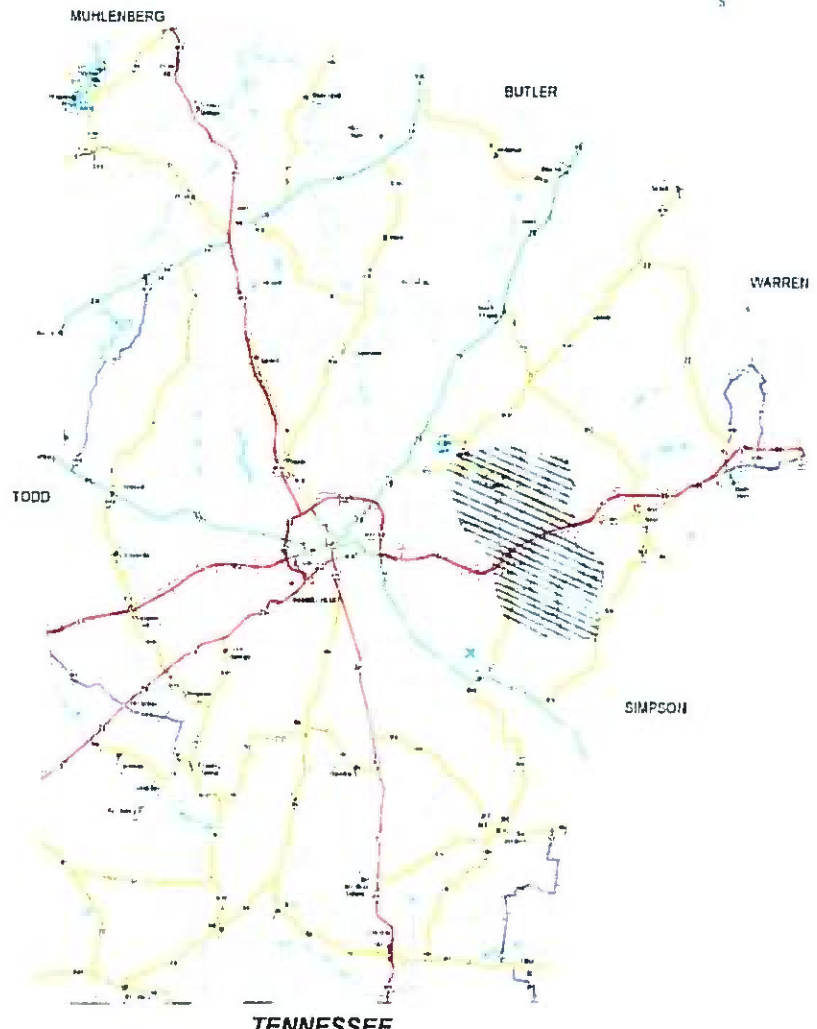
Construction will be performed under Rural Utilities Service (RUS) specifications for direct buried plant and for customer premise cable. Construction is expected to start in March and complete by November 25, 2015. All required highway permits will be obtained prior to construction start. The majority of this construction will be on private right-of-way.



RUSSELLVILLE



ADAIRVILLE



- State Primary Road System**
- Interstate
 - State Primary
 - State Secondary
 - County Road
 - Other Road
 - Bridge
 - Interchange
 - Other
 - Day Trip
 - Area
 - Interchange Area
 - Line
 - State Park
 - National Park - Recreation Area
 - State Park
 - Wildlife Area
 - Designated Area
 - State National Park



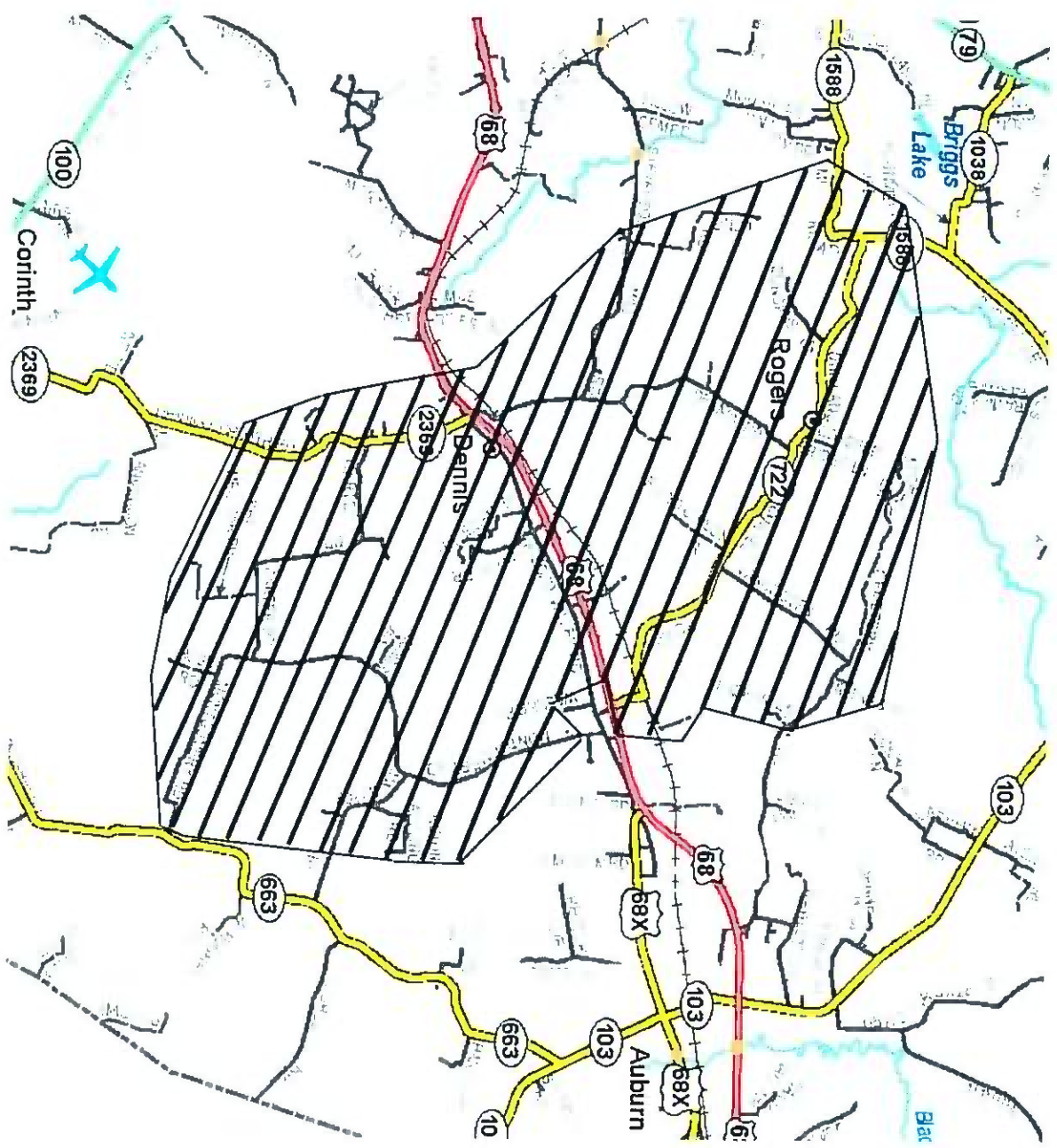
**State Primary Road System
LOGAN COUNTY**

Map revision: NOVEMBER 2014
 Map data collected using GPS technology
 Route by State Plane Coordinate System (NAD83)
transportation.ky.gov/planning

SHEET
1 OF 2

**CPCN APPLICATION
AUBURN WEST**





**CPCN APPLICATION
AUBURN WEST**

Logan Telephone Cooperative, INC.
Auburn West FTTP
OSP Cost Estimate

10-LT 14011

Unit	Quantity	Labor	Extended Labor	Material	Extended Material	Unit Cost	Total Cost
BDO5(1)	39	\$196 00	\$7,644 00	\$381 83	\$14,891 37	\$577 83	\$22,535 37
SUBTOTAL SECTION BDO			\$7,644.00		\$14,891.37		\$22,535.37
BFO12RW	95,154	\$2 43	\$231,224 22	\$0 59	\$56,140 86	\$3 02	\$287,365 08
BFO12RI	440	\$0 93	\$409 20	\$0 43	\$189 20	\$1 36	\$598 40
BFO12RIE	590	\$0 95	\$560 50	\$0 43	\$253 70	\$1 38	\$814 20
BFO24RW	25,630	\$2 67	\$68,432 10	\$0 66	\$16,915 80	\$3 33	\$85,347 90
BFO24RI	320	\$0 93	\$297 60	\$0 51	\$163 20	\$1 44	\$460 80
BFO48RW	29,770	\$3 10	\$92,287 00	\$0 82	\$24,411 40	\$3 92	\$116,698 40
BFO72RW	18,654	\$2 64	\$49,246 56	\$0 96	\$17,907 84	\$3 60	\$67,154 40
BFO72RI	3,338	\$0 93	\$3,104 34	\$0 81	\$2,703 78	\$1 74	\$5,808 12
BFO96RW	15,672	\$2 81	\$44,038 32	\$1 11	\$17,395 92	\$3 92	\$61,434 24
BFO96RIE	514	\$0 95	\$488 30	\$1 00	\$514 00	\$1 95	\$1,002 30
BFO144RW	45,612	\$2 90	\$132,274 80	\$1 39	\$63,400 68	\$4 29	\$195,675 48
BFO144RIE	1,200	\$0 95	\$1,140 00	\$1 24	\$1,488 00	\$2 19	\$2,628 00
BFO288RW	21,798	\$3 15	\$68,663 70	\$2 31	\$50,353 38	\$5 46	\$119,017 08
BFO288RIE	1,130	\$1 25	\$1,412 50	\$2 12	\$2,395 60	\$3 37	\$3,808 10
BFO864RW	1,580	\$2 89	\$4,566 20	\$6 40	\$10,112 00	\$9 29	\$14,678 20
BFO864RIE	18,568	\$2 25	\$41,778 00	\$6 21	\$115,307 28	\$8 46	\$157,085 28
1) (BFO144RW	7,218	\$2 97	\$21,437 46	\$1 39	\$10,033 02	\$4 36	\$31,470 48
1A) & BFO288R)D	7,360	\$1 21	\$8,905 60	\$2 31	\$17,001 60	\$3 52	\$25,907 20
2) (BFO144RW	260	\$3 10	\$806 00	\$1 39	\$361 40	\$4 49	\$1,167 40
2A) & BFOV(1x1 25))D	260	\$0 84	\$218 40	\$0 66	\$171 60	\$1 50	\$390 00
BFOV(1x1 25)H	2,500	\$9 00	\$22,500 00	\$0 56	\$1,400 00	\$9 56	\$23,900 00
BFOV(1x1 25)HR	1,584	\$37 63	\$59,605 92	\$0 56	\$887 04	\$38 19	\$60,492 96
BFOV(1x1 25)HRR	70	\$84 69	\$5,928 30	\$0 56	\$39 20	\$85 25	\$5,967 50
SUBTOTAL SECTION BFO			\$859,325.02		\$409,546.50		\$1,268,871.52
BHF(12x12x12)	9	\$167 50	\$1,507 50	\$98 32	\$884 88	\$265 82	\$2,392 38
BHF(22X42X30)TIER 15	262	\$362 50	\$94,975 00	\$326 90	\$85,647 80	\$689 40	\$180,622 80
BHF(30x48x30)TIER 15	12	\$412 50	\$4,950 00	\$636 52	\$7,638 24	\$1,049 02	\$12,588 24
SUBTOTAL SECTION BH			\$101,432.50		\$94,170.92		\$195,603.42
BM2	239	\$28 08	\$6,711 12	\$30 81	\$7,363 59	\$58 89	\$14,074 71
BM2A	71	\$23 83	\$1,691 93	\$9 29	\$659 59	\$33 12	\$2,351 52
BM53	280	\$27 10	\$7,588 00	\$33 40	\$9,352 00	\$60 50	\$16,940 00
BM53L	261	\$32 73	\$8,542 53	\$41 30	\$10,779 30	\$74 03	\$19,321 83
BM60(1x1 25)	1,930	\$9 00	\$17,370 00	\$0 56	\$1,080 80	\$9 56	\$18,450 80
BM60(1x1 25)D	3,694	\$9 00	\$33,246 00	\$0 56	\$2,068 64	\$9 56	\$35,314 64
BM60(1x1 25)R	4,675	\$37 63	\$175,920 25	\$0 56	\$2,618 00	\$38 19	\$178,538 25
BM60(1x1 25)RR	1,850	\$101 88	\$188,478 00	\$0 56	\$1,036 00	\$102 44	\$189,514 00
BM60(1x1 50)	40	\$13 90	\$556 00	\$0 74	\$29 60	\$14 64	\$585 60
BM60(1x1 50)D	180	\$13 90	\$2,502 00	\$0 74	\$133 20	\$14 64	\$2,635 20
BM60(1x1 50)R	225	\$37 70	\$8,482 50	\$0 74	\$166 50	\$38 44	\$8,649 00
BM60(1x1 50)RR	120	\$101 88	\$12,225 60	\$0 74	\$88 80	\$102 62	\$12,314 40
BM60(2x1 25)	40	\$14 59	\$583 60	\$1 29	\$51 60	\$15 88	\$635 20
BM60(2x1 25)D	40	\$14 59	\$583 60	\$1 29	\$51 60	\$15 88	\$635 20
BM60(2x1 25)R	145	\$38 25	\$5,546 25	\$1 29	\$187 05	\$39 54	\$5,733 30
BM60(2x1 25)RR	30	\$106 70	\$3,201 00	\$1 29	\$38 70	\$107 99	\$3,239 70
BM60(2x1 50)D	150	\$14 71	\$2,205 50	\$1 49	\$223 50	\$16 20	\$2,430 00
BM60(2x1 50)R	470	\$38 25	\$17,977 50	\$1 49	\$700 30	\$39 74	\$18,677 80
BM60(2x1 50)RR	80	\$107 58	\$8,606 40	\$1 49	\$119 20	\$109 07	\$8,725 60
BM60(3x1 25)	40	\$19 88	\$795 20	\$1 84	\$73 60	\$21 72	\$868 80
BM60(3x1 25)R	50	\$64 61	\$3,230 50	\$1 84	\$92 00	\$66 45	\$3,322 50
BM60(3x1 25)RR	60	\$145 38	\$8,722 80	\$1 84	\$110 40	\$147 22	\$8,833 20
BM61(1)	30	\$14 69	\$440 70	\$0 33	\$9 90	\$15 02	\$450 60
BM71	10,200	\$11 00	\$112,200 00	\$0 56	\$5,712 00	\$11 56	\$117,912 00
BM71E(12)	10,200	\$12 00	\$122,400 00	\$0 56	\$5,712 00	\$12 56	\$128,112 00
BM71E(18)	10,200	\$14 00	\$142,800 00	\$0 56	\$5,712 00	\$14 56	\$148,512 00
BM71E(24)	10,200	\$16 67	\$170,034 00	\$0 56	\$5,712 00	\$17 23	\$175,746 00
BM71CF	1,100	\$20 16	\$22,176 00	\$0 56	\$616 00	\$20 72	\$22,792 00
BM83	451	\$23 60	\$10,643 60	\$5 88	\$2,651 88	\$29 48	\$13,295 48
SUBTOTAL SECTION BM			\$1,095,461.58		\$63,149.75		\$1,158,611.33
HBFOX L	4	\$241 25	\$965 00	\$782 46	\$3,129 82	\$1,023 71	\$4,094 82
HBFOL	6	\$231 24	\$1,387 44	\$545 89	\$3,275 33	\$777 13	\$4,662 77

Logan Telephone Cooperative, INC.
Auburn West FTTP
OSP Cost Estimate

10-LT-14011

Unit	Quantity	Labor	Extended Labor	Material	Extended Material	Unit Cost	Total Cost
HBFOM	50	\$201 00	\$10,050 00	\$378 95	\$18,947 63	\$579 95	\$28,997 63
HBFOS	215	\$201 00	\$43,215 00	\$348 06	\$74,831 83	\$549 06	\$118,046 83
SUBTOTAL SECTION HBF			\$55,617.44		\$100,184.60		\$155,802.04
HO1	1,136	\$30 38	\$34,511 68	\$0 54	\$613 44	\$30 92	\$35,125 12
HO1R	4,248	\$21 88	\$92,946 24	\$1 09	\$4,630 32	\$22 97	\$97,576 56
SUBTOTAL SECTION HO			\$127,457.92		\$5,243.76		\$132,701.68
MDU12	2	\$108 50	\$217 00	\$41 35	\$82 70	\$149 85	\$299 70
NIDO	367	\$82 38	\$30,233 46	\$47 10	\$17,285 70	\$129 48	\$47,519 16
NIDO9	82	\$132 38	\$10,855 16	\$72 59	\$5,952 38	\$204 97	\$16,807 54
SUBTOTAL SECTION NID			\$41,305.62		\$23,320.78		\$64,626.40
SEBO2	116 450	\$2 04	\$237,558 00	\$0 18	\$20,961 00	\$2 22	\$258,519 00
SEBO2E(24)	17,025	\$2 44	\$41,541 00	\$0 27	\$4,596 75	\$2 71	\$46,137 75
SEBO2I	2,482	\$1 75	\$4,343 50	\$0 32	\$794 24	\$2 07	\$5,137 74
SEBO6	322	\$2 06	\$663 32	\$0 21	\$67 62	\$2 27	\$730 94
SEBO6I	108	\$1 75	\$189 00	\$0 21	\$22 68	\$1 96	\$211 68
SUBTOTAL SECTION SE			\$284,294.82		\$26,442.29		\$310,737.11
UO864R	1,672	\$1 86	\$3,109 92	\$7 42	\$12,406 24	\$9 28	\$15,516 16
SUBTOTAL SECTION UO			\$3,109.92		\$12,406.24		\$15,516.16
WBHF	4	\$287 50	\$1,150 00	\$17 50	\$70 00	\$305 00	\$1,220 00
WHBFOM	1	\$175 00	\$175 00	\$57 44	\$57 44	\$232 44	\$232 44
SUBTOTAL SECTION WW			\$1,325.00		\$127.44		\$1,452.44
XXBHF	1	\$155 88	\$155 88	\$0 00	\$0 00	\$155 88	\$155 88
SUBTOTAL SECTION XX			\$155.88		\$0.00		\$155.88
GRAND TOTAL			\$2,577,129.70		\$749,483.65		\$3,326,613.35

LOGAN TELEPHONE COOPERATIVE
AUBURN WEST
ELECTRONICS ESTIMATES

<u>PART NUMBER</u>	<u>MODEL</u>	<u>DESCRIPTION</u>	<u>UNIT COST</u>	<u>QTY</u>	<u>TOTAL COST</u>
100-04011	844 ONT	844 GigaCenter ONT	\$ 300.00	460	\$ 138,000.00
100-04068	ONT	INDOOR UPS WALL MOUNT 12V 7.2AH 24W	\$ 46.00	460	\$ 21,160.00
100-03894	ONT	INDOOR UPS POWER CORD 7 PIN TO 8 PIN 10' BLACK	\$ 9.00	460	\$ 4,140.00
100-03448	ONTCMN-INDOOR	ONT FIBER MGMT ASSEMBLY QTY 20	\$ 180.00	23	\$ 4,140.00
100-03249	ONT	717GE ONT	\$ 309.00	2	\$ 618.00
100-02062	UPS	UPS-24WATTS Single ONT UPS	\$ 46.00	2	\$ 92.00
000-00529	E7-20	E7-20 SYSTEM PACKAGE	\$ 2,089.50	1	\$ 2,089.50
100-02092	E7-20	E7-20 SWITCH CONTROL PROCESSOR	\$ 4,196.50	2	\$ 8,393.00
100-02093	E7-20	E7-20 GE-24X CARD	\$ 2,796.50	20	\$ 55,930.00
100-01792	OIM AE	2X 1GE BIDI CSFP DUAL BIDI 20 KM 1490 NM LC	\$ 168.75	240	\$ 40,500.00
100-01660	OIM TRANSPORT	1GE SFP MULTI-MODE 500M 850NM LC	\$ 60.00	2	\$ 120.00
ELECTRONICS TOTAL					\$ 275,182.50
SALES TAX					\$ 16,510.95
FREIGHT					\$ -
110-00724	800GE RSG	EXTENDED WARRANTY 4 YEARS FOR 844 GigaCenter ONT	\$ 20.00	460	\$ 9,200.00
INSTALLATION		RACKS, RECTIFIRERS, PATCH PANELS, SPLICE BOX, LABOR			\$ 10,000.00
GRAND TOTAL					\$ 310,893.45

**LOGAN TELEPHONE COOPERATIVE
AUBURN WEST FTTP
TOTAL CONSTRUCTION ESTIMATE**

Drops	455
Route Miles	54.76
Drop Miles	25.83
Total Miles	80.59
OSP Estimate	\$3,326,613
Electronics Estimate	\$310,893
Engineering Estimate	\$588,938
Total Estimate	<u>\$4,226,445</u>