

Logan Telephone Cooperative

2014 Chandlers Plans and Specs

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PUBLIC SERVICE
UTILITY DIVISION

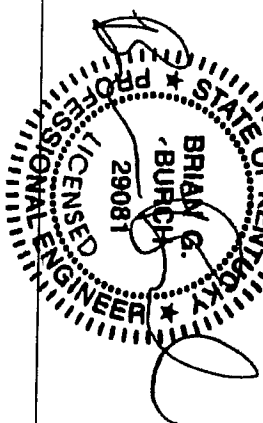
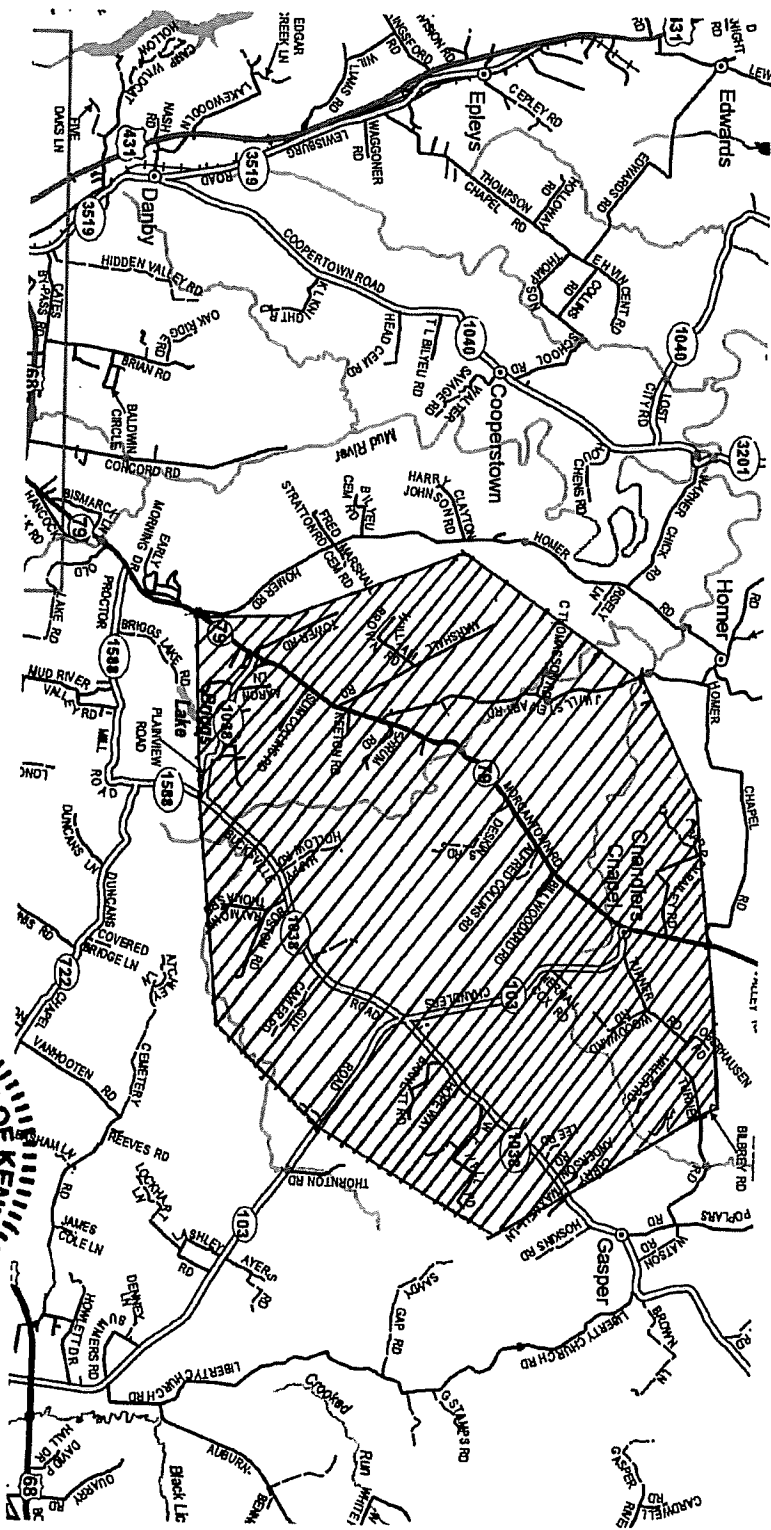
Logan Telephone Cooperative (Logan) plans to construct Fiber-To-The-Premise (FTTP) facilities to 508 premises in the Northwest portion of the Auburn exchange of Logan County. Plans are to deploy this active FTTP system to increase the broadband speeds available to customers. This construction will afford this portion of Logan County with State of the Art broadband facilities.

This area of Logan County has no other wireline communications service providers.

Plans are to place a new concrete hut near an existing cell tower to house the electronics for this build out. Logan's fiber optic cable will be placed between this electronics site 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 this electronics site to transport the optical signal from the electronics site 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. Logan will also add electronic equipment at this site to make the site a node on Logan's main fiber ring. This will help with service reliability. An existing generator will also be installed at this location to help keep services working during any extended power outages.

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 late July and complete by January 31, 2014. All required highway permits will be obtained prior to construction start. The majority of this construction will be on private right-of-way.



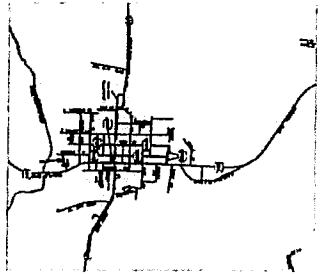
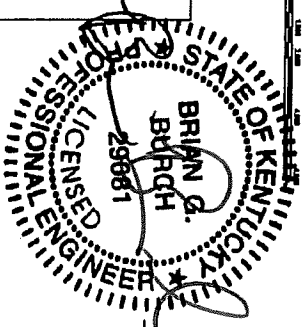
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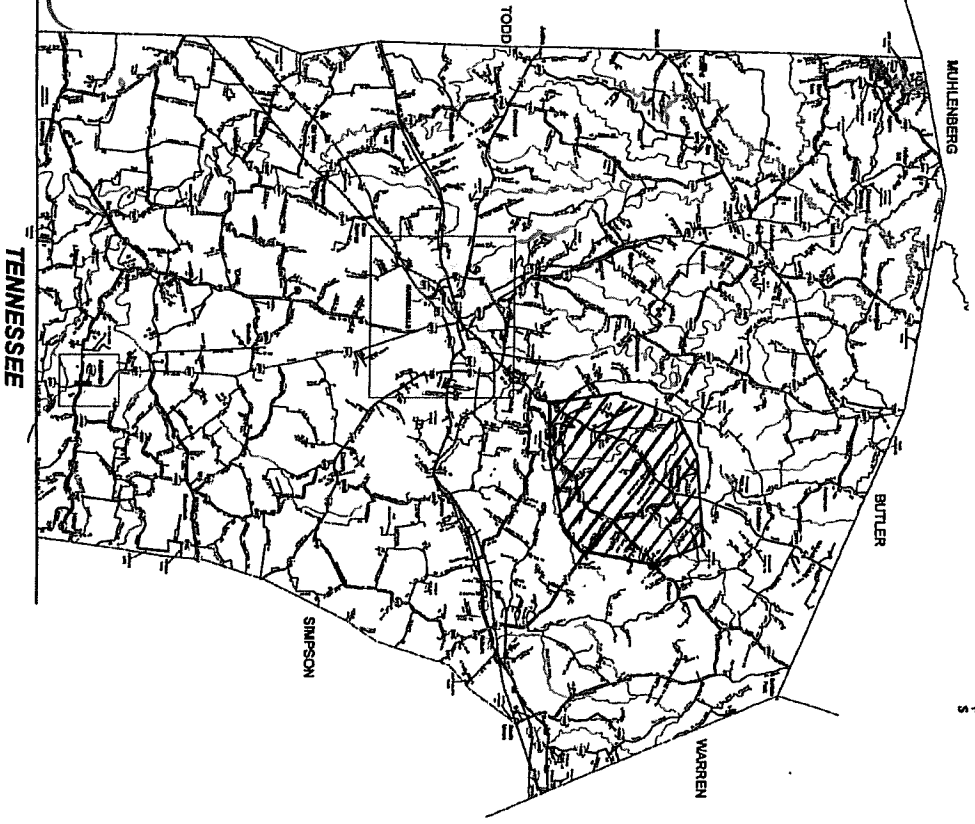
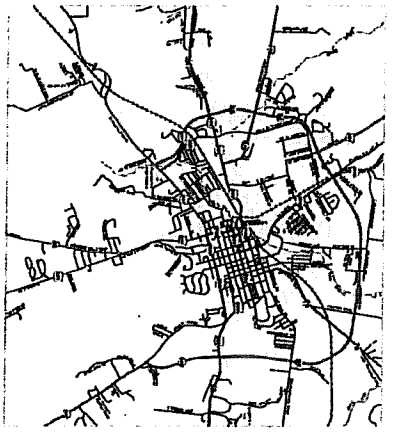
CPCN APPLICATION
CHANDLERS OVERVIEW



State Primary Road System	
	Interstate
	State Route
	County Road
	Local Road
	Unimproved Area
	Other Road
	Railroad
	Waterway
	Airport
	School
	Cemetery
	Public Building
	Church
	Park
	Cemetery
	Public Building
	Church
	Park



RUSSELLVILLE



Kentucky
 State Primary Road System
 LOGAN COUNTY

Last Date Printed: FEBRUARY 2013
 Date of Revision: NONE
 Project Name: Logan County Primary Road System
 Project Number: 10LT-14011

**CPCN APPLICATION
 CHANDLERS OVERVIEW**



**Logan Telephone Cooperative Corporation
Chandlers FTTP
OSP Cost Estimate**

10-LT-14011

Unit	Quantity	Labor	Extended Labor	Material	Extended Material	Unit Cost	Total Cost
BDO5G	86	\$200.00	\$17,200.00	\$456.00	\$39,216.00	\$656.00	\$56,416.00
SUBTOTAL SECTION BDO			\$17,200.00		\$39,216.00		\$56,416.00
BFO12RW	109,633	\$2.00	\$219,266.00	\$0.74	\$81,493.86	\$2.74	\$300,759.86
BFO12RI	750	\$1.00	\$750.00	\$0.48	\$357.50	\$1.48	\$1,107.50
BFO24RW	53,085	\$2.00	\$106,170.00	\$0.83	\$44,237.50	\$2.83	\$150,407.50
BFO24RI	1,848	\$1.00	\$1,848.00	\$0.56	\$1,041.04	\$1.56	\$2,889.04
BFO48RW	17,861	\$2.00	\$35,722.00	\$0.75	\$13,395.75	\$2.75	\$49,117.75
BFO48RI	1,238	\$1.00	\$1,238.00	\$0.75	\$928.50	\$1.75	\$2,166.50
BFO72RW	3,866	\$2.00	\$7,732.00	\$1.19	\$4,600.54	\$3.19	\$12,332.54
BFO72RI	250	\$1.00	\$250.00	\$1.19	\$297.50	\$2.19	\$547.50
BFO96RW	22,030	\$2.00	\$44,060.00	\$1.37	\$30,181.10	\$3.37	\$74,241.10
BFO144RW	13,264	\$2.25	\$29,844.00	\$1.66	\$22,018.24	\$3.91	\$51,862.24
BFO144RI	3,190	\$1.05	\$3,349.50	\$1.66	\$5,295.40	\$2.71	\$8,644.90
BFO216RW	24,586	\$2.50	\$61,465.00	\$2.16	\$53,105.76	\$4.66	\$114,570.76
BFO216RI	322	\$1.25	\$402.50	\$2.16	\$695.52	\$3.41	\$1,098.02
BFO288RW	9,906	\$2.50	\$24,765.00	\$2.59	\$25,656.54	\$5.09	\$50,421.54
BFO288RI	1,554	\$1.25	\$1,942.50	\$2.59	\$4,024.86	\$3.84	\$5,967.36
BFO432RI	2,236	\$1.25	\$2,795.00	\$4.32	\$9,659.52	\$5.57	\$12,454.52
BFO864RW	3,408	\$2.50	\$8,520.00	\$7.42	\$25,287.36	\$9.92	\$33,807.36
BFO864RI	3,070	\$1.50	\$4,605.00	\$7.42	\$22,779.40	\$8.92	\$27,384.40
BFO864RIE	4,752	\$2.50	\$11,880.00	\$7.42	\$35,259.84	\$9.92	\$47,139.84
1) (BFO144RW	870	\$2.20	\$1,914.00	\$1.66	\$1,444.20	\$3.86	\$3,358.20
1A) &BFO432R	690	\$1.00	\$690.00	\$4.32	\$2,980.80	\$5.32	\$3,670.80
1B) &BFO864R)D	690	\$1.00	\$690.00	\$7.42	\$5,119.80	\$8.42	\$5,809.80
2) (BFO288RW	14,560	\$2.50	\$36,400.00	\$2.59	\$37,710.40	\$5.09	\$74,110.40
2A) &BFO432R)D	12,984	\$1.05	\$13,633.20	\$4.32	\$56,090.88	\$5.37	\$69,724.08
3) (BFO144RW	11,578	\$2.20	\$25,471.60	\$1.66	\$19,219.48	\$3.86	\$44,691.08
3A) & BFO576R)D	10,650	\$2.50	\$26,625.00	\$5.76	\$61,344.00	\$8.26	\$87,969.00
4) (BFO864RW	7,068	\$2.50	\$17,670.00	\$7.42	\$52,444.56	\$9.92	\$70,114.56
4A) &BFO96R)D	8,508	\$1.00	\$8,508.00	\$1.19	\$10,124.52	\$2.19	\$18,632.52
5) (BFO864RW	4,802	\$2.50	\$12,005.00	\$7.42	\$35,630.84	\$9.92	\$47,635.84
5A) &BFO72R)D	6,116	\$1.00	\$6,116.00	\$1.19	\$7,278.04	\$2.19	\$13,394.04
6) (BFO144RW	3,990	\$2.50	\$9,975.00	\$1.66	\$6,623.40	\$4.16	\$16,598.40
6A) &V(1X1.50)D	3,170	\$0.90	\$2,853.00	\$1.29	\$4,089.30	\$2.19	\$6,942.30
7) (BFO288RW	2,298	\$2.50	\$5,745.00	\$2.59	\$5,951.82	\$5.09	\$11,696.82
7A) & BFO144R)D	2,298	\$1.00	\$2,298.00	\$1.66	\$3,814.68	\$2.66	\$6,112.68
8) (BFO864RW	1,864	\$2.50	\$4,660.00	\$7.42	\$13,830.88	\$9.92	\$18,490.88
8A) & BFO24R)D	1,970	\$1.00	\$1,970.00	\$0.56	\$1,103.20	\$1.56	\$3,073.20
9) (BFO864RW	1,938	\$2.50	\$4,845.00	\$7.42	\$14,379.96	\$9.92	\$19,224.96
9A) &BFO48R)D	2,338	\$1.00	\$2,338.00	\$0.75	\$1,753.50	\$1.75	\$4,091.50
BFOV(1x1.25)H	2,796	\$8.00	\$22,368.00	\$0.65	\$1,808.08	\$8.65	\$24,176.08
BFOV(1x1.25)HR	1,068	\$21.50	\$22,962.00	\$0.65	\$694.20	\$22.15	\$23,656.20
BFOV(1x1.25)W	100	\$10.00	\$1,000.00	\$0.70	\$70.00	\$10.70	\$1,070.00
BFOV(1X1.50)H	1,062	\$10.00	\$10,620.00	\$1.29	\$1,369.98	\$11.29	\$11,989.98
BFOV(2X1.50)H	490	\$11.25	\$5,512.50	\$1.49	\$728.47	\$12.74	\$6,240.97
BFOV(3X1.50)H	662	\$9.00	\$5,958.00	\$1.49	\$984.17	\$10.49	\$6,942.17
BFOV(4X1.50)W	1,295	\$10.00	\$12,950.00	\$1.80	\$2,331.00	\$11.80	\$15,281.00
BFOV(5X1.50)I	60	\$5.00	\$300.00	\$2.00	\$120.00	\$7.00	\$420.00
SUBTOTAL SECTION BFO			\$832,681.80		\$729,355.89		\$1,562,037.69
BHF(12x12x12)	13	\$200.00	\$2,600.00	\$93.52	\$1,215.72	\$293.52	\$3,815.72
BHF(22X42X30)TIER 15	304	\$350.00	\$106,400.00	\$209.79	\$63,777.17	\$559.79	\$170,177.17
BHF(30x48x30)TIER 15	2	\$400.00	\$800.00	\$566.50	\$1,132.99	\$966.50	\$1,932.99
BHF(39X48X30)TIER 15	17	\$426.42	\$7,249.14	\$570.28	\$9,694.76	\$996.70	\$16,943.90
SUBTOTAL SECTION BH			\$117,049.14		\$75,820.64		\$192,869.78
BM2	304	\$28.08	\$8,537.33	\$30.81	\$9,365.23	\$58.89	\$17,902.56
BM2A	112	\$23.83	\$2,669.33	\$9.29	\$1,040.48	\$33.12	\$3,709.81
BM53	207	\$26.30	\$5,444.10	\$33.40	\$6,913.80	\$59.70	\$12,357.90
BM53L	328	\$31.97	\$10,485.07	\$41.30	\$13,545.31	\$73.26	\$24,030.37
BM60(1X1.25)	5,136	\$9.42	\$48,364.00	\$0.65	\$3,321.28	\$10.06	\$51,685.28
BM60(1X1.25)D	6,943	\$9.42	\$65,403.06	\$0.65	\$4,489.81	\$10.07	\$69,892.87
BM60(1X1.25)R	1,514	\$33.47	\$50,673.58	\$0.65	\$984.10	\$34.12	\$51,657.68
BM60(1X1.25)RR	696	\$70.00	\$48,720.00	\$0.65	\$450.08	\$70.65	\$49,170.08
BM60(1x1.50)	444	\$8.00	\$3,552.00	\$0.74	\$328.56	\$8.74	\$3,880.56

Logan Telephone Cooperative Corporation
Chandlers FTTP
OSP Cost Estimate

10-LT-14011

Unit	Quantity	Labor	Extended Labor	Material	Extended Material	Unit Cost	Total Cost
BM60(1x1.50)D	372	\$8.00	\$2,976.00	\$0.74	\$276.52	\$8.74	\$3,252.52
BM60(1x1.50)R	206	\$33.47	\$6,894.82	\$0.74	\$152.44	\$34.21	\$7,047.26
BM60(1x1.50)RR	322	\$70.00	\$22,540.00	\$0.74	\$238.28	\$70.74	\$22,778.28
BM60(1x2)	50	\$8.00	\$400.00	\$1.85	\$92.33	\$9.85	\$492.33
BM60(1x3)	60	\$9.00	\$540.00	\$2.26	\$135.40	\$11.26	\$675.40
BM60(1x8)	60	\$20.00	\$1,200.00	\$4.31	\$258.60	\$24.31	\$1,458.60
BM60(2x1.25)D	80	\$8.00	\$640.00	\$1.29	\$103.47	\$9.29	\$743.47
BM60(2x1.25)R	30	\$50.00	\$1,500.00	\$1.29	\$38.80	\$51.29	\$1,538.80
BM60(2x1.50)	120	\$2.61	\$313.20	\$1.49	\$178.80	\$4.10	\$492.00
BM60(2x1.50)D	2,111	\$8.00	\$16,888.00	\$1.49	\$3,138.35	\$9.49	\$20,026.35
BM60(2x1.50)R	448	\$33.47	\$14,993.07	\$1.49	\$666.03	\$34.95	\$15,659.09
BM60(2x1.50)RR	100	\$70.00	\$7,000.00	\$1.49	\$148.67	\$71.49	\$7,148.67
BM60(3X1.50)D	42	\$8.00	\$336.00	\$2.30	\$96.60	\$10.30	\$432.60
BM61(1)	124	\$7.00	\$868.00	\$0.33	\$41.33	\$7.33	\$909.33
BM71	6,320	\$11.00	\$69,520.00	\$0.00	\$0.00	\$11.00	\$69,520.00
BM71E(12)	6,320	\$12.00	\$75,840.00	\$0.00	\$0.00	\$12.00	\$75,840.00
BM71E(18)	6,320	\$14.00	\$88,480.00	\$0.00	\$0.00	\$14.00	\$88,480.00
BM71E(24)	6,320	\$16.67	\$105,354.40	\$0.00	\$0.00	\$16.67	\$105,354.40
BM71CF	210	\$16.00	\$3,360.00	\$0.00	\$0.00	\$16.00	\$3,360.00
BM83	507	\$25.00	\$12,675.00	\$5.88	\$2,982.85	\$30.88	\$15,657.85
SUBTOTAL SECTION BM			\$676,166.96		\$48,987.11		\$725,154.07
HBFOXL	13	\$300.00	\$3,900.00	\$790.00	\$10,270.00	\$1,090.00	\$14,170.00
HBFOL	7	\$287.00	\$2,009.00	\$630.00	\$4,410.00	\$917.00	\$6,419.00
HBFOM	66	\$208.33	\$13,750.00	\$460.00	\$30,360.00	\$668.33	\$44,110.00
HBFOS	254	\$208.33	\$52,916.67	\$400.00	\$101,600.00	\$608.33	\$154,516.67
SUBTOTAL SECTION HBF			\$72,575.67		\$146,640.00		\$219,215.67
HO1	1,355	\$30.81	\$41,747.55	\$0.54	\$727.18	\$31.35	\$42,474.73
HO1R	6,132	\$23.00	\$141,036.00	\$1.09	\$6,704.32	\$24.09	\$147,740.32
SUBTOTAL SECTION HO			\$182,783.55		\$7,431.50		\$190,215.05
NIDO	447	\$61.39	\$27,442.82	\$52.00	\$23,244.00	\$113.39	\$50,686.82
NIDO9	61	\$92.00	\$5,612.00	\$92.00	\$5,612.00	\$184.00	\$11,224.00
SUBTOTAL SECTION NID			\$33,054.82		\$28,856.00		\$61,910.82
SEBO2	112,111	\$1.80	\$201,799.80	\$0.20	\$22,795.90	\$2.00	\$224,595.70
SEBO2E(18)	168	\$2.30	\$386.40	\$0.20	\$34.16	\$2.50	\$420.56
SEBO2E(24)	14,706	\$2.50	\$36,765.00	\$0.28	\$4,166.70	\$2.78	\$40,931.70
SEBO2I	1,970	\$1.25	\$2,462.50	\$0.20	\$400.57	\$1.45	\$2,863.07
SEBO6	778	\$2.00	\$1,556.00	\$0.26	\$202.28	\$2.26	\$1,758.28
SUBTOTAL SECTION SE			\$242,969.70		\$27,599.61		\$270,569.31
XXBHF	1	\$142.00	\$142.00	\$0.00	\$0.00	\$142.00	\$142.00
XXHBFO	2	\$84.00	\$168.00	\$0.00	\$0.00	\$84.00	\$168.00
SUBTOTAL SECTION XX			\$310.00		\$0.00		\$310.00
GRAND TOTAL			\$2,174,791.64		\$1,103,906.76		\$3,278,698.40

LOGAN TELEPHONE COOPERATIVE
CHANDLERS FTTP
ELECTRONICS ESTIMATES

PART NUMBER	MODEL	DESCRIPTION	UNIT COST	QUANTITY	TOTAL COST
100-03158	800GE R5G	836GE RESIDENTIAL SERVICE GATEWAY	\$ 232.50	351	\$ 81,607.50
100-00049	C7	CIRCUIT BREAKER PANEL	\$ 636.00	2	\$ 1,272.00
100-01790	E7	E7 LINE CARD BLANK	\$ 20.00	5	\$ 100.00
100-03448	ONTCMN-INDOOR	ONT FIBER MGMT ASSEMBLY QTY 20	\$ 180.00	18	\$ 3,240.00
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	15	\$ 41,947.50
100-01792	OIM AE	2X 1GE BIDI CSFP DUAL BIDI 20 KM 1490 NM LC	\$ 168.75	180	\$ 30,375.00
100-01660	OIM TRANSPORT	1GE SFP MULTI-MODE 500M 850NM LC	\$ 60.00	2	\$ 120.00
100-02062	ONT	INDOOR UP5 WALL MOUNT 12V 7.2AH 24W	\$ 46.00	351	\$ 16,146.00
100-02064	ONT	INDOOR UP5 POWER CORD 7 PIN TO 9 PIN 10' BLACK	\$ 9.00	351	\$ 3,159.00
BT77A51AA	7200 Chassis	DWDM 7200 10G Packet Node	\$ 9,500.00	1	\$ 9,500.00
ELECTRONIC 5 TOTAL					\$ 197,949.50
SALES TAX					\$ 11,876.97
FREIGHT					\$ 4,250.00
110-00724	800GE R5G	EXTENDED WARRENTY 4 YEARS FOR 100-03158	\$ 20.00	351	\$ 7,020.00
INSTALLATION					\$ 50,000.00
GRAND TOTAL					\$ 271,096.47

**LOGAN TELEPHONE COOPERATIVE
CHANDLERS FTTP
TOTAL CONSTRUCTION ESTIMATE**

Drops	508
Route Miles	60.98
Drop Miles	24.57
Total Miles	85.55

OSP Estimate	\$3,278,698
Electronics Estimate	\$271,096
Engineering Estimate	\$570,332
Total Estimate	<u>\$4,120,127</u>