

Broadband Technology and Opportunities Program (BTOP)

	Underground		Aerial		Hybrid		Total	
	Per Foot Costs	Per Mile Costs	Per Foot Costs	Per Mile Costs	Per Foot Costs	Per Mile Costs	Per Foot Costs	Per Mile Costs
Maximum	34.74	183,429	9.18	48,451	15.50	81,828	34.74	183,429
Minimum	10.64	56,187	5.47	28,867	6.53	34,478	5.47	28,867
Average	18.38	97,065	6.11	32,271	10.43	55,060	12.24	64,643
Median	15.99	84,425	7.05	37,212	10.82	57,112	11.06	58,397

Organization	State	Cost	Size (LF or SF)	Cost per LF	Notes
Level 3 EON,LLC	TX	6,237,051	5,300	1,176.80	ROW and permitting \$2,653 per site, Site work for manhole install \$11,250 per site, Construction cost is for L&M for fiber entry cables, fiber entry conduits and fiber entry manholes. Total Cost includes DWDM equipment
Level 3 EON,LLC	FL	2,755,000	2,700	1,020.37	ROW and permitting \$2,850 per site, Site work for manhole install \$11,250 per site, Construction cost is for L&M for fiber entry cables, fiber entry conduits and fiber entry manholes. Total Cost includes DWDM equipment
NebraskaLink, LLC	NE	16,496,952	2,376,000	6.94	20% buried construction plus 80% IRU
Land, structure, ROW, appraisals, etc.		604,700	2,640	229.05	Hut Cost per square foot including land and site costs. 290+190=480psf
Architectural and engineering fees		1,753,523	2,376,000	0.74	19% of Construction Costs
Project inspection fees		125,718	2,376,000	0.05	
Construction		9,349,257	2,376,000	3.93	
Equipment		3,588,505	2,376,000	1.51	Power & Batteries, AC Generator and Relay Rack & Cable Rack equal \$46,000 per site. Or \$190/sq ft.
			2,640	1,359.28	Equipment per square foot
Miscellaneous - Fiber leases		1,075,249	8,057,280	0.13	
			1,526	704.62	per mile for IRU FOC lease
Enventis Telecom	MN	24,048,024	2,259,840	10.64	321 miles of FOC and 105 miles of FOC laterals primarily underground
Land, structure, ROW, appraisals, etc.		427,040	432	988.52	includes all hut related investment
Architectural and engineering fees		2,325,503	2,259,840	1.03	17%
Project inspection fees		3,693,293	2,259,840	1.63	
Site work		953,974	2,259,840	0.42	
Construction		13,452,148	2,259,840	5.95	96 strand fiber with splices every 3.5 miles. OSP costs urban at \$75k/mile and rural at \$41k/mile.
Equipment		2,726,000	2,259,840	1.21	
			864	3,155.09	Equipment per square foot
Miscellaneous		160,000	2	80,000.00	Colo fee per unit
Merit Network, Inc.	MI	41,611,526	5,042,400	8.25	72 strand fiber for 80% of route, 86/14 aerial vs underground
Land, structure, ROW, appraisals, etc.		676,199			
Architectural and engineering fees		4,737,179	5,042,400	0.94	19% of Construction Costs
Project inspection fees		1,690,498	5,042,400	0.34	Architectural, engineering and inspection fee approximately 18%
Site work		1,696,898	5,042,400	0.34	
Construction		25,357,463	5,042,400	5.03	
Equipment		5,485,955	5,042,400	1.09	
Miscellaneous		131,324			
Sho-Me Technologies, LLC	MO	29,200,000	2,640,000	11.06	40/60 aerial and underground
Land, structure, ROW, appraisals, etc.		1,047,334	3,600	290.93	\$230,000 investment per 12x20 Hut including Air Handler, ground acq, generator and site prep.
Architectural and engineering fees		-			IRU lease at \$2,500 PFM
Project inspection fees		-			Hut Cost \$333/psf
Site work		75,000			
Construction		17,427,666	2,640,000	6.60	
Equipment		10,650,000	2,640,000	4.03	
			3,600	2,958.33	Equipment per square foot
Miscellaneous		-			
Zayo Bandwidth, LLC	IN	35,825,394	3,305,280	10.84	90/10 aerial vs underground
Land, structure, ROW, appraisals, etc.		-			
Architectural and engineering fees		1,931,658			6%
Project inspection fees					
Site work		400,000			
Construction		32,260,736	3,305,280	9.76	
Equipment		1,113,000	3,305,280	0.34	
Miscellaneous		-			
Zayo Bandwidth, LLC	MN	19,117,990	1,267,200	15.09	70/30 aerial vs underground
Land, structure, ROW, appraisals, etc.		-			
Architectural and engineering fees		1,026,454			7%
Project inspection fees					
Site work		-			
Construction		15,271,893	1,267,200	12.05	

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Organization	State	Cost	Size (LF or SF)	Cost per LF	Notes								
Equipment		2,647,380	1,267,200	2.09									
Miscellaneous		-											
Horizon Telecom	OH	94,963,210	10,348,800	9.18	100% aerial								
Land, structure, ROW, appraisals, etc.		-											
Architectural and engineering fees		7,785,026			11%								
Project inspection fees		-											
Site work		-											
Construction		67,717,624	10,348,800	6.54									
Equipment		14,259,128	10,348,800	1.38									
Miscellaneous		5,201,432											
Appalacian Valley Fiber Network	AL,GA	26,730,257	2,476,320	10.79	90% underground				Install 240 miles of primarily buried fiber and use 50 miles of dark fiber				
Land, structure, ROW, appraisals, etc.		1,729,210			\$1,166,000 for leasing 287 miles or \$4,000 per mile								
Architectural and engineering fees		768,561			4%								
Project inspection fees		220,961											
Site work		-											
Construction		17,702,862	2,476,320	7.15									
Equipment		3,877,461	2,476,320	1.57	Contains \$3.5m for existing 60 miles of network								
Miscellaneous		270,300											
Biddeford Internet Corp	MN	31,753,630	5,808,000	5.47	Aerial project								
Land, structure, ROW, appraisals, etc.		-											
Architectural and engineering fees		-			0%								
Project inspection fees		-											
Site work		9,000,000			Make ready for utility poles								
Construction		20,634,580	5,808,000	3.55	Includes 4 huts at \$83k/ea								
Equipment		800,000	5,808,000	0.14									
Miscellaneous		46,800											
Bend Cable Communications, LLC	OR	6,312,522	696,960	9.06	86/14 aerial vs underground								
Land, structure, ROW, appraisals, etc.		-											
Architectural and engineering fees		-			0%								
Project inspection fees		-											
Site work		-											
Construction		5,235,866	696,960	7.51									
Equipment		1,047,656	696,960	1.50									
Miscellaneous		46,800											
ENMR Telephone Cooperative, Inc.	NM,TX	23,515,451	997,920	23.56	100% underground								
Land, structure, ROW, appraisals, etc.		225,000	960	234.38	per square foot								
Architectural and engineering fees		3,080,000			20%								
Project inspection fees		-											
Site work		-											
Construction		15,690,500	997,920	15.72									
Equipment		4,519,951	997,920	4.53									
Miscellaneous		-	960	4,708.28									
ION Hold Co, LLC	NY,PA.	48,673,735	6,906,240	7.05									
Land, structure, ROW, appraisals, etc.		-											
Architectural and engineering fees		3,116,122			8%								
Project inspection fees		-											
Site work		1,157,001											
Construction		37,772,032	6,906,240	5.47									

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Organization	State	Cost	Size (LF or SF)	Cost per LF	Notes								
Equipment		5,598,140	6,906,240	0.81									
Miscellaneous		-											
Delta Communications	IL	45,395,020	3,907,200	11.62	100% underground								
Land, structure, ROW, appraisals, etc.		525,000											
Architectural and engineering fees		2,500,000			9%								
Project inspection fees		-											
Site work		-											
Construction		27,051,500	3,907,200	6.92									
Equipment		15,318,520	3,907,200	3.92									
Miscellaneous		-											
Dekalb County Government	IL	14,830,204	686,400	21.61	100% underground								
Land, structure, ROW, appraisals, etc.		1,435,485											
Architectural and engineering fees		646,480			6%								
Project inspection fees		-											
Site work		-											
Construction		10,969,239	686,400	15.98									
Equipment		1,695,000	686,400	2.47									
Miscellaneous		-											
Dakota Carrier Network, LLC	ND	15,401,653	1,077,120	14.30	100% underground								
Land, structure, ROW, appraisals, etc.		355,687											
Architectural and engineering fees		627,682			6%								
Project inspection fees		941,506											
Site work		-											
Construction		9,860,644	1,077,120	9.15									
Equipment		3,448,757	1,077,120	3.20									
Miscellaneous		-											
Contact Network	MS	14,480,584	2,217,600	6.53	23/77 aerial vs underground								
Land, structure, ROW, appraisals, etc.		384,000	768	500.00	per square foot								
Architectural and engineering fees		186,000			2%								
Project inspection fees		-											
Site work		359,299											
Construction		11,339,864	2,217,600	5.11									
Equipment		2,117,516	2,217,600	0.95									
Miscellaneous		-	768	2,757.18									
California Broadband Cooperative, Inc.	CA,NV	101,435,997	2,919,840	34.74	Directly connecting 200 plus CAI's, average 444 fibers								
Land, structure, ROW, appraisals, etc.		2,657,051											
Architectural and engineering fees		2,578,500			3%								
Project inspection fees		790,400											
Site work		322,313											
Construction		80,940,644	2,919,840	27.72									
Equipment		773,713	2,919,840	0.26									
Miscellaneous		-	-										
Contact Network, Inc.	MS	25,906,278	3,352,800	7.73	50/50 aerial vs underground								
Land, structure, ROW, appraisals, etc.		768,000	2,048	375.00	per square foot								
Architectural and engineering fees		216,000			1%								
Project inspection fees		-											
Site work		359,299											
Construction		21,603,816	3,352,800	6.44									

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Equipment		2,865,258	3,352,800	0.85	
Miscellaneous		-	2,048		
County of Carver	MN	7,494,500	638,880	11.73	100% underground
Land, structure, ROW, appraisals, etc.		191,807			
Architectural and engineering fees		966,760			18%
Project inspection fees		375			
Site work		57,915			
Construction		5,474,045	638,880	8.57	
Equipment		803,598	638,880	1.26	
Miscellaneous		-	-		
South Dakota Network, LLC	SD	25,715,303	1,895,520	13.57	100% underground
Land, structure, ROW, appraisals, etc.		700,000	480	1,458.33	
Architectural and engineering fees		3,533,729			21%
Project inspection fees		-			
Site work		-			
Construction		16,511,000	1,895,520	8.71	
Equipment		3,513,857	1,895,520	1.85	
Miscellaneous		1,381,717	480	7,320.54	
County of Clackamas	OR	11,148,830	950,400	11.73	70/30 aerial vs underground
Land, structure, ROW, appraisals, etc.		-			
Architectural and engineering fees		1,183,084			17%
Project inspection fees		-			
Site work		-			
Construction		7,033,166	950,400	7.40	
Equipment		2,320,000	950,400	2.44	
Miscellaneous		-	-		
County of Oconee	SC	14,306,764	1,293,600	11.06	100% underground
Land, structure, ROW, appraisals, etc.		-			
Architectural and engineering fees		628,760			5%
Project inspection fees		-			
Site work		-			
Construction		12,833,604	1,293,600	9.92	
Equipment		-	1,293,600	-	
Miscellaneous		360,900	-		
County of Rockbridge	VA	9,990,570	707,520	14.12	100% underground
Land, structure, ROW, appraisals, etc.		3,219,000			
Architectural and engineering fees		1,054,718			47%
Project inspection fees		108,316			
Site work		2,973,056			
Construction		2,239,010	707,520	3.16	
Equipment		-	707,520	-	
Miscellaneous		361,320	-		
Connecticut Department of Information TechnolCT		117,318,786	13,236,960	8.86	
Land, structure, ROW, appraisals, etc.		-			
Architectural and engineering fees		-			0%
Project inspection fees		-			
Site work		-			
Construction		70,971,874	13,236,960	5.36	

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Equipment		38,619,962	13,236,960	2.92	
Miscellaneous		7,726,950	-		
Com Net, Inc.	OH	42,904,268	3,696,000	11.61	15/85 aerial vs underground
Land, structure, ROW, appraisals, etc.		1,497,801	880	1,702.05	
Architectural and engineering fees		1,536,325			5%
Project inspection fees		130,000			
Site work		205,600			
Construction		30,306,281	3,696,000	8.20	
Equipment		8,758,868	3,696,000	2.37	
			880	9,953.26	
Miscellaneous		7,726,950			
Columbia County Georgia Information Technolo	GA	18,002,131	1,161,600	15.50	10/90 aerial vs underground plus 5 300 ft towers
Land, structure, ROW, appraisals, etc.		1,236,925	8,000	154.62	
Architectural and engineering fees		706,186			7%
Project inspection fees		1,238,739			
Site work		480,975			
Construction		10,656,539	1,161,600	9.17	
Equipment		3,023,304	1,161,600	2.60	
Miscellaneous		149,763			
Citizens Telephone Co-Operative	VA	11,560,803	982,080	11.77	15/85 aerial vs underground
Land, structure, ROW, appraisals, etc.		160,000	560	285.71	
Architectural and engineering fees		491,739			5%
Project inspection fees		-			
Site work		-			
Construction		9,819,064	982,080	10.00	
Equipment		1,090,000	982,080	1.11	
			17	64,117.65	each location
Miscellaneous		-			
Bristol Virginia Utilities Board	VA	36,220,536	2,048,640	17.68	5/95 aerial vs underground
Land, structure, ROW, appraisals, etc.		1,242,231			
Architectural and engineering fees		1,388,148			4%
Project inspection fees		638,352			
Site work		-			
Construction		31,203,526	2,048,640	15.23	
Equipment		1,688,279	2,048,640	0.82	
Miscellaneous		-			
Education Networks of America	IN	18,351,465	3,000,000	6.12	100% aerial
Land, structure, ROW, appraisals, etc.		917,574			
Architectural and engineering fees		917,574			7%
Project inspection fees		917,574			
Site work		-			
Construction		12,351,026	3,000,000	4.12	
Equipment		2,310,147	3,000,000	0.77	
Miscellaneous		20,000			
Bloomingsdale Communications, Inc.	MI	7,058,092	776,160	9.09	20/80 aerial vs buried
Land, structure, ROW, appraisals, etc.		150,000	384	390.63	
Architectural and engineering fees		403,500			9%
Project inspection fees		518,700			
Site work		-			
Construction		4,535,892	776,160	5.84	

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Equipment		1,450,000	776,160	1.87	
Miscellaneous		-			
Allied Fiber			60,973,440		432 ct longhaul and 216 short-haul with huts every 60 miles
Phase 1	IL - VA	140,000,000	6,864,000	20.40	
Phase 2	VA - FI	188,700,000	8,426,880	22.39	
Phase 3	IL - W/	350,000,000	11,684,640	29.95	