

Boulder Valley School District  
Fiber Optic Network Project

<b>Boulder Valley SD Fiber Optic Network Estimates</b>	
<b>East Ring Budgetary Estimate</b>	<b>\$5,534,074</b>
<b>West Ring Budgetary Estimate</b>	<b>\$4,470,483</b>
<b>Total Operational Network</b>	<b>\$10,004,557</b>
<b>Bond Fund</b>	<b>\$10,600,000</b>
<b>Remaining Budget</b>	<b>\$595,443</b>
<b>Estimated Construction OSP East Ring</b>	<b>\$3,017,917</b>
<b>Estimated Construction OSP West Ring</b>	<b>\$2,110,447</b>
<b>Estimated Engineering East Ring</b>	<b>\$331,003</b>
<b>Estimated Engineering West Ring</b>	<b>\$223,568</b>
<b>Estimated Materials East</b>	<b>\$620,154</b>
<b>Estimated Materials West</b>	<b>\$571,469</b>
<b>Estimated Electronics</b>	<b>\$2,500,000</b>
<b>Estimated CM-PM-Materials Management</b>	<b>\$630,000</b>
<b>Estimated Total Operational Network</b>	<b>\$10,004,557</b>

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<b>EAST RING</b>	Unit	Quantity	Price	Total Price
Network Electronics	EA	1	\$1,250,000.00	\$1,250,000.00
Engineering	LF	194707.8	\$1.70	\$331,003.26
Fiber Pull w/exsisting pull rope	LF		\$0.75	\$0.00
Fiber Pull-Blowing	LF		\$0.85	\$0.00
Conduit Proofing	LF		\$0.50	\$0.00
Directional Bore w/HH-Duct 1.25"	LF	194707.8	\$15.00	\$2,920,617.00
Directional Bore w/HH-Duct 2"	LF		\$17.00	\$0.00
Directional Bore 1.25" HDPE	LF			\$0.00
Directional Bore 2" HDPE	LF			\$0.00
Trench 1.25" HDPE	LF		\$7.70	\$0.00
Trench 2" HDPE	LF		\$7.70	\$0.00
Aerial Attachments	LF			\$0.00
Bridge Attachment 2" GRC	LF			\$0.00
1.25" HDPE	LF	194707.8	\$0.41	\$79,830.20
2" HDPE	LF			\$0.00
36x36x24 Handhole	EA	55	\$280.00	\$15,400.00
48x32x18 Handhole		15	\$390.00	\$5,850.00
Install 36x36x24 Handhole	EA	55	\$200.00	\$11,000.00
Install 48x32x18 Handhole	EA	15	\$220.00	\$3,300.00
Intersept Exsisting Handhole	EA	40	\$200.00	\$8,000.00
X-Ray and Core Drill Building 2" EMT	EA		\$1,550.00	\$0.00
Marker Posts	EA	250	\$38.00	\$9,500.00
Remove and Replace Asphalt	Sq. Ft.			\$0.00
Remove and Replace Concrete	Sq. Ft.			\$0.00
Remove and Replace Sod	Sq. Ft.			\$0.00
Remove and re-seed	Sq. Ft.			\$0.00
Grounding and Bonding	EA	150	\$150.00	\$22,500.00
Splicing - Termination	EA	2500	\$30.00	\$75,000.00
Multi-Link 24 POS FTP SC/UPC	EA	14	\$460.00	\$6,440.00
Multi-Link 12 POS FTP SC/UPC	EA	25	\$310.00	\$7,750.00

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FTP 24	EA			\$0.00
FTP 48	EA			\$0.00
FTP 96	EA			\$0.00
FTP 144	EA			\$0.00
FTP 168	EA			\$0.00
FTP 288	EA			\$0.00
Pre Test Fiber	PF			\$0.00
Post Test Fiber	PF			\$0.00
288 FOC Armored	LF		\$2.25	\$0.00
168 FOC Armored	LF	136235	\$1.08	\$147,133.32
144 FOC Armored	LF	0	\$1.25	\$0.00
120 FOC Armored	LF			\$0.00
108 FOC Armored	LF			\$0.00
96 FOC Armored	LF		\$1.02	\$0.00
72 FOC Armored	LF			\$0.00
48 FOC Armored	LF	4979	\$0.39	\$1,941.83
24 FOC Armored	LF	27672	\$0.27	\$7,471.57
12 FOC Armored	LF	77794	\$0.21	\$16,336.66
Pull Rope	LF			\$0.00
PM-CM	EA	1	\$250,000.00	\$250,000.00
Misc. materials and labor	EA	1	\$300,000.00	\$300,000.00
Materials Management	EA	1	\$65,000.00	\$65,000.00
				\$0.00
				\$0.00
				\$0.00
				\$5,534,073.83

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<b>WEST RING</b>	Unit	Quantity	Price	Total Price
Network Electronics	EA	1	\$1,250,000.00	\$1,250,000.00
Engineering	LF	131510.64	\$1.70	\$223,568.09
Fiber Pull w/exsisting pull rope	LF	53982.72	\$0.75	\$40,487.04
Fiber Pull-Blowing	LF		\$0.85	\$0.00
Conduit Proofing	LF		\$0.75	\$0.00
Directional Bore w/HH-Duct 1.25"	LF	131510.64	\$15.00	\$1,972,659.60
Directional Bore w/HH-Duct 2"	LF	0	\$17.00	\$0.00
Directional Bore 1.25" HDPE	LF	0	\$0.00	\$0.00
Directional Bore 2" HDPE	LF			\$0.00
Trench 1.25" HDPE	LF		\$7.70	\$0.00
Trench 2" HDPE	LF		\$7.70	\$0.00
Aerial Attachments	LF			\$0.00
Bridge Attachment 2" GRC	LF			\$0.00
1.25" HDPE	LF	131510.64	\$0.41	\$53,919.36
2" HDPE	EA			
36x36x24 Handhole	EA	55	\$280.00	\$15,400.00
48x32x18 Handhole	EA	15	\$390.00	\$5,850.00
Install 36x36x24 Handhole	EA	55	\$200.00	\$11,000.00
Install 48x32x18 Handhole	EA	15	\$220.00	\$3,300.00
Intersept Exsisting Handhole	EA	40	\$200.00	\$8,000.00
X-Ray and Core Drill Building 2" EMT	EA		\$1,550.00	\$0.00
Marker Posts	EA	250	\$38.00	\$9,500.00
Remove and Replace Asphalt	Sq. Ft.			\$0.00
Remove and Replace Concrete	Sq. Ft.			\$0.00
Remove and Replace Sod	Sq. Ft.			\$0.00
Remove and re-seed	Sq. Ft.			\$0.00
Grounding and Bonding	EA	150	\$150.00	\$22,500.00
Splicing - Termination	EA	2500	\$30.00	\$75,000.00
Multi-Link 24 POS FTP SC/UPC	EA	14	\$460.00	\$6,440.00
Multi-Link 12 POS FTP SC/UPC	EA	25	\$310.00	\$7,750.00

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FTP 24	EA			\$0.00
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FTP 96	EA			\$0.00
FTP 144	EA			\$0.00
FTP 168	EA			\$0.00
FTP 288	EA			\$0.00
Pre Test Fiber	PF			\$0.00
Post Test Fiber	PF			\$0.00
288 FOC Armored	LF		\$2.25	\$0.00
168 FOC Armored	LF	129323	\$1.08	\$139,668.88
144 FOC Armored	LF		\$1.25	\$0.00
120 FOC Armored	LF			\$0.00
108 FOC Armored	LF			\$0.00
96 FOC Armored	LF		\$1.02	\$0.00
72 FOC Armored	LF			\$0.00
48 FOC Armored	LF	0	\$0.39	\$0.00
24 FOC Armored	LF	6727	\$0.27	\$1,816.21
12 FOC Armored	LF	41068	\$0.21	\$8,624.25
Pull Rope	LF			\$0.00
PM-CM	EA	1	\$250,000.00	\$250,000.00
Misc. materials and labor	EA	1	\$300,000.00	\$300,000.00
Materials Management	EA	1	\$65,000.00	\$65,000.00
				\$0.00
				\$0.00
				\$4,470,483.43



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<b>WEST RING</b>							
	West BB 168 New Build	West BB 168 Existing Conduit	12 FOC Lat Miles	12 FOC Lat Yds	24 FOC Lat Miles	48 FOC Lat Miles	FOC Lease
	2.01	0.379	0.395	100	0.509		0.712
	0.893	0.953	0.747	156	0.765		
	0.275	0.651	0.481	100			
	0.774	0.388	0.25	357			
	1.01	0.634	0.524	300			
	1.65	1.01	0.791	303			
	1.1	1.25	0.481	200			
	2.11	0.426	0.486	200			
	3.51	0.707	0.569				
	0.379	0.397	0.527				
	0.764	0.305	0.492				
	0.504	0.507	1.35				
	1.12	0.787	0.685				
Miles West	16.1	8.4	7.8	1716.0	1.3		0.712
Total LF	85003	44320	41068	5148	6727		3759.36
<b>EAST RING</b>							
	East BB 168 New Build	East BB 168 Existing Conduit	12 FOC Lat Miles	12 FOC Lat Yds	24 FOC Lat Miles	48 FOC Lat Miles	FOC Lease
	1.3	0	1.34	200	0.76	0.943	0
	2.55		0.33	200	0.717		
	1.32		0.601	200	2.49		
	0.759		0.813	200			
	4.86		0.515	500			
	0.54		0.746				
	0.862		0.333				
	0.996		0.564				
	1.13						
	1.33						
	2.97						
	3.46						
	1						
	1.85						
	0.875						
Miles East	25.8	0.0	5.2	1300.0	4.0	0.9	0
E BB total LF	136235	0	27678	3900	20946	4979	
	168	168	12	12	24	48	Lease
Total LF	221237	44320	68746	9048	27672	4979	0.712
Fiber totals							
	168 FOC	12 FOC	24 FOC	48 FOC	Totals		
	265558	77794	27672	4979	376003		
	0						
10%	26556	7779	2767	498			
LF W/Slack loop	292113	85573	30440	5477	413603		
BB TTL LF New	221237						
BB TTL LF Existing	44320						
LAT TTL LF	110445						
Total LF	376003						
TTL Miles	71						