

Appendix L

Route Comparison Table

Appendix L Comparison of Key Factors of Routes Considered

Environmental Features	Route Segments/Options ^a							
	Segment 1		Segment 2		Segment 3		Segment 4	
	North	South	North	South	East	West	East	West
	General		Corridor Sharing		Proximity to Residences		Prime Farmland	
Length (miles)	48.11	53.65	41.17	33.71	43.37	19.61	23.65	
Right-of-Way (acres)	766.58	866.76	748.56	613.13	788.82	237.75	429.91	
Double-circuit Existing Transmission Line (miles)	46.48	38.85	28.39	5.66	43.37	5.11	0.00	
Paralleling Existing Transmission Line (miles)	0.00	0.00	0.00	0.00	0.00	1.43	7.69	
Roads and Railroads (miles)	1.63	8.09	4.55	4.43	0.00	9.55	3.13	
Property Lines (miles)	0.00	4.27	5.40	19.66	0.00	2.27	10.27	
No Linear Feature Sharing (miles)	0.00	2.44	2.84	3.95	0.00	1.24	2.58	
Total Linear Feature Sharing (miles)	48.11	51.21	38.34	29.75	43.37	18.37	21.09	
Total Linear Feature Sharing (percent)	100%	95%	93%	88%	100%	94%	89%	
Number of Residences 0 to 75 ^b feet from Application Alignments	0	2	0	0	0	1	0	
Number of Residences 76 ^b to 150 feet from Application Alignments	3	18	3	4	1	9	4	
Number of Residences 151 to 300 feet from Application Alignments	32	55	46	10	9	40	15	
Number of Residences 301 to 500 feet from Application Alignments	35	61	48	17	12	85	27	
Total Number of Residences within 500 feet of Application Alignments	70	136	97	31	22	135	46	

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Total All Categories of Prime Farmland Within Right-of-Way (acres/percent)	378.55 (49.38%)	566.53 (65.36%)	589.00 (78.68%)	514.10 (83.85%)	331.97 (42.08%)	261.30 (60.78%)	151.72 (63.81%)	261.30 (60.78%)
Farmland of State Importance Within the Right-of-Way (acres/percent)	187.85 (24.50%)	154.14 (17.78%)	91.08 (12.17%)	49.19 (8.02%)	233.25 (29.57%)	106.83 (24.85%)	45.79 (19.26%)	106.83 (24.85%)
Environmental Features								
Cultivated Crops Within the Right-of-Way (acres/percent)	436.19 (56.90%)	371.68 (42.88%)	428.04 (57.18%)	467.60 (76.26%)	475.52 (60.28%)	253.74 (52.09%)	76.99 (32.38%)	253.74 (52.09%)
Developed Areas Within the Right-of-Way (acres/percent)	93.56 (12.20%)	323.12 (37.28%)	200.59 (26.80%)	61.83 (10.08%)	50.87 (6.45%)	45.78 (10.65%)	94.52 (39.76%)	45.78 (10.65%)
Pasture/Hay Within the Right-of-Way (acres/percent)	101.15 (13.19%)	88.27 (10.18%)	60.97 (8.15%)	31.21 (5.09%)	88.97 (11.28%)	52.97 (12.32%)	25.40 (10.68%)	52.97 (12.32%)
Deciduous Forest Within the Right-of-Way (acres/percent)	63.93 (8.34%)	29.49 (3.40%)	14.41 (1.93%)	12.40 (2.02%)	82.12 ^c (10.41%)	45.78 (10.65%)	5.65 (2.38%)	45.78 (10.65%)
Emergent Herbaceous Wetlands Within the Right-of-Way (acres/percent)	54.38 (7.09%)	42.96 (4.96%)	14.46 (1.93%)	22.74 (3.71%)	31.01 (3.93%)	3.48 (0.81%)	2.17 (0.91%)	3.48 (0.81%)
Woody Wetlands Within the Right-of-Way (acres/percent)	4.71 (0.61%)	1.81 (0.21%)	2.48 (0.33%)	0.00 (0.00%)	10.01 ^c (1.27%)	6.63 (1.54%)	1.96 (0.82%)	6.63 (1.54%)
Grassland/Herbaceous Within the Right-of-Way (acres/percent)	3.64 (0.47%)	5.16 (0.60%)	23.35 (3.12%)	15.41 (2.51%)	32.93 (4.17%)	22.65 (5.27%)	26.23 (11.03%)	22.65 (5.27%)
Mixed Forest Within the Right-of-Way (acres/percent)	4.70 (0.61%)	1.58 (0.18%)	2.64 (0.35%)	1.05 (0.17%)	8.35 ^c (1.05%)	2.30 (0.54%)	2.58 (1.09%)	2.30 (0.54%)
Open Water Within the Right-of-Way (acres/percent)	2.20 (0.29%)	1.55 (0.18%)	0.90 (0.12%)	0.07 (0.01%)	6.43 (0.82%)	0.27 (0.06%)	0.40 (0.17%)	0.27 (0.06%)
Shrub/Scrub Within the Right-of-Way (acres/percent)	1.64 (0.21%)	0.00 (0.00%)	0.00 (0.00%)	0.00 (0.00%)	0.97 (0.12%)	0.00 (0.00%)	0.00 (0.00%)	0.00 (0.00%)
Barren Land (Rock/Sand/Clay) Within the Right-of-Way (acres/percent)	0.39 (0.05%)	0.96 (0.11%)	0.75 (0.10%)	0.75 (0.12%)	0.89 (0.11%)	0.47 (0.11%)	1.64 (0.69%)	0.47 (0.11%)
Evergreen Forest Within the Right-of-Way (acres/percent)	0.00 (0.00%)	0.06 (0.01%)	0.00 (0.00%)	0.00 (0.00%)	0.65 ^c (0.08%)	0.14 (0.03%)	0.19 (0.08%)	0.14 (0.03%)

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	Wetlands							
Total Wetlands Within the Right-of-Way (acres)	110.98	92.72	35.25	38.06	62.76	9.97	18.89	
Non-Forested Wetlands Within the Right-of-Way (acres)	101.85	81.39	32.19	35.65	52.85	9.88	9.82	
Forested Wetlands Within the Right-of-Way (acres)	9.13	11.33	3.06	2.41	9.91 ^c	0.09	9.07	
	Floodplains							
100 Year Floodplain - Zone A and AE Within the Right-of-Way (acres)	34.24	8.40	2.59	5.29	56.22	11.49	17.42	
500 Year Floodplain - Zone X Within the Right-of-Way (acres)	0.29	0.00	0.00	0.00	0.00	3.60	1.29	
	PWI and Shallow Lakes							
Number of Stream and River Crossings by Right-of-Way	29	29	44	36	68	22	26	
Number or PWI Stream Crossings by Right-of-Way	7	6	12	5	7	3	5	
Number of PWI Basins Within Right-of-Way	7	7	0	1	2	1	0	
Number of PWI Basins over 1,000 feet Crossed by Right-of-Way	0	2	0	1	0	1	0	
Number of Shallow Lakes Within Right-of-Way	6	5	0	0	1	1	0	
	Wells and Impaired Waterbodies							
Wells Within Right-of-Way	0	6	0	0	0	9	1	
Impaired Waterbodies Crossings by Right-of-Way	14	7	4	0	3	3	3	

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Conservation Easements and Other Designated Lands							
Number of WMAs Within Right-of-Way	4	2	1	1	1	0	0
Number of WPAs Within Right-of-Way	1	1	0	0	0	0	0
Number of AMAs Within Right-of-Way	1	0	0	0	0	0	0
Number of SNAs Within Right-of-Way	1	0	0	0	0	0	0
Number of T&E Listed Species Potentially Present.	3	3	4	4	6	3	3
Number of T&E Candidate Species, Proposed Species, and Experimental Populations Potentially Present	4	4	3	3	3	3	3
Number of Minnesota Biological Survey Sites Within Right-of-Way (number/acres)	11 (40.67)	4 (10.71)	3 (6.16)	0 (0.00)	11 (68.08)	1 (0.47)	3 (6.59)
Number of MNDNR Native Plant Communities Within Right-of-Way (number/acres)	14 (23.41)	3 (7.17)	1 (4.28)	0 (0.00)	6 (15.92)	0 (0.00)	4 (3.13)
Number of State Water Trail Crossings by Centerline	1	0	1	1	2	3	4
Number of State Trail Crossings by Centerline	3	4	0	0	0	0	1
Number of Snowmobile Trail Crossings by Centerline	10	11	17	6	22	8	2
Cultural Resources							
Number of Previously Recorded Archaeological Sites Within Right-of-Way	3	4	3	0	3	2	1
Number of Previously Recorded Architectural Resources Within Right-of-Way	2	3	1	2	1	5	0

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Number of Unrecorded Historic Cemeteries Within Right-of-Way	1	8	5	2	1	2	2	3
^a The 345 kV portion of the Project typically requires a 150-foot wide right-of-way. For the 161 kV portions of the Project, a 100-foot wide right-of-way is typically required								
^b Distance to residences ranges were adjusted for Segment 4 because the right-of-way for a 161 kV line is smaller than for a 345 kV line (typically 100 feet vs. 150 feet). Rather than distance ranges of 0-75 and 76-150 for Segment 4 ranges of 0-50 and 51-150 were used.								
^c Segment 3 occurs within an existing ROW cleared of tall-growing vegetation and no longer supports these forested land cover types.								