(b) Transmission projects Mr Van Zandt managed
City of Austin Garfield project, cited above, and several projects on various environmental topics for Brazos Electric Power Cooperative

Addendum: Additional route selection and environmental assessment experience for new location linear projects

"Summary of Data Collection and Analysis Conducted in Support of Intervenors in All-American Pipeline Proceedings," Lynn Storm and George Hinkle EH&A Doc No. 851216, February 1986

"Bibliography and Roster of Expert Witnesses in Support of Intervenor Litigation in All-American Pipeline Proceedings," Office of Travis County Attorney June 1986

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Texas FasTrac, Inc Franchise Application to Texas High Speed Rail Authority Environmental and Community Impacts January, 1991

Prefiled testimony and exhibits Texas High Speed Rail Authority Franchise Hearings Texas FasTrac, Inc., and Fulbright & Jaworski March 1991

Environmental Assessment Proposed East-West Freeway and Relocation of Seagraves, Whiteface & Lubbock Railroad (with Texas Department of Transportation, Lubbock District). HDR Engineering and City of Lubbock November 1991

Endangered Species/Cultural Resources Investigations Proposed Camino Colombia Private Toll Road, Laredo, Texas. Fulbright & Jaworski, for Camino Colombia, Inc February 1992.

Environmental Assessment Proposed Camino Columbia Private Toll Road, Laredo, Texas Camino Colombia, Inc., for Texas Department of Transportation, Pharr District, November 1992

Environmental Impact Statement for Texas High Speed Rail System (Socioeconomics, Recreation, Aesthetics, Prime Farmlands tasks) Texas TGV, Inc January 1994

Final Environmental Impact Statement East-West Freeway and Relocation of Seagraves, Whiteface, and Lubbock Railroad (with TxDOT Lubbock District) HDR Engineering and City of Lubbock November 1994

Corridor studies and environmental overview for proposed roadway from Lubbock, TX to Interstate 10 and from Amarillo to the state line HDR Engineering and TxDOT Transportation Planning and Programming August 1997

Environmental Impact Statement for Loop 49 West, route selection for proposed western segment Carter & Burgess for TxDOT - Tyler District 1998

Environmental Assessment and endangered species investigations for proposed S H 96, League City, Texas for TxDOT - Houston District. Dannenbaum Engineering Spring, 1997

THOMAS VAN ZANDT
Principal/Environmental Management

Environmental Impact Statement and route selection support for SH 130 proposed 90-mile I H 35 reliever route from Georgetown, TX to I-10 near Seguin Project Manager for Segment A (with Carter Burgess), Project Principal for Segment B (with EarthTech), Project Principal for combined EIS for Texas Turnpike Authority Division, TxDOT Record of Decision, June 2001

City of Austin Urban Rail Pre-NEPA Scoping Study for City of Austin, with Shaw Environmental October 2009 ongoing

Hicks & Company Project Manager or Principal on Highway Projects Receiving Finding of No Significant Impact

Camino Columbia Toll Road – Laredo	FONSI 1994
City of Alton/McAllen	FONSI 1994
FM 156 – Denton/Tarrant Counties	FONSI 7/26/1995
IH 35 West/ SH 170 to Alliance Blvd	FONSI 1996
US 87 – Cuero to Nursery	FONSI 1996
US 281 – Main Floodway, South of Pharr	FONSI 5/24/1996
US 287 – Freestone County	FONSI 1996
Ocean Drive–Corpus Christi	FONSI 1996
Ennis Joslin Rd (Spur 3) – Corpus Christi	FONSI 1997
Harlingen/Arroyo Colorado Estates	FONSI 1997
Keller-Haslet Rd Frontage Rd	
(@ Alliance Airport) Tarrant County	FONSI 1997
SH 114 EA Reevaluation	
(@ Texas Motor Speedway) Tarrant County	FONSI 1997
82nd St – Lubbock	FONSI 1997
SH 96 – League City	FONSI 1998
Dallas/Fort Worth Intl Airport	FONSI 4/21/98
RM 2244 – Bee Cave Rd	FONSI 8/16/1999
Loop 574 – IH 35 to Loop 484 - Waco	FONSI 9/13/99
SH 276	FONSI 12/13/99
US 59 Laredo to Freer	FONSI 1999
PR 22 – JFK Causeway	FONSI 1/25/2000
FM 346 – Whitehouse	FONSI 2/2000
US 79 – IH 45 to SH 75 - Buffalo	FONSI 8/24/2000
US 87 Dalhart/New Mexico	FONSI March 2001
US 77 Willacy County	FONSI 7/3/2001
FM 604 – Callahan County	FONSI 8/14/2001
US 69 – Greenville to Alba	Approval of Overview EA 8/28/2001
US 69 – Lindale to Mineola	FONSI 10/1/2001

THOMAS VAN ZANDT
Principal/Environmental Management

US 175 – Mabank to Athens	FONSI 6/24/2002
SH 7 @ BNSF–Center	FONSI 12/11/02
SH 36 – SH 95 to CR 113 (Wm/Bell Cos)	FONSI 6/18/2003
SH 195 – Williamson County	FONSI 9/12/2003
Loop 363 - Bell County	FONSI 9/15/2003
US 79 Little Brazos River	FONSI 10/03/2003
FM 1626 Hays Co.	FONSI 3/18/2004
US 377 Keller	FONSI 4/16/04
RM 2338 Williamson Co	FONSI 5/04
US 83 Menard to Eden	FONSI 5/04
50th Street Lubbock	FONSI 6/2004
US 175 Baxter to Frankston	FONSI 6/08/04
SH 130 - CR 119/Tschoepe Road to IH 10	FONSI 10/15/2004
Wonder World Drive–San Marcos	FONSI 11/10/04
US 79 Palestine to Trinity River	FONSI 1/21/05
SH 349 Midland Relief Route	FONSI 1/10/05
IH 35 from FM 487 to FM 2268	FONSI 5/24/05
Project Pegasus Dallas	FONSI 7/2005
US 69 from Alba to Mineola	FONSI 12/19/05
IH 35 From FM 1304 to FM 310	FONSI 6/13/06
US 83 Junction to Menard	FONSI 6/7/07
FM 1021 Eagle Pass EA	FONSI 3/07
SH 349 Martin/Midland County to FM 829	FONSI 07/15/2008
SH 114/SH121 Improvements (DFW Connector)	FONSI 4/09
US 183 Improvements Austin	FONSI 7/09
IH 35 Waco District Section 1C Belton	FONSI 11/09
IH 35 Waco District Section 1B Salado	FONSI 3/10
IH 35 Waco District Section 3B Lorena	FONSI 5/10
IH 35 Waco District Section 5B Lorena	FONSI 8/10

Updated November 2010

Appendix 2 – Variable Weighting Process Tables

Table 1. Environmental Data for Variable Weighting Analysis

Alternative Route Number	123	Rank	Quartile
Cost of alternative route	147,365,000	8	3
Length of route parallel to existing transmission lines	182,677	3	4
Length of route parallel to railroads	4,351	1t	4
Length of route parallel to existing public roads/highways	29,311	13	1
Length of route parallel to pipelines	5,379	8t	3
Length of route parallel to apparent property boundaries	98,074	12	1
Total length of route parallel to existing compatible rights-of-way (including apparent property boundaries)	289,490	3	4
Number of habitable structures within 500 feet of the route centerline	94	3	4
Number of parks or recreational areas within 1,000 feet of the route centerline	0	1t	4
Length of the route across parks/recreational areas	3,547	4t	4
Length of route through commercial/industrial areas	1,086	1	4
Length of the route across cropland/hay meadow	211,700	14	1
Length across rangeland pasture	157,438	10	2
Length of route across agricultural cropland with mobile irrigation systems	0		
Length of route across upland woodlands	30,270	8	3
Length of route across riparian woodlands	27,805	12	1
Length of route across potential wetlands	6,877	3	4
Number of stream crossings by the route	173	12	1
Length of route parallel to streams (within 100 feet)	27,709	12	1
Length across lakes or ponds (open waters)	3,928	12	1
Number of known rare/unique plant locations within the right-of-way	0		
Length of route through known habitat of endangered or threatened species	0		
Number of recorded cultural resource sites crossed by the route	1	11t	2
Number of recorded cultural resource sites within 1,000 feet of the route centerline	6	10t	2
Length of route across areas of high archaeological/historical site potential	228,293	12	1
Number of private airstrips within 10,000 feet of the route centerline	3	12t	1
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	3	9t	2
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	11	14	1
Number of heliports located within 5,000 feet of the route centerline	0		
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	2	13t	1
Number of FM, microwave and other electronic installations within 2,000 feet of the route centerline	7	10t	2
Number of U.S. or State Highway crossings by the route	3	1t	4
Number of Farm-to-Market (FM), county roads, or other street crossings by the route	64	12	1
Estimated length of right-of-way within foreground visual zone of U.S. and State Highways	27,740	5	3
Estimated length of right-of-way within foreground visual zone of park/recreational areas	14,449	1	4
Total Value			74
Average			2.39

Table 1. Environmental Data for Variable Weighting Analysis (cont.)

Alternative Route Number	141	Rank	Quartile
Cost of alternative route	169,007,000	14	1
Length of route parallel to existing transmission lines	192,938	2	4
Length of route parallel to railroads	0	7t	3
Length of route parallel to existing public roads/highways	52,683	2	4
Length of route parallel to pipelines	5,379	8t	3
Length of route parallel to apparent property boundaries	148,336	2	4
Total length of route parallel to existing compatible rights-of-way (including apparent property boundaries)	343,126	1	4
Number of habitable structures within 500 feet of the route centerline	140	7	3
Number of parks or recreational areas within 1,000 feet of the route centerline	1	4t	4
Length of the route across parks/recreational areas	3,547	4t	4
Length of route through commercial/industrial areas	1,888	6	3
Length of the route across cropland/hay meadow	204,462	13	1
Length across rangeland pasture	213,200	14	1
Length of route across agricultural cropland with mobile irrigation systems	0		
Length of route across upland woodlands	33,748	10	2
Length of route across riparian woodlands	43,348	14	1
Length of route across potential wetlands	6,081	2	4
Number of stream crossings by the route	187	14	1
Length of route parallel to streams (within 100 feet)	31,316	13	1
Length across lakes or ponds (open waters)	4,387	13	1
Number of known rare/unique plant locations within the right-of-way	0		
Length of route through known habitat of endangered or threatened species	0		
Number of recorded cultural resource sites crossed by the route	0	1t	4
Number of recorded cultural resource sites within 1,000 feet of the route centerline	4	6	3
Length of route across areas of high archaeological/historical site potential	273,346	14	1
Number of private airstrips within 10,000 feet of the route centerline	3	12t	1
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	4	13t	1
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	10	13	1
Number of heliports located within 5,000 feet of the route centerline	0		
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	1	5t	3
Number of FM, microwave and other electronic installations within 2,000 feet of the route centerline	6	5t	3
Number of U.S. or State Highway crossings by the route	5	6t	3
Number of Farm-to-Market (FM), county roads, or other street crossings by the route	73	14	1
Estimated length of right-of-way within foreground visual zone of U.S. and State Highways	80,597	14	1
Estimated length of right-of-way within foreground visual zone of park/recreational areas	23,542	6t	3
Total Value			74
Average			2.39

Table 1. Environmental Data for Variable Weighting Analysis (cont.)

Alternative Route Number	1863	Rank	Quartile
Cost of alternative route	131,300,000	2	4
Length of route parallel to existing transmission lines	121,568	4	4
Length of route parallel to railroads	4,351	1t	4
Length of route parallel to existing public roads/highways	22,607	14	1
Length of route parallel to pipelines	5,379	8t	3
Length of route parallel to apparent property boundaries	96,014	13	1
Total length of route parallel to existing compatible rights-of-way (including apparent property boundaries)	220,279	4	4
Number of habitable structures within 500 feet of the route centerline	71	1	4
Number of parks or recreational areas within 1,000 feet of the route centerline	1	4t	4
Length of the route across parks/recreational areas	3,547	4t	4
Length of route through commercial/industrial areas	1,182	3	4
Length of the route across cropland/hay meadow	161,775	9	2
Length across rangeland pasture	150,802	9	2
Length of route across agricultural cropland with mobile irrigation systems	0		
Length of route across upland woodlands	36,154	12	1
Length of route across riparian woodlands	23,434	11	2
Length of route across potential wetlands	7,766	6	3
Number of stream crossings by the route	136	10t	2
Length of route parallel to streams (within 100 feet)	23,375	10	2
Length across lakes or ponds (open waters)	3,023	8	3
Number of known rare/unique plant locations within the right-of-way	0		
Length of route through known habitat of endangered or threatened species	0		
Number of recorded cultural resource sites crossed by the route	0	1t	4
Number of recorded cultural resource sites within 1,000 feet of the route centerline	3	1t	4
Length of route across areas of high archaeological/historical site potential	202,145	10	2
Number of private airstrips within 10,000 feet of the route centerline	2	6t	3
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	3	9t	2
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	7	4t	4
Number of heliports located within 5,000 feet of the route centerline	0		
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	1	5t	3
Number of FM, microwave and other electronic installations within 2,000 feet of the route centerline	2	1	4
Number of U.S. or State Highway crossings by the route	3	1t	4
Number of Farm-to-Market (FM), county roads, or other street crossings by the route	53	6t	3
Estimated length of right-of-way within foreground visual zone of U.S. and State Highways	16,106	1	4
Estimated length of right-of-way within foreground visual zone of park/recreational areas	34,390	14	1
Total Value			92
Average			2.97

Table 1. Environmental Data for Variable Weighting Analysis (cont.)

Alternative Route Number	1865	Rank	Quartile
Cost of alternative route	124,208,000	1	4
Length of route parallel to existing transmission lines	105,151	5	3
Length of route parallel to railroads	0	7t	3
Length of route parallel to existing public roads/highways	30,897	12	1
Length of route parallel to pipelines	1,671	12t	1
Length of route parallel to apparent property boundaries	92,808	14	1
Total length of route parallel to existing compatible rights-of-way (including apparent property boundaries)	197,288	13	1
Number of habitable structures within 500 feet of the route centerline	88	2	4
Number of parks or recreational areas within 1,000 feet of the route centerline	1	4t	4
Length of the route across parks/recreational areas	0	1t	4
Length of route through commercial/industrial areas	1,150	2	4
Length of the route across cropland/hay meadow	159,489	8	3
Length across rangeland pasture	142,482	8	3
Length of route across agricultural cropland with mobile irrigation systems	0		
Length of route across upland woodlands	37,213	13	1
Length of route across riparian woodlands	15,626	9	2
Length of route across potential wetlands	9,824	14	1
Number of stream crossings by the route	119	8	3
Length of route parallel to streams (within 100 feet)	20,113	8	3
Length across lakes or ponds (open waters)	3,254	10	2
Number of known rare/unique plant locations within the right-of-way	0		
Length of route through known habitat of endangered or threatened species	0		
Number of recorded cultural resource sites crossed by the route	1	11t	2
Number of recorded cultural resource sites within 1,000 feet of the route centerline	5	7t	3
Length of route across areas of high archaeological/historical site potential	200,756	9	2
Number of private airstrips within 10,000 feet of the route centerline	2	6t	3
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	2	8	3
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	7	4t	4
Number of heliports located within 5,000 feet of the route centerline	0		
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	1	5t	3
Number of FM, microwave and other electronic installations within 2,000 feet of the route centerline	4	2t	4
Number of U.S. or State Highway crossings by the route	3	1t	4
Number of Farm-to-Market (FM), county roads, or other street crossings by the route	48	3	4
Estimated length of right-of-way within foreground visual zone of U.S. and State Highways	17,346	2	4
Estimated length of right-of-way within foreground visual zone of park/recreational areas	30,536	13	1
Total Value			85
Average			2.74

Table 1. Environmental Data for Variable Weighting Analysis (cont.)

Alternative Route Number	1886	Rank	Quartile
Cost of alternative route	133,273,000	3	4
Length of route parallel to existing transmission lines	101,886	6	3
Length of route parallel to railroads	0	7t	3
Length of route parallel to existing public roads/highways	37,152	9	2
Length of route parallel to pipelines	1,671	12t	1
Length of route parallel to apparent property boundaries	115,903	5	3
Total length of route parallel to existing compatible rights-of-way (including apparent property boundaries)	217,305	5	3
Number of habitable structures within 500 feet of the route centerline	114	5	3
Number of parks or recreational areas within 1,000 feet of the route centerline	0	1t	4
Length of the route across parks/recreational areas	0	1t	4
Length of route through commercial/industrial areas	1,205	4t	4
Length of the route across cropland/hay meadow	166,255	10	2
Length across rangeland pasture	158,730	11	2
Length of route across agricultural cropland with mobile irrigation systems	0		
Length of route across upland woodlands	38,415	14	1
Length of route across riparian woodlands	18,853	10	2
Length of route across potential wetlands	9,756	13	1
Number of stream crossings by the route	136	10t	2
Length of route parallel to streams (within 100 feet)	25,611	11	2
Length across lakes or ponds (open waters)	3,688	11	2
Number of known rare/unique plant locations within the right-of-way	0		
Length of route through known habitat of endangered or threatened species	0		
Number of recorded cultural resource sites crossed by the route	2	13t	1
Number of recorded cultural resource sites within 1,000 feet of the route centerline	7	11	2
Length of route across areas of high archaeological/historical site potential	213,736	11	2
Number of private airstrips within 10,000 feet of the route centerline	1	3t	4
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	3	9t	2
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	8	8	3
Number of heliports located within 5,000 feet of the route centerline	0		
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	1	5t	3
Number of FM, microwave and other electronic installations within 2,000 feet of the route centerline	4	2t	4
Number of U.S. or State Highway crossings by the route	3	1t	4
Number of Farm-to-Market (FM), county roads, or other street crossings by the route	55	8t	3
Estimated length of right-of-way within foreground visual zone of U.S. and State Highways	18,324	3t	4
Estimated length of right-of-way within foreground visual zone of park/recreational areas	16,997	4t	4
Total Value			84
Average			2.71

Table 1. Environmental Data for Variable Weighting Analysis (cont.)

Alternative Route Number	2153	Rank	Quartile
Cost of alternative route	151,840,000	11	2
Length of route parallel to existing transmission lines	213,556	1	4
Length of route parallel to railroads	0	7t	3
Length of route parallel to existing public roads/highways	52,173	3	4
Length of route parallel to pipelines	5,379	8t	3
Length of route parallel to apparent property boundaries	133,766	3	4
Total length of route parallel to existing compatible rights-of-way (including apparent property boundaries)	329,221	2	4
Number of habitable structures within 500 feet of the route centerline	131	6	3
Number of parks or recreational areas within 1,000 feet of the route centerline	1	4t	4
Length of the route across parks/recreational areas	3,547	4t	4
Length of route through commercial/industrial areas	1,902	7	3
Length of the route across cropland/hay meadow	192,703	12	1
Length across rangeland pasture	202,528	13	1
Length of route across agricultural cropland with mobile irrigation systems	0		
Length of route across upland woodlands	33,379	9	2
Length of route across riparian woodlands	39,637	13	1
Length of route across potential wetlands	7,474	4	4
Number of stream crossings by the route	179	13	1
Length of route parallel to streams (within 100 feet)	31,860	14	1
Length across lakes or ponds (open waters)	4,952	14	1
Number of known rare/unique plant locations within the right-of-way	0		
Length of route through known habitat of endangered or threatened species	0		
Number of recorded cultural resource sites crossed by the route	0	1t	4
Number of recorded cultural resource sites within 1,000 feet of the route centerline	5	7t	3
Length of route across areas of high archaeological/historical site potential	257,511	13	1
Number of private airstrips within 10,000 feet of the route centerline	4	14	1
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	4	13t	1
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	6	2t	4
Number of heliports located within 5,000 feet of the route centerline	0		
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	2	13t	1
Number of FM, microwave and other electronic installations within 2,000 feet of the route centerline	6	5t	3
Number of U.S. or State Highway crossings by the route	5	6t	3
Number of Farm-to-Market (FM), county roads, or other street crossings by the route	70	13	1
Estimated length of right-of-way within foreground visual zone of U.S. and State Highways	76,880	13	1
Estimated length of right-of-way within foreground visual zone of park/recreational areas	23,542	6t	3
Total Value			76
Average			2.45

Table 1. Environmental Data for Variable Weighting Analysis (cont.)

Alternative Route Number	2202	Rank	Quartile
Cost of alternative route	138,444,000	6	3
Length of route parallel to existing transmission lines	32,382	14	1
Length of route parallel to railroads	0	7t	3
Length of route parallel to existing public roads/highways	53,692	1	4
Length of route parallel to pipelines	1,671	12t	1
Length of route parallel to apparent property boundaries	149,986	1	4
Total length of route parallel to existing compatible rights-of-way (including apparent property boundaries)	182,543	14	1
Number of habitable structures within 500 feet of the route centerline	110	4	4
Number of parks or recreational areas within 1,000 feet of the route centerline	0	1t	4
Length of the route across parks/recreational areas	0	1t	4
Length of route through commercial/industrial areas	1,205	4t	4
Length of the route across cropland/hay meadow	174,296	11	2
Length across rangeland pasture	168,305	12	1
Length of route across agricultural cropland with mobile irrigation systems	0		
Length of route across upland woodlands	34,721	11	2
Length of route across riparian woodlands	15,326	8	3
Length of route across potential wetlands	4,228	1	4
Number of stream crossings by the route	126	9	2
Length of route parallel to streams (within 100 feet)	23,359	9	2
Length across lakes or ponds (open waters)	3,234	9	2
Number of known rare/unique plant locations within the right-of-way	0		
Length of route through known habitat of endangered or threatened species	0		
Number of recorded cultural resource sites crossed by the route	2	13t	1
Number of recorded cultural resource sites within 1,000 feet of the route centerline	6	10t	2
Length of route across areas of high archaeological/historical site potential	189,406	8	3
Number of private airstrips within 10,000 feet of the route centerline	0	1t	4
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	3	9t	2
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	6	2t	4
Number of heliports located within 5,000 feet of the route centerline	0		
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	1	5t	3
Number of FM, microwave and other electronic installations within 2,000 feet of the route centerline	4	2t	4
Number of U.S. or State Highway crossings by the route	3	1t	4
Number of Farm-to-Market (FM), county roads, or other street crossings by the route	57	11	2
Estimated length of right-of-way within foreground visual zone of U.S. and State Highways	18,324	3t	4
Estimated length of right-of-way within foreground visual zone of park/recreational areas	16,997	4t	4
Total Value			88
Average			2.84

Table 1. Environmental Data for Variable Weighting Analysis (cont.)

Alternative Route Number	2288	Rank	Quartile
Cost of alternative route	133,963,000	4	4
Length of route parallel to existing transmission lines	67,017	9	2
Length of route parallel to railroads	1,497	3t	4
Length of route parallel to existing public roads/highways	45,770	4	4
Length of route parallel to pipelines	44,947	6	3
Length of route parallel to apparent property boundaries	109,407	8	3
Total length of route parallel to existing compatible rights-of-way (including apparent property boundaries)	211,991	7	3
Number of habitable structures within 500 feet of the route centerline	215	8	3
Number of parks or recreational areas within 1,000 feet of the route centerline	1	4t	4
Length of the route across parks/recreational areas	8,285	8t	3
Length of route through commercial/industrial areas	1,934	8	3
Length of the route across cropland/hay meadow	116,906	1	4
Length across rangeland pasture	123,295	7	3
Length of route across agricultural cropland with mobile irrigation systems	0		
Length of route across upland woodlands	13,205	1	4
Length of route across riparian woodlands	5,298	2	4
Length of route across potential wetlands	7,951	8	3
Number of stream crossings by the route	78	4	4
Length of route parallel to streams (within 100 feet)	9,894	6	3
Length across lakes or ponds (open waters)	774	2	4
Number of known rare/unique plant locations within the right-of-way	0		
Length of route through known habitat of endangered or threatened species	0		
Number of recorded cultural resource sites crossed by the route	0	1t	4
Number of recorded cultural resource sites within 1,000 feet of the route centerline	6	10t	2
Length of route across areas of high archaeological/historical site potential	117,481	1	4
Number of private airstrips within 10,000 feet of the route centerline	0	1t	4
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	1	1t	4
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	7	4t	4
Number of heliports located within 5,000 feet of the route centerline	0		
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	1	5t	3
Number of FM, microwave and other electronic installations within 2,000 feet of the route centerline	6	5t	3
Number of U.S. or State Highway crossings by the route	5	6t	3
Number of Farm-to-Market (FM), county roads, or other street crossings by the route	42	1t	4
Estimated length of right-of-way within foreground visual zone of U.S. and State Highways	50,368	7t	3
Estimated length of right-of-way within foreground visual zone of park/recreational areas	16,331	2t	4
Total Value			107
Average			3.45

Table 1. Environmental Data for Variable Weighting Analysis (cont.)

Alternative Route Number	2317	Rank	Quartile
Cost of alternative route	151,805,000	10	2
Length of route parallel to existing transmission lines	58,484	12	1
Length of route parallel to railroads	0	7t	3
Length of route parallel to existing public roads/highways	33,030	11	2
Length of route parallel to pipelines	61,787	1	4
Length of route parallel to apparent property boundaries	105,724	9	2
Total length of route parallel to existing compatible rights-of-way (including apparent property boundaries)	202,857	9	2
Number of habitable structures within 500 feet of the route centerline	257	14	1
Number of parks or recreational areas within 1,000 feet of the route centerline	2	10t	2
Length of the route across parks/recreational areas	8,285	8t	3
Length of route through commercial/industrial areas	2,055	9t	2
Length of the route across cropland/hay meadow	146,259	6	3
Length across rangeland pasture	115,714	4	4
Length of route across agricultural cropland with mobile irrigation systems	0		
Length of route across upland woodlands	21,160	5	3
Length of route across riparian woodlands	5,210	1	4
Length of route across potential wetlands	9,396	12	1
Number of stream crossings by the route	77	3	4
Length of route parallel to streams (within 100 feet)	7,998	1	4
Length across lakes or ponds (open waters)	934	4	4
Number of known rare/unique plant locations within the right-of-way	0		
Length of route through known habitat of endangered or threatened species	0		
Number of recorded cultural resource sites crossed by the route	0	1t	4
Number of recorded cultural resource sites within 1,000 feet of the route centerline	3	1t	4
Length of route across areas of high archaeological/historical site potential	139,677	5	3
Number of private airstrips within 10,000 feet of the route centerline	2	6t	3
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	1	1t	4
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	9	9t	2
Number of heliports located within 5,000 feet of the route centerline	0		
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	0	1t	4
Number of FM, microwave and other electronic installations within 2,000 feet of the route centerline	7	10t	2
Number of U.S. or State Highway crossings by the route	6	11t	2
Number of Farm-to-Market (FM), county roads, or other street crossings by the route	55	8t	3
Estimated length of right-of-way within foreground visual zone of U.S. and State Highways	53,035	9t	2
Estimated length of right-of-way within foreground visual zone of park/recreational areas	24,722	8t	3
Total Value			87
Average			2.81

Table 1. Environmental Data for Variable Weighting Analysis (cont.)

Alternative Route Number	2317A	Rank	Quartile
Cost of alternative route	152,577,884	13	1
Length of route parallel to existing transmission lines	58484	13	1
Length of route parallel to railroads	0	7t	3
Length of route parallel to existing public roads/highways	35119 4	10	2
Length of route parallel to pipelines	57138.9	2	4
Length of route parallel to apparent property boundaries	108655.4	7	3
Total length of route parallel to existing compatible rights-of-way (including apparent property boundaries)	201547.8	12	1
Number of habitable structures within 500 feet of the route centerline	232	11	2
Number of parks or recreational areas within 1,000 feet of the route centerline	2	10t	2
Length of the route across parks/recreational areas	8285	8t	3
Length of route through commercial/industrial areas	2064.4	11	2
Length of the route across cropland/hay meadow	144505.4	5	3
Length across rangeland pasture	115087.2	2	4
Length of route across agricultural cropland with mobile irrigation systems	0		
Length of route across upland woodlands	23576.5	6	3
Length of route across riparian woodlands	6327	6	3
Length of route across potential wetlands	9091	10	2
Number of stream crossings by the route	80	5t	3
Length of route parallel to streams (within 100 feet)	9491	5	3
Length across lakes or ponds (open waters)	1633.4	6	3
Number of known rare/unique plant locations within the right-of-way	0		
Length of route through known habitat of endangered or threatened species	0		
Number of recorded cultural resource sites crossed by the route	0	1t	4
Number of recorded cultural resource sites within 1,000 feet of the route centerline	3	1t	4
Length of route across areas of high archaeological/historical site potential	148282	7	3
Number of private airstrips within 10,000 feet of the route centerline	2	6t	3
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	1	1t	4
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	7	4t	4
Number of heliports located within 5,000 feet of the route centerline	0		
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	0	1t	4
Number of FM, microwave and other electronic installations within 2,000 feet of the route centerline	10	13t	1
Number of U.S. or State Highway crossings by the route	6	11t	2
Number of Farm-to-Market (FM), county roads, or other street crossings by the route	53	6t	3
Estimated length of right-of-way within foreground visual zone of U.S. and State Highways	53707.6	11	2
Estimated length of right-of-way within foreground visual zone of park/recreational areas	24722	8t	3
Total Value			85
Average			2.74

Table 1. Environmental Data for Variable Weighting Analysis (cont.)

Alternative Route Number	2317B	Rank	Quartile
Cost of alternative route	151,378,581	9	2
Length of route parallel to existing transmission lines	58,484	10	2
Length of route parallel to railroads	1,418	6	3
Length of route parallel to existing public roads/highways	37,625	8	3
Length of route parallel to pipelines	55,510	3	4
Length of route parallel to apparent property boundaries	111,583	6	3
Total length of route parallel to existing compatible rights-of-way (including apparent property boundaries)	202,736	10	2
Number of habitable structures within 500 feet of the route centerline	229	10	2
Number of parks or recreational areas within 1,000 feet of the route centerline	2	10t	2
Length of the route across parks/recreational areas	8,285	8t	3
Length of route through commercial/industrial areas	2,065	12	1
Length of the route across cropland/hay meadow	133,282	3	4
Length across rangeland pasture	122,954	6	3
Length of route across agricultural cropland with mobile irrigation systems	0		
Length of route across upland woodlands	24,519	7	3
Length of route across riparian woodlands	6,017	5	3
Length of route across potential wetlands	9,230	11	2
Number of stream crossings by the route	80	5t	3
Length of route parallel to streams (within 100 feet)	10,206	7	3
Length across lakes or ponds (open waters)	1850.6	7	3
Number of known rare/unique plant locations within the right-of-way	0		
Length of route through known habitat of endangered or threatened species	0		
Number of recorded cultural resource sites crossed by the route	0	1t	4
Number of recorded cultural resource sites within 1,000 feet of the route centerline	3	1t	4
Length of route across areas of high archaeological/historical site potential	147,779	6	3
Number of private airstrips within 10,000 feet of the route centerline	2	6t	3
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	1	1t	4
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	2	1	4
Number of heliports located within 5,000 feet of the route centerline	0		
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	0	1t	4
Number of FM, microwave and other electronic installations within 2,000 feet of the route centerline	10	13t	1
Number of U.S. or State Highway crossings by the route	6	11t	2
Number of Farm-to-Market (FM), county roads, or other street crossings by the route	51	5	3
Estimated length of right-of-way within foreground visual zone of U.S. and State Highways	56,651	12	1
Estimated length of right-of-way within foreground visual zone of park/recreational areas	24,722	8t	3
Total Value			87
Average			2.81

Table 1. Environmental Data for Variable Weighting Analysis (cont.)

Alternative Route Number	2320	Rank	Quartile
Cost of alternative route	152,365,000	12	1
Length of route parallel to existing transmission lines	58,484	11	2
Length of route parallel to railroads	0	7t	3
Length of route parallel to existing public roads/highways	40,705	7	3
Length of route parallel to pipelines	55,183	4	4
Length of route parallel to apparent property boundaries	101,866	10	2
Total length of route parallel to existing compatible rights-of-way (including apparent property boundaries)	201,697	11	2
Number of habitable structures within 500 feet of the route centerline	252	13	1
Number of parks or recreational areas within 1,000 feet of the route centerline	2	10t	2
Length of the route across parks/recreational areas	8,285	8t	3
Length of route through commercial/industrial areas	2,055	9t	2
Length of the route across cropland/hay meadow	147,859	7	3
Length across rangeland pasture	115,585	3	4
Length of route across agricultural cropland with mobile irrigation systems	0		
Length of route across upland woodlands	19,850	4	4
Length of route across riparian woodlands	5,941	4	4
Length of route across potential wetlands	7,657	5	3
Number of stream crossings by the route	75	2	4
Length of route parallel to streams (within 100 feet)	8,350	2	4
Length across lakes or ponds (open waters)	1,409	5	3
Number of known rare/unique plant locations within the right-of-way	0		
Length of route through known habitat of endangered or threatened species	0		
Number of recorded cultural resource sites crossed by the route	0	1t	4
Number of recorded cultural resource sites within 1,000 feet of the route centerline	3	1t	4
Length of route across areas of high archaeological/historical site potential	132,349	4	4
Number of private airstrips within 10,000 feet of the route centerline	2	6t	3
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	1	1t	4
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	9	9t	2
Number of heliports located within 5,000 feet of the route centerline	0		
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	0	1t	4
Number of FM, microwave and other electronic installations within 2,000 feet of the route centerline	7	10t	2
Number of U.S. or State Highway crossings by the route	6	11t	2
Number of Farm-to-Market (FM), county roads, or other street crossings by the route	56	10	2
Estimated length of right-of-way within foreground visual zone of U.S. and State Highways	53,035	9t	2
Estimated length of right-of-way within foreground visual zone of park/recreational areas	24,722	8t	3
Total Value			90
Average			2.90

Table 1. Environmental Data for Variable Weighting Analysis (cont.)

Alternative Route Number	2328	Rank	Quartile
Cost of alternative route	138,589,000	7	3
Length of route parallel to existing transmission lines	70,295	8	3
Length of route parallel to railroads	1,497	3t	4
Length of route parallel to existing public roads/highways	44,458	5	3
Length of route parallel to pipelines	52,760	5	3
Length of route parallel to apparent property boundaries	99,929	11	2
Total length of route parallel to existing compatible rights-of-way (including apparent property boundaries)	212,292	6	3
Number of habitable structures within 500 feet of the route centerline	243	12	1
Number of parks or recreational areas within 1,000 feet of the route centerline	2	10t	2
Length of the route across parks/recreational areas	8,285	8t	3
Length of route through commercial/industrial areas	2,266	14	1
Length of the route across cropland/hay meadow	144,140	4	4
Length across rangeland pasture	104,772	1	4
Length of route across agricultural cropland with mobile irrigation systems	0		
Length of route across upland woodlands	19,324	3	4
Length of route across riparian woodlands	6,533	7	3
Length of route across potential wetlands	7,775	7	3
Number of stream crossings by the route	81	7	3
Length of route parallel to streams (within 100 feet)	9,017	3	4
Length across lakes or ponds (open waters)	745	1	4
Number of known rare/unique plant locations within the right-of-way	0		
Length of route through known habitat of endangered or threatened species	0		
Number of recorded cultural resource sites crossed by the route	0	1t	4
Number of recorded cultural resource sites within 1,000 feet of the route centerline	5	7t	3
Length of route across areas of high archaeological/historical site potential	119,965	3	4
Number of private airstrips within 10,000 feet of the route centerline	1	3t	4
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	1	1t	4
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	9	9t	2
Number of heliports located within 5,000 feet of the route centerline	0		
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	1	5t	3
Number of FM, microwave and other electronic installations within 2,000 feet of the route centerline	6	5t	3
Number of U.S. or State Highway crossings by the route	5	6t	3
Number of Farm-to-Market (FM), county roads, or other street crossings by the route	49	4	4
Estimated length of right-of-way within foreground visual zone of U.S. and State Highways	49,600	6	3
Estimated length of right-of-way within foreground visual zone of park/recreational areas	24,722	8t	3
Total Value			97
Average			3.13

Table 1. Environmental Data for Variable Weighting Analysis (cont.)

Alternative Route Number	3476	Rank	Quartile
Cost of alternative route	137,962,000	5	3
Length of route parallel to existing transmission lines	72,555	7	3
Length of route parallel to railroads	1,497	3t	4
Length of route parallel to existing public roads/highways	40,944	6	3
Length of route parallel to pipelines	26,381	7	3
Length of route parallel to apparent property boundaries	119,003	4	4
Total length of route parallel to existing compatible rights-of-way (including apparent property boundaries)	210,574	8	3
Number of habitable structures within 500 feet of the route centerline	218	9	2
Number of parks or recreational areas within 1,000 feet of the route centerline	1	4t	4
Length of the route across parks/recreational areas	8,285	8t	3
Length of route through commercial/industrial areas	2,247	13	1
Length of the route across cropland/hay meadow	127,638	2	4
Length across rangeland pasture	120,262	5	3
Length of route across agricultural cropland with mobile irrigation systems	0		
Length of route across upland woodlands	13,205	1	4
Length of route across riparian woodlands	5,451	3	4
Length of route across potential wetlands	8,705	9	2
Number of stream crossings by the route	73	1	4
Length of route parallel to streams (within 100 feet)	9,163	4	4
Length across lakes or ponds (open waters)	921	3	4
Number of known rare/unique plant locations within the right-of-way	0		
Length of route through known habitat of endangered or threatened species	0		
Number of recorded cultural resource sites crossed by the route	0	1t	4
Number of recorded cultural resource sites within 1,000 feet of the route centerline	6	10t	2
Length of route across areas of high archaeological/historical site potential	118,302	2	4
Number of private airstrips within 10,000 feet of the route centerline	1	3t	4
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	1	1t	4
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	9	9t	2
Number of heliports located within 5,000 feet of the route centerline	0		
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	1	5t	3
Number of FM, microwave and other electronic installations within 2,000 feet of the route centerline	6	5t	3
Number of U.S. or State Highway crossings by the route	5	6t	3
Number of Farm-to-Market (FM), county roads, or other street crossings by the route	42	1t	4
Estimated length of right-of-way within foreground visual zone of U.S. and State Highways	50,368	7t	3
Estimated length of right-of-way within foreground visual zone of park/recreational areas	16,331	2t	4
Total Value			102
Average			3.29

Table 2. Quartile Values by Criteria Groups

	123	141	1863	1865	1886	2153	2202	2288	2317	2317A	2317B	2320	2328	3476
Cost of alternative route	3	1	4	4	4	2	3	4	2	1	2	1	3	3
Average	3 00	1 00	4 00	4 00	4 00	2 00	3 00	4.00	2 00	1 00	2 00	1 00	3 00	3.00
Length of route parallel to existing transmission lines	4	4	4	3	3	4	1	2	1	1	2	2	3	3
Average	4 00	4 00	4 00	3 00	3 00	4 00	1 00	2 00	1 00	1 00	2 00	2 00	3.00	3 00
Other Existing Compatible														
Length of route parallel to railroads	4	3	4	3	3	3	3	4	3	3	3	3	4	4
Length of route parallel to existing public roads/highways	1	4	1	1	2	4	4	4	2	2	3	3	3	3
Length of route parallel to pipelines	3	3	3	1	1	3	1	3	4	4	4	4	3	3
Length of route parallel to apparent property boundaries	1	4	1	1	3	4	4	3	2	3	3	2	2	4
Subtotal	9	14	9	6	9	14	12	14	11	12	13	12	12	14
Average	2 25	3 50	2 25	1 50	2 25	3 50	3 00	3 50	2 75	3 00	3.25	3.00	3 00	3 50
Habitable Structures														
Number of habitable structures within 500 feet of the route centerline1	4	3	4	4	3	3	4	3	1	2	2	1	1	2
Average	4 00	3 00	4 00	4 00	3 00	3 00	4 00	3.00	1 00	2 00	2 00	1 00	1 00	2 00
Parks and Recreation														
Number of parks or recreational areas within 1,000 feet of the route centerline2	4	4	4	4	4	4	4	4	2	2	2	2	2	4
Length of the route across parks/recreational areas	4	4	4	4	4	4	4	3	3	3	3	3	3	3
Estimated length of right-of-way within foreground visual zone of park/recreational areas	4	3	1	1	4	3	4	4	3	3	3	3	3	4
Subtotal	12	11	9	9	12	11	12	11	8	8	8	8	8	11
Average	4 00	3 67	3 00	3 00	4 00	3 67	4.00	3.67	2 67	2 67	2 67	2 67	2.67	3 67
Ecological Resources														
Length of the route across cropland/hay meadow	1	1	2	3	2	1	2	4	3	3	4	3	4	4
Length of route across upland woodlands	3	2	1	1	1	2	2	4	3	3	3	4	4	4
Length of route across riparian woodlands	1	1	2	2	2	1	3	4	4	3	3	4	3	4
Length of route across potential wetlands	4	4	3	1	1	4	4	3	1	2	2	3	3	2
Number of stream crossings by the route	1	1	2	3	2	1	2	4	4	3	3	4	3	4
Length of route parallel to streams (within 100 feet)	1	1	2	3	2	1	2	3	4	3	3	4	4	4
Length across lakes or ponds (open waters)	1	1	3	2	2	1	2	4	4	3	3	3	4	4
Subtotal	12	11	15	15	12	11	17	26	23	20	21	25	25	26
Average	1 71	1 57	2 14	2.14	1.71	1.57	2.43	3 71	3 29	2 86	3 00	3.57	3.57	3.71

Table 2. Quartile Values by Criteria Groups (cont.)

	123	141	1863	1865	1886	2153	2202	2288	2317	2317A	2317B	2320	2328	3476
Cultural Resources														
Number of recorded cultural resource sites crossed by the route	2	4	4	2	1	4	1	4	4	4	4	4	4	4
Number of recorded cultural resource sites within 1,000 feet of the route centerline	2	3	4	3	2	3	2	2	4	4	4	4	3	2
Length of route across areas of high archaeological/historical site potential	1	1	2	2	2	1	3	4	3	3	3	4	4	4
Subtotal	5	8	10	7	5	8	6	10	11	11	11	12	11	10
Average	1 67	2 67	3 33	2 33	1 67	2 67	2 00	3 33	3 67	3 67	3.67	4 00	3 67	3 33
Land Use														
Length of route through commercial/industrial areas	4	3	4	4	4	3	4	3	2	2	1	2	1	1
Length across rangeland pasture	2	1	2	3	2	1	1	3	4	4	3	4	4	3
Number of private airstrips within 10,000 feet of the route centerline	1	1	3	3	4	1	4	4	3	3	3	3	4	4
Number of FAA-registered airports with at least one runway more than 3,200 feet in length within 20,000 feet of route centerline	2	1	2	3	2	1	2	4	4	4	4	4	4	4
Number of FAA-registered airports with no runway greater than 3,200 feet in length within 10,000 feet of the route centerline	1	1	4	4	3	4	4	4	2	4	4	2	2	2
Number of commercial AM radio transmitters located within 10,000 feet of the route centerline	1	3	3	3	3	1	3	3	4	4	4	4	3	3
Number of FM, microwave and other electronic installations within 2,000 feet of the route centerline	2	3	4	4	4	3	4	3	2	1	1	2	3	3
Number of U.S. or State Highway crossings by the route	4	3	4	4	4	3	4	3	2	2	2	2	3	3
Number of Farm-to-Market (FM), county roads, or other street crossings by the route	1	1	3	4	3	1	2	4	3	3	3	2	4	4
Estimated length of right-of-way within foreground visual zone of U S. and State Highways	3	1	4	4	4	1	4	3	2	2	1	2	3	3
Subtotal	21	18	33	36	33	19	32	34	28	29	26	27	31	30
Average	2.10	1.80	3.30	3 60	3 30	1 90	3.20	3 40	2 80	2 90	2 60	2 70	3.10	3 00

Table 3. Variable Weighting Scenarios (Cases I-III)

		Assigned Weight		
		I. TSP Presentation	**II. §37.056 (c) Balance**	**III. TPWD Priorities**
Cost of alternative route		22%	15%	0%
Existing Compatible				
	Length of route parallel to existing transmission lines	14%	15%	18%
	Other Existing Compatible	8%	5%	7%
Habitable Structures		22%	20%	0%
Parks and Recreation		10%	15%	25%
Ecological Resources		10%	15%	50%
Cultural Resources		4%	5%	0%
Land Use		10%	10%	0%
	TOTAL	100%	100%	100%

Table 4. Variable Weights, Scores and Ranking by Weighting Scenario

I. TSP Presentation															
	Weight	123	141	1863	1865	1886	2153	2202	2288	2317	2317A	2317B	2320	2328	3476
Cost of alternative route	22%	0 66	0 22	0 88	0 88	0 88	0 44	0 66	0 88	0 44	0 22	0 44	0 22	0 66	0 66
Length of route parallel to existing transmission lines	14%	0 56	0 56	0 56	0 42	0 42	0 56	0 14	0 28	0 14	0 14	0 28	0 28	0 42	0 42
Other Existing Compatible	8%	0 18	0 28	0 18	0 12	0 18	0 28	0 24	0 28	0 22	0 24	0 26	0 24	0 24	0 28
Habitable Structures	22%	0 88	0 66	0 88	0 88	0 66	0 66	0 88	0 66	0 22	0 44	0 44	0 22	0 22	0 44
Parks and Recreation	10%	0 40	0 37	0 30	0 30	0 40	0 37	0 40	0 37	0 27	0 27	0 27	0 27	0 27	0 37
Ecological Resources	10%	0 17	0 16	0 21	0 21	0 17	0 16	0 24	0 37	0 33	0 29	0 30	0 36	0 36	0 37
Cultural Resources	4%	0 07	0 11	0 13	0 09	0 07	0 11	0 08	0 13	0 15	0 15	0 15	0 16	0 15	0 13
Land Use	10%	0 21	0 18	0 33	0 36	0 33	0 19	0 32	0 34	0 28	0 29	0 26	0 27	0 31	0 30
Sum	100%	**3.13**	**2.53**	**3 48**	**3.27**	**3.11**	**2.76**	**2.96**	**3 31**	**2.04**	**2.03**	**2 39**	**2.01**	**2.62**	**2.97**

Alternative	Score	Rank
1863	**3.48**	1
2288	**3.31**	2
1865	**3.27**	3
123	**3.13**	4
1886	**3.11**	5
3476	**2.97**	6
2202	**2.96**	7
2153	**2.76**	8
2328	**2.62**	9
141	**2.53**	10
2317B	**2.39**	11
2317	**2.04**	12
2317A	**2.03**	13
2320	**2.01**	14

Table 4. Variable Weights, Scores and Ranking by Weighting Scenario (cont.)

II. §37.056 (c) Balance															
	Weight	123	141	1863	1865	1886	2153	2202	2288	2317	2317A	2317B	2320	2328	3476
Cost of alternative route	15%	0 45	0 15	0 60	0 60	0 60	0 30	0 45	0 60	0 30	0 15	0 30	0 15	0 45	0 45
Length of route parallel to existing transmission lines	15%	0 60	0 60	0 60	0 45	0 45	0 60	0 15	0 30	0 15	0 15	0 30	0 30	0 45	0 45
Other Existing Compatible	5%	0 11	0 18	0 11	0 08	0 11	0 18	0 15	0 18	0 14	0 15	0 16	0 15	0 15	0 18
Habitable Structures	20%	0 80	0 60	0 80	0 80	0 60	0 60	0 80	0 60	0 20	0 40	0 40	0 20	0 20	0 40
Parks and Recreation	15%	0 60	0 55	0 45	0 45	0 60	0 55	0 60	0 55	0 40	0 40	0 40	0 40	0 40	0 55
Ecological Resources	15%	0 26	0 24	0 32	0 32	0 26	0 24	0 36	0 56	0 49	0 43	0 45	0 54	0 54	0 56
Cultural Resources	5%	0 08	0 13	0 17	0 12	0 08	0 13	0 10	0 17	0 18	0 18	0 18	0 20	0 18	0 17
Land Use	10%	0 21	0 18	0 33	0 36	0 33	0 19	0 32	0 34	0 28	0 29	0 26	0 27	0 31	0 30
Sum	100%	**3.11**	**2.62**	**3.38**	**3.17**	**3.03**	**2 78**	**2.93**	**3.29**	**2.14**	**2.15**	**2.46**	**2.21**	**2.68**	**3.05**

Alternative	Score	Rank
1863	3.38	1
2288	3.29	2
1865	3.17	3
123	3.11	4
3476	3 05	5
1886	3 03	6
2202	2.93	7
2153	2.78	8
2328	2.68	9
141	2.62	10
2317B	2.46	11
2320	2.21	12
2317A	2.15	13
2317	2.14	14

Table 4. Variable Weights, Scores and Ranking by Weighting Scenario (cont.)

III. TPWD Priorities	Weight	123	141	1863	1865	1886	2153	2202	2288	2317	2317A	2317B	2320	2328	3476
Cost of alternative route	0%	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Length of route parallel to existing transmission lines	18%	0 72	0 72	0 72	0 54	0 54	0 72	0 18	0 36	0 18	0 18	0 36	0 36	0 54	0 54
Other Existing Compatible	7%	0 16	0 25	0 16	0 11	0 16	0 25	0 21	0 25	0 19	0 21	0 23	0 21	0 21	0 25
Habitable Structures	0%	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Parks and Recreation	25%	1 00	0 92	0 75	0 75	1 00	0 92	1 00	0 92	0 67	0 67	0 67	0 67	0 67	0 92
Ecological Resources	50%	0 86	0 79	1 07	1 07	0 86	0 79	1 21	1 86	1 64	1 43	1 50	1 79	1 79	1 86
Cultural Resources	0%	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Land Use	0%	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Sum	100%	**2.73**	**2.67**	**2.70**	**2.47**	**2.55**	**2.67**	**2.60**	**3.38**	**2.68**	**2 49**	**2 75**	**3.02**	**3.20**	**3.56**

Alternative	Score	Rank
3476	**3.56**	1
2288	**3.38**	2
2328	**3.20**	3
2320	**3.02**	4
2317B	**2.75**	5
123	**2.73**	6
1863	**2.70**	7
2317	**2.68**	8
141	**2.67**	9
2153	**2.67**	10
2202	**2.60**	11
1886	**2.55**	12
2317A	**2.49**	13
1865	**2.47**	14

Table 5. Parallel to Existing Compatible Rights-of-Way and Length Across Park Land
As a Percent of Total Length

Alternative Route	123	141	1863	1865	1886	2153	2202	2288	2317	2317A	2317B	2320	2328	3476
Total length of route (feet)	439,103	269,362	278,429	396,901	401,314	482,575	507,115	285,555	300,728	300,356	302,285	299,918	369,037	384,137
Length of route parallel to existing transmission lines (feet)	182,677	67,017	72,555	101,886	32,382	213,556	192,938	70,295	58,484	58,484	58,484	58,484	105,151	121,568
as % of total	41 6%	24 9%	26 1%	25 7%	8 1%	44 3%	38 0%	24 6%	19 4%	19 5%	19 3%	19 5%	28 5%	31 6%
Length of route parallel to other existing compatible rights-of-way (feet)	106,813	144,974	138,019	115,419	150,161	115,665	150,188	141,997	144,373	143,213	143,064	144,252	92,137	98,711
as % of total	24 3%	53 8%	49 6%	29 1%	37 4%	24 0%	29 6%	49 7%	48 0%	47 7%	47 3%	48 1%	25 0%	25 7%
Length of route across park/ recreational areas (feet)	3,547	8,285	8,285	0	0	3,547	3,547	8,285	8,285	8,285	8,285	8,285	0	3,547
as % of total	0 8%	3 1%	3 0%	0 0%	0 0%	0 7%	0 7%	2 9%	2 8%	2 8%	2 7%	2 8%	0 0%	0 9%

Alternative		Rank-- transmission lines	Alternative		Rank-- other compatible uses	Alternative		Rank -- across parks
2153	44 3%	1	**141**	53 8%	1	**1865**	0 000%	1 (tie)
123	41 6%	2	**2288**	49 7%	2	**1886**	0 000%	1 (tie)
2202	38 0%	3	**1863**	49 6%	3	**2328**	0 000%	1 (tie)
3476	31 6%	4	**2320**	48 1%	4	**2202**	0 699%	4
2328	28 5%	5	**2317**	48 0%	5	**2153**	0 735%	5
1863	26 1%	6	**2317A**	47 7%	6	**123**	0 808%	6
1865	25 7%	7	**2317B**	47 3%	7	**3476**	0 923%	7
141	24 9%	8	**1886**	37 4%	8	**2317B**	2 741%	8
2288	24 6%	9	**2202**	29 6%	9	**2317**	2 755%	9
2320	19 5%	10	**1865**	29 1%	10	**2317A**	2 758%	10
2317A	19 5%	11	**3476**	25 7%	11	**2320**	2 762%	11
2317	19 4%	12	**2328**	25 0%	12	**2288**	2 901%	12
2317B	19 3%	13	**123**	24 3%	13	**1863**	2 976%	13
1886	8 1%	14	**2153**	24 0%	14	**141**	3 076%	14

Table 6. Alternative Routes Ranked by Weighted Scores

I. TSP Presentation			II. §37.056 (c) Balance			III. TPWD Priorities		
Route	Score	Rank	Route	Score	Rank	Route	Score	Rank
1863	3.48	1	1863	3.38	1	3476	3.56	1
2288	3.31	2	2288	3.29	2	2288	3.38	2
1865	3.27	3	1865	3.17	3	2328	3.20	3
123	3.13	4	123	3.11	4	2320	3.02	4
1886	3.11	5	3476	3.05	5	2317B	2.75	5
3476	2.97	6	1886	3.03	6	123	2.73	6
2202	2.96	7	2202	2.93	7	1863	2.70	7
2153	2.76	8	2153	2.78	8	2317	2.68	8
2328	2.62	9	2328	2.68	9	141	2.67	9
141	2.53	10	141	2.62	10	2153	2.67	10
2317B	2.39	11	2317B	2.46	11	2202	2.60	11
2317	2.04	12	2320	2.21	12	1886	2.55	12
2317A	2.03	13	2317A	2.15	13	2317A	2.49	13
2320	2.01	14	2317	2.14	14	1865	2.47	14

Table 7. Alternative Routes Ranked by Variable Weighting Scenarios

Rank	I. TSP Presentation	II. §37.056 (c) Balance	III. TPWD Priorities
1	1863	1863	3476
2	2288	2288	2288
3	1865	1865	2328
4	123	123	2320
5	1886	3476	2317B
6	3476	1886	123
7	2202	2202	1863
8	2153	2153	2317
9	2328	2328	141
10	141	141	2153
11	2317B	2317B	2202
12	2317	2320	1886
13	2317A	2317A	2317A
14	2320	2317	1865

Appendix 3 – Vegetation Types - Map

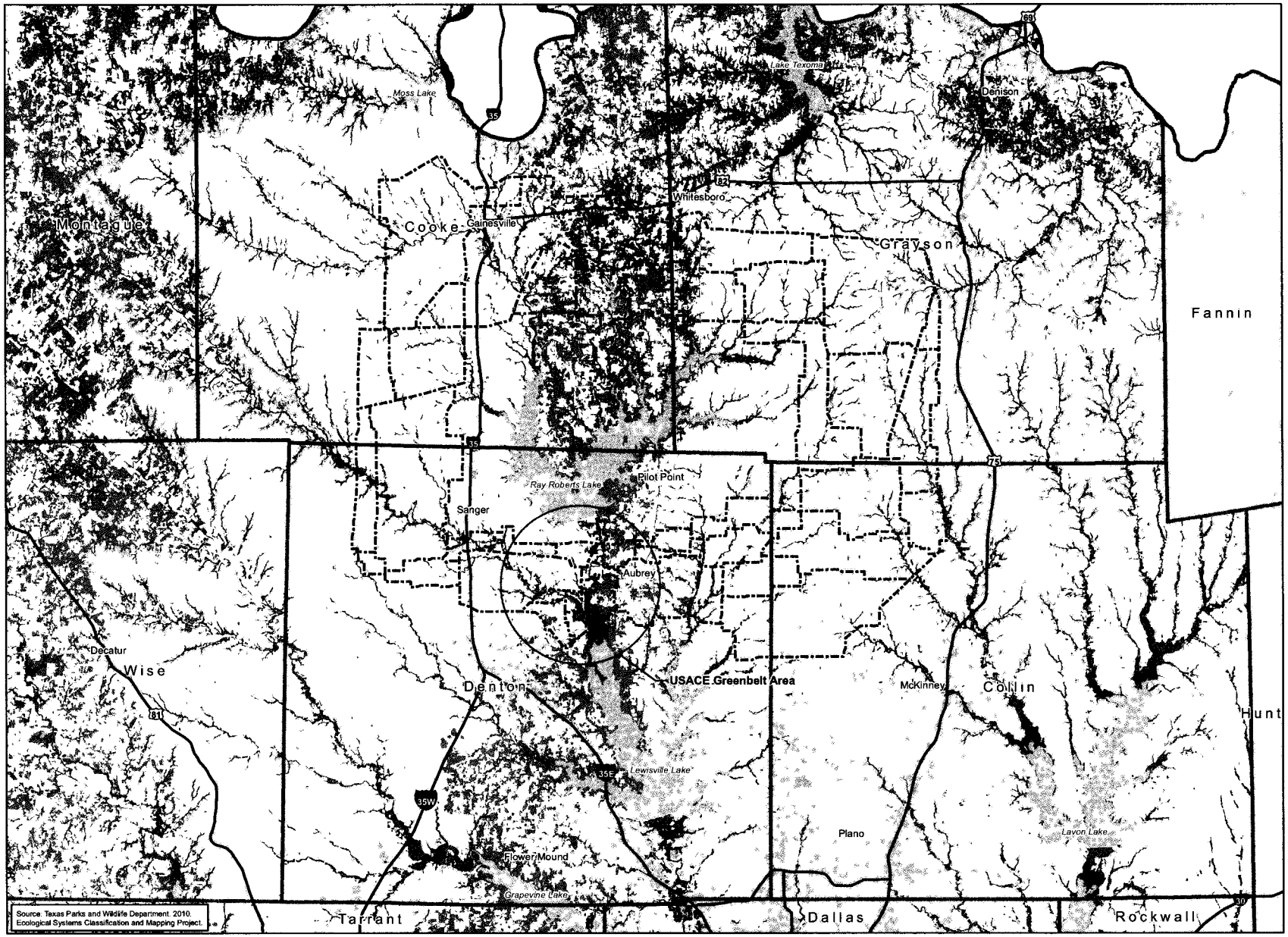

Figure 1
Appendix 3

CREZ - Krum West to Anna
Vegetation Types