APPENDIX E

AIR QUALITY AND GREENHOUSE GAS EMISSIONS

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Modifications to Existing Substations (Upgrades)

Substation Cut/Fill Grading and Surface Improvements

Substation	Task	Materials	Approximate Surface Area (sqft)	Approximate volume (cuyd)		
Devers Substation	Substation equipment foundations, cut	Concrete	1,109	108	Acres	0.1
	Substation equipment foundations, import	Concrete	931	199	PM10/day	0.5
	Site Fill	Soil	177	-	PM2.5/day	0.1
	Site Cut	Soil	-	92		
El Casco Substation	Substation equipment foundations, cut	Concrete	770	43	Acres	0.0
	Substation equipment, import	Concrete	910	51	PM10/day	0.4
	Site Cut	Soil	140	8	PM2.5/day	0.1
Vista Substation	Substation equipment foundations, cut	Concrete	1,109	108	Acres	0.0
	Substation equipment foundations, import	Concrete	931	199	PM10/day	0.5
	Site Fill	Soil	125	-	PM2.5/day	0.1
San Bernardino Substation	Substation equipment foundations, cut	Concrete	2,797	322	Acres	0.1
	Substation equipment foundations, import	Concrete	1,558	255	PM10/day	1.3
	Site Fill	Soil	1,239	57	PM2.5/day	0.3
Timoteo Substation	Substation equipment foundations, cut	Concrete	68	4	Acres	0.0
	Substation equipment foundations, import	Concrete	60	3	PM10/day	0.0
	Site Fill	Soil	8	1	PM2.5/day	0.0
Tennessee Substation	Substation equipment foundations, cut	Concrete	25	2	Acres	0.0
	Substation equipment foundations, import	Concrete	30	2	PM10/day	0.0
	Site Cut	Soil	5	-	PM2.5/day	0.0

Modifications to Existing Substations (Upgrades)

Construction Equipment and Workforce Estimates

Substation	Primary Equipment	Estimated Horse-Power	Probable Fuel Type	Quantity	Estimated Workforce	Estimated Schedule (Days)	Duration (hrs./day)	EMFAC2011 Diesel Emission Factors (gms/mi) or OFFROAD Diesel Emissions Factors (lb/hr)							Average Speed (mph)	Miles per day or Hours per day	Estimated Emissions					
								CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2	CH_4			**CO**	**ROG**	**NO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
Devers Substation	***Civil***				**8**	**80**		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	2.9	0.1	0.3	0.0	0.0	10.9
	Auger Truck	210	Diesel	1	2	24	6	0.343	0.074	0.614	0.018	0.016	188.000	0.007		6	2.1	0.4	3.7	0.1	0.1	13.5
	¾-Ton Crew Cab 4×4	275	Gas	2		80	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.5	0.0	0.1	0.0	0.0	4.6
	Boom/Crane Truck	180	Diesel	1	2	24	6	0.481	0.098	0.731	0.041	0.038	80.300	0.009		6	2.9	0.6	4.4	0.2	0.2	5.8
	Dump Trucks	350	Diesel	2		40	4	0.450	0.156	1.353	0.056	0.052	130.000	0.014		4	3.6	1.3	10.8	0.4	0.4	20.8
	Backhoe	125	Diesel	1	1	40	6	0.464	0.121	0.749	0.063	0.058	64.900	0.011		6	2.8	0.7	4.5	0.4	0.3	7.8
	Lowboy Truck/Trailer	450	Diesel	1		40	2	1.346	0.344	2.989	0.122	0.112	305.000	0.031		2	2.7	0.7	6.0	0.2	0.2	12.2
	Forklift	75	Diesel	1		80	2	0.157	0.038	0.138	0.011	0.010	14.700	0.003		2	0.3	0.1	0.3	0.0	0.0	1.2
	Ditch Digger	75	Diesel	1		40	6	0.276	0.073	0.235	0.019	0.017	25.000	0.007		6	1.7	0.4	1.4	0.1	0.1	3.0
																	19.4	**4.3**	**31.4**	**1.6**	**1.4**	**79.7**
	Electrical				**10**	120		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	3.6	0.1	0.4	0.0	0.0	20.4
	Manlifts/Bucket Truck	250	Diesel	2		100	6	0.310	0.071	0.706	0.032	0.029	97.934	0.006		6	3.7	0.9	8.5	0.4	0.4	58.8
	Boom/Crane Truck	180	Diesel	1	2	80	6	0.481	0.098	0.731	0.041	0.038	80.300	0.009		6	2.9	0.6	4.4	0.2	0.2	19.3
	¾-Ton Crew Cab 4×4	275	Gas	2		120	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.5	0.0	0.1	0.0	0.0	6.9
	150-ton Crane	250	Diesel	1	2	40	6	0.282	0.098	0.909	0.032	0.029	112.000	0.009		6	1.7	0.6	5.5	0.2	0.2	13.4
	Lowboy Truck/Trailer	450	Diesel	1		40	2	1.346	0.344	2.989	0.122	0.112	305.000	0.031		2	2.7	0.7	6.0	0.2	0.2	12.2
	Ditch Digger	75	Diesel	1		10	6	0.276	0.073	0.235	0.019	0.017	25.000	0.007		6	1.7	0.4	1.4	0.1	0.1	0.8
	Forklift	75	Diesel	1		100	2	0.157	0.038	0.138	0.011	0.010	14.700	0.003		2	0.3	0.1	0.3	0.0	0.0	1.5
	Utility Truck	180	Gas	1		120	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	3.4
																	17.3	**3.4**	**26.4**	**1.2**	**1.1**	**136.6**
	Maintenance				**4**	200		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	1.4	0.0	0.1	0.0	0.0	13.6
	Checker/Truck	180	Gas/Diesel	1		200	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	5.7
	Manlifts	75	Gas/Diesel	1		20	4	0.281	0.093	0.231	0.022	0.020	23.200	0.008		4	1.1	0.4	0.9	0.1	0.1	0.9
	¾-Ton Crew Cab 4×4	275	Gas	1		20	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	0.6
	Gas/Processing Trailer	0	Electric	0		10	4										**3.1**	**0.4**	**1.1**	**0.1**	**0.1**	**20.8**
	Test				**2**	140		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	0.7	0.0	0.1	0.0	0.0	4.8
	Utility Truck	180	Gas	1		140	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	4.0
																	1.0	**0.0**	**0.1**	**0.0**	**0.0**	**8.8**
															Fugitive Dust					**0.5**	**0.1**	
															Peak Phase Emission		19.4	4.3	31.4	2.1	1.5	

	Civil			**6**		**40**		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	2.2	0.1	0.2	0.0	0.0	4.1
	Auger Truck	210	Diesel	0		0	0	0.343	0.074	0.614	0.018	0.016	188.000	0.007		0	0.0	0.0	0.0	0.0	0.0	0.0
	¾-Ton Crew Cab 4×4	275	Gas	2		40	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.5	0.0	0.1	0.0	0.0	2.3
	Boom/Crane Truck	180	Diesel	0		0	0	0.481	0.098	0.731	0.041	0.038	80.300	0.009		0	0.0	0.0	0.0	0.0	0.0	0.0
	Dump Trucks	350	Diesel	2		25	4	0.450	0.156	1.353	0.056	0.052	130.000	0.014		4	3.6	1.3	10.8	0.4	0.4	13.0
	Backhoe	125	Diesel	1	1	25	6	0.464	0.121	0.749	0.063	0.058	64.900	0.011		6	2.8	0.7	4.5	0.4	0.3	4.9
	Lowboy Truck/Trailer	450	Diesel	1		25	2	1.346	0.344	2.989	0.122	0.112	305.000	0.031		2	2.7	0.7	6.0	0.2	0.2	7.6
	Forklift	75	Diesel	1		30	2	0.157	0.038	0.138	0.011	0.010	14.700	0.003		2	0.3	0.1	0.3	0.0	0.0	0.4
	Ditch Digger	75	Diesel	1		10	6	0.276	0.073	0.235	0.019	0.017	25.000	0.007		6	1.7	0.4	1.4	0.1	0.1	0.8
																	13.7	**3.3**	**23.3**	**1.2**	**1.1**	**33.0**
	Electrical			**8**		60		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	2.9	0.1	0.3	0.0	0.0	8.2
	Manlifts/Bucket Truck	250	Diesel	2		40	6	0.282	0.098	0.909	0.032	0.029	112.000	0.009		6	3.4	1.2	10.9	0.4	0.3	26.9
	Boom/Crane Truck	180	Diesel	1	2	30	6	0.481	0.098	0.731	0.041	0.038	80.300	0.009		6	2.9	0.6	4.4	0.2	0.2	7.2
	¾-Ton Crew Cab 4×4	275	Gas	2		60	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.5	0.0	0.1	0.0	0.0	3.4
El Casco Substation	150-ton Crane	250	Diesel	1	2	20	6	0.282	0.098	0.909	0.032	0.029	112.000	0.009		6	1.7	0.6	5.5	0.2	0.2	6.7
	Lowboy Truck/Trailer	450	Diesel	1		20	2	1.346	0.344	2.989	0.122	0.112	305.000	0.031		2	2.7	0.7	6.0	0.2	0.2	6.1
	Ditch Digger	75	Diesel	1		10	6	0.276	0.073	0.235	0.019	0.017	25.000	0.007		6	1.7	0.4	1.4	0.1	0.1	0.8
	Forklift	75	Diesel	1		50	2	0.157	0.038	0.138	0.011	0.010	14.700	0.003		2	0.3	0.1	0.3	0.0	0.0	0.7
	Utility Truck	180	Gas	1		60	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	1.7
																	16.3	**3.7**	**28.8**	**1.2**	**1.1**	**61.7**
	Maintenance			**3**		100		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	1.1	0.0	0.1	0.0	0.0	5.1
	Checker/Truck	180	Gas/Diesel	1		100	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109		2	0.3	0.0	0.0	0.0	0.0	64.8
	Manlifts	75	Gas/Diesel	1		10	4	0.195	0.053	0.240	0.019	0.017	26.207	0.005		4	0.8	0.2	1.0	0.1	0.1	0.5
	¾-Ton Crew Cab 4×4	275	Gas	1		10	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	0.3
	Gas/Processing Trailer	0	Electric	0		5	4										**2.4**	**0.3**	**1.1**	**0.1**	**0.1**	**70.7**
	Test			**2**		70		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	0.7	0.0	0.1	0.0	0.0	2.4
	Utility Truck	180	Gas	1		70	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	2.0
																	1.0	**0.0**	**0.1**	**0.0**	**0.0**	**4.4**
																Fugitive Dust				**0.4**	**0.1**	
																Peak Phase Emission	16.3	3.7	28.8	1.6	1.2	

	Civil				8	45		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	2.9	0.1	0.3	0.0	0.0	6.1
	Auger Truck	210	Diesel	0	2	20	6	0.343	0.074	0.614	0.018	0.016	188.000	0.007		6	0.0	0.0	0.0	0.0	0.0	0.0
	¾-Ton Crew Cab 4×4	275	Gas	2		45	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.5	0.0	0.1	0.0	0.0	2.6
	Boom/Crane Truck	180	Diesel	0	2	20	4	0.481	0.098	0.731	0.041	0.038	80.300	0.009		4	0.0	0.0	0.0	0.0	0.0	0.0
	Dump Trucks	350	Diesel	2		25	4	0.450	0.156	1.353	0.056	0.052	130.000	0.014		4	3.6	1.3	10.8	0.4	0.4	13.0
	Backhoe	125	Diesel	1	1	25	6	0.464	0.121	0.749	0.063	0.058	64.900	0.011		6	2.8	0.7	4.5	0.4	0.3	4.9
	Lowboy Truck/Trailer	450	Diesel	1		25	2	1.346	0.344	2.989	0.122	0.112	305.000	0.031		2	2.7	0.7	6.0	0.2	0.2	7.6
	Forklift	75	Diesel	1		30	2	0.157	0.038	0.138	0.011	0.010	14.700	0.003		2	0.3	0.1	0.3	0.0	0.0	0.4
	Ditch Digger	75	Diesel	1		15	6	0.276	0.073	0.235	0.019	0.017	25.000	0.007		6	1.7	0.4	1.4	0.1	0.1	1.1
																	14.4	**3.3**	**23.3**	**1.2**	**1.1**	**35.7**
	Electrical				10	75		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	3.6	0.1	0.4	0.0	0.0	12.7
	Manlifts/Bucket Truck	250	Diesel	2		65	6	0.282	0.098	0.909	0.032	0.029	112.000	0.009		6	3.4	1.2	10.9	0.4	0.3	43.7
	Boom/Crane Truck	180	Diesel	1	2	60	6	0.481	0.098	0.731	0.041	0.038	80.300	0.009		6	2.9	0.6	4.4	0.2	0.2	14.5
	¾-Ton Crew Cab 4×4	275	Gas	2		75	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.5	0.0	0.1	0.0	0.0	4.3
Vista Substation	150-ton Crane	250	Diesel	1	2	50	6	0.282	0.098	0.909	0.032	0.029	112.000	0.009		6	1.7	0.6	5.5	0.2	0.2	16.8
	Lowboy Truck/Trailer	450	Diesel	1		50	2	1.346	0.344	2.989	0.122	0.112	305.000	0.031		2	2.7	0.7	6.0	0.2	0.2	15.3
	Ditch Digger	75	Diesel	1		15	6	0.276	0.073	0.235	0.019	0.017	25.000	0.007		6	1.7	0.4	1.4	0.1	0.1	1.1
	Forklift	75	Diesel	1		65	2	0.157	0.038	0.138	0.011	0.010	14.700	0.003		2	0.3	0.1	0.3	0.0	0.0	1.0
	Utility Truck	180	Gas	1		75	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	2.1
																	17.0	**3.7**	**28.9**	**1.2**	**1.1**	**111.4**
	Maintenance				3	120		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	1.1	0.0	0.1	0.0	0.0	6.1
	Checker/Truck	180	Gas/Diesel	1		120	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109		2	0.3	0.0	0.0	0.0	0.0	77.8
	Manlifts	75	Gas/Diesel	1		20	4	0.281	0.093	0.231	0.022	0.020	23.200	0.008		4	1.1	0.4	0.9	0.1	0.1	0.9
	¾-Ton Crew Cab 4×4	275	Gas	1		20	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	0.6
	Gas/Processing Trailer	0	Electric	0		10	4										**2.7**	**0.4**	**1.1**	**0.1**	**0.1**	**85.4**
	Test				2	120		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	0.7	0.0	0.1	0.0	0.0	4.1
	Utility Truck	180	Gas	1		120	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	3.4
																	1.0	**0.0**	**0.1**	**0.0**	**0.0**	**7.5**
																Fugitive Dust				**0.5**	**0.1**	
																Peak Phase Emission	17.0	3.7	28.9	1.7	1.2	

	Civil			**8**		**80**	3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	2.9	0.1	0.3	0.0	0.0	10.9
	Auger Truck	210	Diesel	1	2	24	6	0.343	0.074	0.614	0.018	0.016	188.000	0.007		6	2.1	0.4	3.7	0.1	0.1	13.5
	¾-Ton Crew Cab 4×4	275	Gas	2		80	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.5	0.0	0.1	0.0	0.0	4.6
	Boom/Crane Truck	180	Diesel	1	2	24	6	0.481	0.098	0.731	0.041	0.038	80.300	0.009		6	2.9	0.6	4.4	0.2	0.2	5.8
	Dump Trucks	350	Diesel	2		40	4	0.450	0.156	1.353	0.056	0.052	130.000	0.014		4	3.6	1.3	10.8	0.4	0.4	20.8
	Backhoe	125	Diesel	1	1	40	6	0.464	0.121	0.749	0.063	0.058	64.900	0.011		6	2.8	0.7	4.5	0.4	0.3	7.8
	Lowboy Truck/Trailer	450	Diesel	1		40	2	1.346	0.344	2.989	0.122	0.112	305.000	0.031		2	2.7	0.7	6.0	0.2	0.2	12.2
	Forklift	75	Diesel	1		80	2	0.157	0.038	0.138	0.011	0.010	14.700	0.003		2	0.3	0.1	0.3	0.0	0.0	1.2
	Ditch Digger	75	Diesel	1		40	6	0.276	0.073	0.235	0.019	0.017	25.000	0.007		6	1.7	0.4	1.4	0.1	0.1	3.0
																	19.4	**4.3**	**31.4**	**1.6**	**1.4**	**79.7**
	Electrical			**10**		120	3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	3.6	0.1	0.4	0.0	0.0	20.4
	Manlifts/Bucket Truck	250	Diesel	2		100	6	0.282	0.098	0.909	0.032	0.029	112.000	0.009		6	3.4	1.2	10.9	0.4	0.3	67.2
	Boom/Crane Truck	180	Diesel	1	2	80	6	0.481	0.098	0.731	0.041	0.038	80.300	0.009		6	2.9	0.6	4.4	0.2	0.2	19.3
	¾-Ton Crew Cab 4×4	275	Gas	2		120	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.5	0.0	0.1	0.0	0.0	6.9
San Bernardino Substation	150-ton Crane	250	Diesel	1	2	40	6	0.282	0.098	0.909	0.032	0.029	112.000	0.009		6	1.7	0.6	5.5	0.2	0.2	13.4
	Lowboy Truck/Trailer	450	Diesel	1		40	2	1.346	0.344	2.989	0.122	0.112	305.000	0.031		2	2.7	0.7	6.0	0.2	0.2	12.2
	Ditch Digger	75	Diesel	1		10	6	0.276	0.073	0.235	0.019	0.017	25.000	0.007		6	1.7	0.4	1.4	0.1	0.1	0.8
	Forklift	75	Diesel	1		100	2	0.157	0.038	0.138	0.011	0.010	14.700	0.003		2	0.3	0.1	0.3	0.0	0.0	1.5
	Utility Truck	180	Gas	1		120	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	3.4
																	17.0	**3.7**	**28.9**	**1.2**	**1.1**	**145.0**
	Maintenance			**4**		200	3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	1.4	0.0	0.1	0.0	0.0	13.6
	Checker/Truck	180	Gas/Diesel	1		200	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109		2	0.3	0.0	0.0	0.0	0.0	129.7
	Manlifts	75	Gas/Diesel	1		20	4	0.281	0.093	0.231	0.022	0.020	23.200	0.008		4	1.1	0.4	0.9	0.1	0.1	0.9
	¾-Ton Crew Cab 4×4	275	Gas	1		20	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	0.6
	Gas/Processing Trailer	0	Electric	0		10	4										**3.1**	**0.4**	**1.1**	**0.1**	**0.1**	**144.8**
	Test			**2**		140	3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	0.7	0.0	0.1	0.0	0.0	4.8
	Utility Truck	180	Gas	1		140	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	4.0
																	1.0	**0.0**	**0.1**	**0.0**	**0.0**	**8.8**
																Fugitive Dust				**1.3**	**0.3**	
																Peak Phase Emission	19.4	4.3	31.4	2.8	1.7	
	Electrical			**2**	25		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	0.7	0.0	0.1	0.0	0.0	0.8
	3/4-Ton Crew Cab 4×4	275	Gas	1		25	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	0.7
Etiwanda Substation																	**1.0**	**0.0**	**0.1**	**0.0**	**0.0**	**1.6**
	Test			**2**	20		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	0.7	0.0	0.1	0.0	0.0	0.7
	Utility Truck	180	Gas	1		20	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	0.6
																	1.0	**0.0**	**0.1**	**0.0**	**0.0**	**1.3**
																Fugitive Dust				**0.0**	**0.0**	
																Peak Phase Emission	1.0	0.0	0.1	0.0	0.0	

	Civil			**3**			**8**	3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	1.1	0.0	0.1	0.0	0.0	0.4
	Office Trailer	0	Electric	0		0	0																
	Auger Truck	210	Diesel	0		0	0	0.343	0.074	0.614	0.018	0.016	188.000	0.007		0	0.0	0.0	0.0	0.0	0.0	0.0
	3/4-Ton Crew Cab 4×4	275	Gas	1		8	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	0.2
	Boom/ Crane Truck	180	Diesel	0		0	0	0.481	0.098	0.731	0.041	0.038	80.300	0.009		0	0.0	0.0	0.0	0.0	0.0	0.0
	Dump Trucks	350	Diesel	1	1	4	4	0.450	0.156	1.353	0.056	0.052	130.000	0.014		4	0.1	0.0	0.2	0.0	0.0	1.0
	Backhoe	125	Diesel	1		4	6	0.464	0.121	0.749	0.063	0.058	64.900	0.011		6	0.1	0.0	0.2	0.0	0.0	0.8
	Lowboy Truck/Trailer	450	Diesel	0		0	0	1.346	0.344	2.989	0.122	0.112	305.000	0.031		0	0.0	0.0	0.0	0.0	0.0	0.0
	Forklift	75	Diesel	0		0	0	0.157	0.038	0.138	0.011	0.010	14.700	0.003		0	0.0	0.0	0.0	0.0	0.0	0.0
	Ditch Digger	75	Diesel	0		0	0	0.276	0.073	0.235	0.019	0.017	25.000	0.007		0	0.0	0.0	0.0	0.0	0.0	0.0
																	1.5	**0.1**	**0.6**	**0.0**	**0.0**	**2.5**
	Electrical			**5**		25		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	1.8	0.1	0.2	0.0	0.0	2.1
	Office Trailer	0	Electric	0		0	0																
	Manlifts/Bucket Truck	250	Diesel	1		20	6	0.282	0.098	0.909	0.032	0.029	112.000	0.009		6	0.1	0.0	0.2	0.0	0.0	6.7
	Boom/ Crane Truck	180	Diesel	1		6	4	0.481	0.098	0.731	0.041	0.038	80.300	0.009		4	0.1	0.0	0.1	0.0	0.0	1.0
Timoteo Substation	3/4-Ton Crew Cab 4×4	275	Gas	1		25	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	0.7
	150-ton Crane	250	Diesel	0		0	0	0.282	0.098	0.909	0.032	0.029	112.000	0.009		0	0.0	0.0	0.0	0.0	0.0	0.0
	Lowboy Truck/Trailer	450	Diesel	0		0	0	1.346	0.344	2.989	0.122	0.112	305.000	0.031		0	0.0	0.0	0.0	0.0	0.0	0.0
	Ditch Digger	75	Diesel	0		0	0	0.276	0.073	0.235	0.019	0.017	25.000	0.007		0	0.0	0.0	0.0	0.0	0.0	0.0
	Forklift	75	Diesel	1		10	4	0.157	0.038	0.138	0.011	0.010	14.700	0.003		4	0.0	0.0	0.0	0.0	0.0	0.3
	Utility Truck	180	Gas	0		0	0	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	0	0.0	0.0	0.0	0.0	0.0	0.0
																	2.2	**0.1**	**0.6**	**0.0**	**0.0**	**10.8**
	Maintenance			**3**		25		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	1.1	0.0	0.1	0.0	0.0	1.3
	Checker/ Truck	180	Gas/Diesel	1		25	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109		2	0.3	0.0	0.0	0.0	0.0	16.2
	Manlifts	75	Gas/Diesel	0		0	0	0.281	0.093	0.231	0.022	0.020	23.200	0.008		0	0.0	0.0	0.0	0.0	0.0	0.0
	3/4-Ton Crew Cab 4×4	275	Gas	1		4	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	0.1
	Gas/Processing Trailer	0	Electric	1		2	6										0.0	0.0	0.0	0.0	0.0	0.0
																	1.6	**0.0**	**0.2**	**0.0**	**0.0**	**17.6**
	Test			**2**		15		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	0.7	0.0	0.1	0.0	0.0	0.5
	Utility Truck	180	Gas	1		15	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	0.4
																	1.0	**0.0**	**0.1**	**0.0**	**0.0**	**0.9**
																Fugitive Dust				**0.0**	**0.0**	
																Peak Phase Emission	2.2	0.1	0.6	0.1	0.0	
	Civil			**3**		**4**		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	1.1	0.0	0.1	0.0	0.0	0.2
	3/4-Ton Crew Cab 4×4	275	Gas	1		4	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	0.1
	Dump Trucks	350	Diesel	1	1	2	4	0.450	0.156	1.353	0.056	0.052	130.000	0.014		4	0.1	0.0	0.2	0.0	0.0	0.5
	Backhoe	125	Diesel	1		2	6	0.464	0.121	0.749	0.063	0.058	64.900	0.011		6	0.1	0.0	0.2	0.0	0.0	0.4
																	1.5	**0.1**	**0.6**	**0.0**	**0.0**	**1.2**
	Electrical			**5**		14		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	1.8	0.1	0.2	0.0	0.0	1.2
	Manlifts/Bucket Truck	250	Diesel	1		10	6	0.282	0.098	0.909	0.032	0.029	112.000	0.009		6	0.1	0.0	0.2	0.0	0.0	3.4
	Boom/ Crane Truck	180	Diesel	1		3	4	0.481	0.098	0.731	0.041	0.038	80.300	0.009		4	0.1	0.0	0.1	0.0	0.0	0.5
	3/4-Ton Crew Cab 4×4	275	Gas	1		14	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	0.4
Tennessee Substation	Forklift	75	Diesel	1		8	4	0.157	0.038	0.138	0.011	0.010	14.700	0.003		4	0.0	0.0	0.0	0.0	0.0	0.2
																	2.2	**0.1**	**0.6**	**0.0**	**0.0**	**5.7**
	Maintenance			4		14		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	1.4	0.0	0.1	0.0	0.0	1.0
	Checker/ Truck	180	Gas/Diesel	1		14	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109		2	0.3	0.0	0.0	0.0	0.0	9.1
	3/4-Ton Crew Cab 4×4	275	Gas	1		2	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	0.1
	Gas/Processing Trailer	0	Electric	1		1	6									6	0.0	0.0	0.0	0.0	0.0	0.0
																	2.0	**0.1**	**0.2**	**0.0**	**0.0**	**10.1**
	Test			**2**		8		3.281	0.092	0.333	0.004	0.004	308.221	0.052	40	50	0.7	0.0	0.1	0.0	0.0	0.3
	Utility Truck	180	Gas	1		8	2	2.857	0.103	0.314	0.004	0.004	648.327	0.109	20	2	0.3	0.0	0.0	0.0	0.0	0.2
																	1.0	**0.0**	**0.1**	**0.0**	**0.0**	**0.5**
																Fugitive Dust				0.0	0.0	
																Peak Phase Emission	2.2	0.1	0.6	0.0	0.0	
																				total CO2e =		1086.2

Note: The fugitive dust emissions were calculated using the maximum disturbed area for each substation. To calculate the maximum emissions, the fugitive dust emissions were added to the peak phase emissions

Transmission and Subtransmission (Removal and Installation)

Transmission and Subtransmission Land Disturbance

Transmission Land Disturbance (Excluding Segment 5)

Project Feature	Site Quantity	Disturbed Acreage Calculation (L x W)	Acres Disturbed During Construction	Acres to be Restored (Temporary)	Acres Permanently Disturbed	Segment 1	Segment 2	Segment 3	Segment 4	Segment 6
Guard Structures	667	150' x 50'	114.8	114.8	0	10.4	14.9	29.8	35.7	23.9
Remove Existing Lattice Steel Tower (1)	426	220' x 220'	473.3	473.3	0	43.1	61.5	123.1	147.2	98.4
Remove Existing Tubular Steel Pole (1)	5	220' x 150'	3.8	3.8	0	0.3	0.5	1.0	1.2	0.8
Remove Existing Wood H-Frame (1)	186	175' x 125'	93.4	93.4	0	8.5	12.1	24.3	29.0	19.4
Construct New Lattice Steel Tower (2)	452	220' x 220'	502.2	389.2	113	45.7	65.3	130.6	156.2	104.5
Construct New Tubular Steel Pole (2)	4	220' x 150'	3	2.8	0.2	0.3	0.4	0.8	0.9	0.6
Construct New Wood H-Frame Pole (2)	1	175' x 125'	0.5	0.4	0.1	0.0	0.1	0.1	0.2	0.1
Conductor Stringing Setup Area (3)	93	600' x 150'	192.1	192.1	0	17.5	25.0	49.9	59.7	40.0
Conductor Splicing Setup Areas (3)	10	200' x 150'	6.9	6.9	0	0.6	0.9	1.8	2.1	1.4
Existing Access Roads to be improved (4)	130	linear miles x 18'	283.6	0	283.6	25.8	36.9	73.7	88.2	59.0
New Access Roads (4)	21	linear miles x 18'	45.8	0	45.8	4.2	6.0	11.9	14.2	9.5
Crane Pads, Walls, Cut Slopes	-	-	2611.3	2538.8	73	237.6	339.5	678.9	812.1	543.2
Total Estimated Disturbance Acreage			**4320.6**	**3805.3**	**515.3**	394.1	563.0	1126.0	1346.8	900.8
					Max Days	41.0	61.0	122.0	146.0	97.0
					Acres/day	9.612041	9.229361	9.229361	9.224984	9.286449
					PM10/day	95.73593	91.92443	91.92443	91.88084	92.49304
					PM2.5/day	20.10455	19.30413	19.30413	19.29498	19.42354

Transmission Land Disturbance (Segment 5)

Project Feature	Site Quantity	Disturbed Acreage Calculation (L x W)	Acres Disturbed During Construction	Acres to be Restored (Temporary)	Acres Permanently Disturbed
Construct New Lattice Steel Tower (1)	74	220' x 220'	80	62	18
Construct New Tubular Steel Pole (1)	36	220' x 150'	27.3	25.1	2.2
Conductor Stringing Setup Area (2)	30	600' x 150'	62	62	0
Conductor Splicing Setup Areas (2)	4	200' x 150'	2.8	2.8	0
New Access Roads (3)	4.8	linear miles x 18'	10.3	0	10.3
Crane Pads, Walls, Cut Slopes	-	-	308.4	301.7	6.7
Total Estimated Disturbance Acreage			**490.7**	**453.6**	**37.1**
		Max Days	54.0		
		Acres/day	9.087037037		
		PM10/day	90.50688889		
		PM2.5/day	19.00644667		

Subtransmission Land Disturbance					
Project Feature	**Quantity of Sites**	**Disturbed Acreage Calculation (L x W)**	**Total Acres Disturbed During Construction**	**Acres to be Restored (Temporary)**	**Acres Permanently Disturbed**
Guard Structures	70 ea	75’ x 50’	6	6	0
Remove Existing Lattice Steel Tower (1)	9 ea	220’ x 220’	10	10	0
Remove Existing Wood Pole (1)	28 ea	175’ x 100’	11.2	11.2	0
Construct New Tubular Steel Pole (2)	26 ea	220’ x 150’	19.7	18.1	1.6
Construct New Light Weight Steel/ Wood Pole (2)	154 ea	175’ x 100’	61.9	60.3	1.5
Conductor Stringing Setup Area (3)	28 ea	400’ x 100’	25.7	25.7	0
Install Underground Cable in Conduit	5,280 linear feet	Linear feet x 24” wide	2.9	2.9	0
Install Underground Vault	9 ea	100’ x 100’	2.1	2.1	0
Total Estimated Disturbance Acreage (4)			140.9	136.4	3.1
		Max Days	54		
		Acres/day	2.609259259		
		PM10/day	25.98822222		
		PM2.5/day	5.457526667		

Transmission Land Disturbance Alternative (Segment 5)					
Project Feature	**Site Quantity**	**Disturbed Acreage Calculation (L x W)**	**Acres Disturbed During Construction**	**Acres to be Restored (Temporary)**	**Acres Permanently Disturbed**
Construct New Lattice Steel Tower (1)	74	220' x 220'	82.2	63.7	18.5
Construct New Tubular Steel Pole (1)	36	220' x 150'	27.3	25.1	2.2
Conductor Stringing Setup Area (2)	30	600' x 150'	62	62	0
Conductor Splicing Setup Areas (2)	4	200' x 150'	2.8	2.8	0
New Access Roads (3)	5.3	11.6	11.6	0	11.6
Crane Pads, Walls, Cut Slopes	-	-	308.4	301.7	6.7
Total Estimated Disturbance Acreage			**494.3**	**455.3**	**39**
		Max Days	56		
		Acres/day	8.826785714		
		PM10/day	87.91478571		
		PM2.5/day	18.462105		

Transmission and Subtransmission Construction Equipment and Workforce Estimates

Transmission (Segment 1) Construction Equipment and Workforce Estimates

Work Activity				Activity Production				EMFAC2011 Diesel Emission Factors (gms/mi) or OFFROAD Diesel Emissions Factors (lb/hr)							Average Speed (mph)	Miles per day or Hours per day	Estimated Emissions					
								CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2	CH_4			CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e
Primary Equipment Description	Estimated Horse-Power	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (Days)	Duration of Use (Hrs/Day)	Estimated Production Per Day										(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(MT/yr)
Survey -- (1)				**4**	**3**		**3.5**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.2
3/4-Ton Pick-up Truck, 4×4	200	Gas	2		3	8	1.3 Miles/Day	2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	2.0	0.1	0.2	0.0	0.0	0.7
																Total	**3.5**	**0.1**	**0.4**	**0.0**	**0.0**	**0.9**
																Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
Marshaling Yard -- (2)				**4**				3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.0
1-Ton Crew Cab, 4×4	300	Diesel	1		2	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.1	0.0	0.2	0.0	0.0	0.1
R/T Crane (M)	300	Diesel	1		2	5		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	1.6	0.5	4.9	0.2	0.2	0.6
R/T Forklift	200	Diesel	1		2	5		0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		5	1.7	0.3	1.9	0.1	0.1	0.3
Water Truck	300	Diesel	1		2	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		10	4.2	1.5	12.0	0.4	0.4	1.9
Jet A Fuel Truck			1		2	4		0.6148	0.2034	1.6679	0.0579	0.0533	260.0000	0.0183		4	2.5	0.8	6.7	0.2	0.2	1.0
Truck, Semi, Tractor	350	Diesel	1		2	6		0.5063	0.1560	1.3478	0.0449	0.0413	241.2000	0.0141		6	3.0	0.9	8.1	0.3	0.2	1.4
																Total	**14.6**	**4.1**	**34.0**	**1.2**	**1.1**	**5.3**
																Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
R/W Clearing -- (3)				**5**	**11**		**3.5 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.8	0.1	0.2	0.0	0.0	0.9
1-Ton Crew Cab, 4×4	300	Diesel	1		11	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	0.4	0.1	0.4	0.1	0.1	0.8
Motor Grader	350	Diesel	1		11	7		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		7	4.2	1.2	10.7	0.4	0.4	8.8
Water Truck	350	Diesel	2		11	7		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		7	6.6	2.3	18.2	0.6	0.6	16.1
Backhoe/Front Loader	350	Diesel	1		11	7	0.4 Miles/Day	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	5.1	1.5	12.8	0.4	0.4	13.3
Track Type Dozer	350	Diesel	1		11	9		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		9	8.3	2.4	19.8	0.8	0.8	10.7
Lowboy Truck/Trailer	500	Diesel	1		11	5		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		5	4.6	1.3	11.0	0.5	0.4	5.9
																Total	**31.0**	**8.8**	**72.9**	**2.8**	**2.6**	**56.5**
																Total (tons)	**0.2**	**0.0**	**0.4**	**0.0**	**0.0**	
Roads & Landing Work -- (4)				**10**	**11**		**13.9 Miles & 42 Pads**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	3.6	0.1	0.4	0.0	0.0	1.9
1-Ton Crew Cab, 4×4	300	Diesel	4		11	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	0.7	0.2	0.8	0.1	0.1	1.6
Motor Grader	350	Diesel	2		11	5		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		5	6.0	1.8	15.2	0.6	0.5	12.6
Water Truck	350	Diesel	4		11	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	46.0
Backhoe/Front Loader	350	Diesel	2		11	7	1.3 Miles/Day & 5	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	10.1	3.1	25.6	0.9	0.8	26.6
Drum Type Compactor	250	Diesel	2		11	5	Structure Pads/Day	0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109		5	3.6	1.2	11.3	0.4	0.4	6.7
Track Type Dozer	350	Diesel	2		11	7		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		7	13.0	3.7	30.7	1.3	1.2	16.6
Excavator	300	Diesel	2		6	7		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115		7	7.1	2.3	18.4	0.0	0.0	7.3
Lowboy Truck/Trailer	500	Diesel	2		6	4		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	7.4	2.1	17.6	0.7	0.7	5.2
																Total	**70.4**	**20.9**	**171.9**	**5.8**	**5.4**	**124.4**
																Total (tons)	**0.2**	**0.1**	**0.5**	**0.0**	**0.0**	
Guard Structure Installation -- (5)				**12**	**5**		**60 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	1.0
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4	4	5	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	1.3	0.0	0.1	0.0	0.0	0.7
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	2		5	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.6	0.1	0.6	0.1	0.1	0.6
Compressor Trailer	120	Diesel	2		5	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	4.5	1.1	6.6	0.6	0.5	1.6
Auger Truck	500	Diesel	2		5	5		0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		5	6.1	2.1	15.9	0.6	0.5	6.8
Extendable Flat Bed Pole Truck	350	Diesel	2		5	8	12 Structures/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	8.4
R/T Crane (M)	500	Diesel	2		5	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	7.2
Water Truck	350	Diesel	1		5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	3.8	1.3	10.4	0.4	0.3	4.2
Extendable Flat Bed Pole Truck	350	Diesel	2		5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	8.4
																Total	**43.6**	**12.3**	**96.5**	**3.8**	**3.5**	**38.9**
																Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Remove Existing Conductor & OHGW -- (6)				**56**	**41**		**70 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	20.3	0.6	2.1	0.0	0.0	39.0
1-Ton Crew Cab, 4×4	300	Diesel	16		41	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	5.6	1.2	6.0	1.0	1.0	47.1
Man-lift / Bucket Truck	350	Diesel	12		41	10		0.3637	0.0870	0.9773	0.0354	0.0326	143.9610	0.0079		10	43.6	10.4	117.3	4.3	3.9	354.1
Sleeving Truck	300	Diesel	4		41	5		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		5	8.5	2.9	24.1	0.8	0.8	77.1
R/T Crane (M)	300	Diesel	4	4	41	5		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	6.5	2.2	19.7	0.7	0.6	51.5
Flat Bed Trailer	N/A	N/A	12		38	3	1.7 Miles/Day	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		3	0.0	0.0	0.0	0.0	0.0	0.0
Truck, Semi, Tractor	350	Diesel	4		38	3		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		3	5.7	1.9	15.6	0.5	0.5	47.7
Bull Wheel Puller	500	Diesel	4		29	5		0.6064	0.2032	1.8639	0.0630	0.0580	265.0000	0.0183		5	12.1	4.1	37.3	1.3	1.2	76.9
Water Truck	350	Diesel	4		29	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	72.7
Hydraulic Rewind Puller	300	Diesel	4		29	5		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	6.2	2.2	21.8	0.7	0.6	39.4
																Total	**119.7**	**29.5**	**275.1**	**10.4**	**9.6**	**805.5**
																Total (tons)	**1.7**	**0.4**	**4.0**	**0.2**	**0.1**	

220kV H-Frame/3 Pole Structure Removals				**32**	**31**		**39 Towers**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	11.6	0.3	1.2	0.0	0.0	16.9
1-Ton Crew Cab, 4×4	300	Diesel	8		31	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	2.8	0.6	3.0	0.5	0.5	17.8
Compressor Trailer	120	Diesel	8		31	5		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		5	12.9	3.0	18.7	1.7	1.5	29.1
Backhoe/Front Loader	350	Diesel	4		31	10	6 Structures/Day	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	213.9
Man-lift / Bucket Truck	350	Diesel	4		31	8		0.3637	0.0870	0.9773	0.0354	0.0326	143.9610	0.0079		8	11.6	2.8	31.3	1.1	1.0	71.4
Boom/Crane Truck	350	Diesel	4		31	8		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		8	11.7	3.8	34.1	1.2	1.1	69.0
Flat Bed Pole Truck	400	Diesel	4		31	10		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		10	20.7	7.1	55.9	1.9	1.8	142.6
																Total	**100.4**	**26.3**	**217.2**	**9.0**	**8.3**	**560.7**
																Total (tons)	**1.6**	**0.4**	**3.4**	**0.1**	**0.1**	
Remove Existing Lattice Steel Towers -- (7)				**32**	**16**		**39 Towers**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	11.6	0.3	1.2	0.0	0.0	8.7
1-Ton Crew Cab, 4×4	300	Diesel	8		16	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	2.3	0.5	2.4	0.4	0.4	7.4
R/T Crane (M)	215	Diesel	8		16	5		0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		5	15.0	3.9	33.0	1.4	1.3	31.1
Compressor Trailer	120	Diesel	8		16	10	2.5 Towers/Day	0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		10	25.7	6.1	37.5	3.3	3.1	30.0
Flat Bed Truck/Trailer	350	Diesel	4		16	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	15.1	5.2	41.6	1.4	1.3	53.5
Water Truck	350	Diesel	4		16	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	40.1
																Total	**80.9**	**19.9**	**146.9**	**7.7**	**7.1**	**170.8**
																Total (tons)	**0.6**	**0.2**	**1.2**	**0.1**	**0.1**	
Remove Existing Foundations -- (8)				**16**	**16**		**39 Towers**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	5.8	0.2	0.6	0.0	0.0	4.3
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4		16	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	4.6
Dump Truck	350	Diesel	4		16	10	2.5 Towers/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	66.9
Backhoe/Front Loader	350	Diesel	4		16	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	110.4
Water Truck	350	Diesel	4		16	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	66.9
																Total	**73.9**	**22.2**	**179.2**	**6.4**	**5.8**	**253.1**
																Total (tons)	**0.6**	**0.2**	**1.4**	**0.1**	**0.0**	
Remove Existing Tubular Steel Poles -- (9)				**24**	**2**		**5 TSP**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.8
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8		2	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090		8	182.8	6.6	20.1	0.3	0.3	41.5
R/T Crane (M)	300	Diesel	4		2	5	3.8 Steel Poles/Day	0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	6.5	2.2	19.7	0.7	0.6	2.5
Compressor Trailer	120	Diesel	4		2	10		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		10	12.9	3.0	18.7	1.7	1.5	1.9
Water Truck	350	Diesel	4		2	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	8.4
																Total	**229.7**	**18.5**	**111.5**	**4.4**	**4.1**	**55.1**
																Total (tons)	**0.2**	**0.0**	**0.1**	**0.0**	**0.0**	
Install LST Foundations -- (10)				**28**	**13**		**42 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	10.1	0.3	1.0	0.0	0.0	6.2
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8		13	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.4	0.3	1.5	0.3	0.2	3.7
R/T Crane (M)	300	Diesel	4		13	7		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		7	9.1	3.0	27.6	1.0	0.9	22.9
Backhoe/Front Loader	200	Diesel	4		13	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	89.7
Auger Truck	500	Diesel	4		13	10		0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		10	24.5	8.3	63.8	2.3	2.1	70.7
10-cu. yd. Dump Truck	350	Diesel	8		13	10	3.2 LSTs/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	37.7	13.0	104.1	3.6	3.3	108.7
Kaman K-MAX		Jet A	1		13	7		1.3532	1.1287	7.4027	0.2005	0.1845	1930.3207	0.0000		7	9.5	7.9	51.8	1.4	1.3	87.8
4000 gallon Water Truck	350	Diesel	4		13	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	54.3
10-cu. yd. Concrete Mixer Truck	425	Diesel	12		13	7		0.5422	0.1843	1.4476	0.0507	0.0467	240.5000	0.0166		7	45.5	15.5	121.6	4.3	3.9	131.3
																Total	**185.7**	**63.5**	**496.5**	**17.1**	**15.7**	**575.4**
																Total (tons)	**1.2**	**0.4**	**3.2**	**0.1**	**0.1**	
LST Steel Haul -- (11)				**8**	**16**		**42 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	2.2
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4		16	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	4.6
Truck/Trailer	400	Diesel	4		16	10		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		10	20.7	7.1	55.9	1.9	1.8	73.6
Bell 212		Jet A	2		16	7	2.5 LSTs/Day	1.2590	1.0558	9.3516	0.2472	0.2275	2198.7342	0.0000		7	17.6	14.8	130.9	3.5	3.2	246.3
4000 gallon Water Truck	350	Diesel	4		16	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	66.9
R/T Forklift	200	Diesel	2		16	6		0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		6	4.0	0.6	4.7	0.3	0.2	5.4
																Total	**65.5**	**29.4**	**245.4**	**7.7**	**7.1**	**398.9**
																Total (tons)	**0.5**	**0.2**	**2.0**	**0.1**	**0.1**	
LST Steel Assembly -- (12)				**40**	**31**		**42 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	14.5	0.4	1.5	0.0	0.0	21.1
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		31	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	5	2.5	0.1	0.3	0.0	0.0	8.9
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	6		31	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.1	0.2	1.1	0.2	0.2	6.7
R/T Forklift	125	Diesel	4		31	7	1.4 LSTs/Day	0.2158	0.0390	0.2571	0.0206	0.0190	31.2000	0.0035		7	6.0	1.1	7.2	0.6	0.5	13.5
R/T Crane (L)	300	Diesel	4		31	10		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		10	13.0	4.3	39.5	1.4	1.3	77.9
Kaman K-MAX		Jet A	1		31	7		1.3532	1.1287	7.4027	0.2005	0.1845	1930.3207	0.0000		7	9.5	7.9	51.8	1.4	1.3	209.4
Compressor Trailer	120	Diesel	4		31	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	7.7	1.8	11.2	1.0	0.9	17.5
																Total	**54.2**	**15.8**	**112.6**	**4.6**	**4.2**	**354.9**
																Total (tons)	**0.8**	**0.2**	**1.7**	**0.1**	**0.1**	
LST Erection -- (13)				**48**	**21**		**42 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	17.4	0.5	1.8	0.0	0.0	17.1
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8		21	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	8.1	0.3	0.9	0.0	0.0	19.2
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8		21	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	2.3	0.5	2.4	0.4	0.4	9.6
4000 gallon Water Truck	350	Diesel	4		21	10	2 LSTs/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	87.8
R/T Crane (M)	215	Diesel	4		21	7		0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		7	10.5	2.7	23.1	1.0	0.9	28.6
R/T Crane (L)	350	Diesel	4		21	7		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		7	10.3	3.3	29.8	1.1	1.0	40.9
																Total	**67.3**	**13.8**	**110.0**	**4.3**	**4.0**	**203.3**
																Total (tons)	**0.7**	**0.1**	**1.2**	**0.0**	**0.0**	
Install Tubular Steel Pole Foundations -- (14)				**24**	**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	12		1	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	2.1	0.5	2.3	0.4	0.4	0.4
R/T Crane (M)	300	Diesel	4		1	7		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		7	9.1	3.0	27.6	1.0	0.9	1.8
Backhoe/Front Loader	200	Diesel	4		1	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	6.9

Auger Truck	500	Diesel	4		1	10	2.5 TSPs/Day	0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		10	24.5	8.3	63.8	2.3	2.1	5.4
4000 gallon Water Truck	350	Diesel	4		1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
10-cu. yd. Dump Truck	350	Diesel	8		1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	37.7	13.0	104.1	3.6	3.3	8.4
10-cu. yd. Concrete Mixer Truck	425	Diesel	12		1	6		0.6064	0.2032	1.8639	0.0630	0.0580	265.0000	0.0183		6	43.7	14.6	134.2	4.5	4.2	9.5
																Total	**173.6**	**54.8**	**457.9**	**16.1**	**14.8**	**37.0**
																Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Steel Pole Haul -- (15)				**8**	**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	0.1
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		1	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	4.0	0.1	0.4	0.0	0.0	0.5
4000 gallon Water Truck	350	Diesel	4		1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
R/T Crane (L)	350	Diesel	2		1	10	10 Steel Poles/Day	0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		10	7.3	2.3	21.3	0.8	0.7	1.4
40' Flat Bed Truck/ Trailer	350	Diesel	4		1	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	15.1	5.2	41.6	1.4	1.3	3.3
																Total	**48.2**	**14.3**	**115.7**	**4.0**	**3.7**	**9.5**
																Total (tons)	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	
Steel Pole Assembly -- (16)				**24**	**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8		1	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090		8	182.8	6.6	20.1	0.3	0.3	20.7
4000 gallon Water Truck	350	Diesel	4		1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8		1	6	5 Steel Poles/Day	0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	6	1.7	0.4	1.8	0.3	0.3	0.3
Compressor Trailer	120	Diesel	4		1	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	7.7	1.8	11.2	1.0	0.9	0.6
R/T Crane (L)	350	Diesel	4		1	6		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	8.8	2.8	25.5	0.9	0.8	1.7
																Total	**228.6**	**18.4**	**111.6**	**4.3**	**3.9**	**27.9**
																Total (tons)	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	
Steel Pole Erection -- (17)				**24**	**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8		1	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090		5	114.3	4.1	12.6	0.2	0.2	13.0
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8		1	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.4	0.3	1.5	0.3	0.2	0.3
4000 gallon Water Truck	350	Diesel	4		1	10	5 Steel Poles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
Compressor Trailer	120	Diesel	4		1	5		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		5	6.4	1.5	9.4	0.8	0.8	0.5
R/T Crane (L)	350	Diesel	4		1	6		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	8.8	2.8	25.5	0.9	0.8	1.7
																Total	**158.4**	**15.5**	**101.9**	**4.0**	**3.7**	**20.0**
																Total (tons)	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	
H-Frame Installation -- (18)				**12**	**5**		**1 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	1.0
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		5	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	4.0	0.1	0.4	0.0	0.0	2.3
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	2		5	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.6	0.1	0.6	0.1	0.1	0.6
Compressor Trailer	120	Diesel	2		5	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	4.5	1.1	6.6	0.6	0.5	1.6
Auger Truck	500	Diesel	2		5	5		0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		5	6.1	2.1	15.9	0.6	0.5	6.8
Extendable Flat Bed Pole Truck	350	Diesel	2		5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	8.4
R/T Crane (M)	500	Diesel	2		5	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	7.2
Water Truck	350	Diesel	1		5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	3.8	1.3	10.4	0.4	0.3	4.2
Extendable Flat Bed Pole Truck	350	Diesel	2		5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	8.4
																Total	46.3	12.4	96.8	3.8	3.5	40.4
																Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Install Conductor -- (19)				**220**	**9**		**13 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	79.6	2.2	8.1	0.1	0.1	33.6
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4	4	9	10		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	2.8	0.1	0.3	0.0	0.0	1.3
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8		9	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	2.8	0.6	3.0	0.5	0.5	5.2
Wire Truck/Trailer	350	Diesel	4		6	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	25.1
R/T Crane (M)	215	Diesel	4		9	10		0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		10	15.0	3.9	33.0	1.4	1.3	17.5
Dump Truck	350	Diesel	2		9	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	18.8
Bucket Truck	350	Diesel	4		9	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	37.6
22-Ton Manitex	350	Diesel	4		9	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	12.3	4.4	43.6	1.4	1.3	24.5
Splicing Rig	350	Diesel	2		2	5		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	3.1	1.1	10.9	0.3	0.3	1.4
Splicing Lab	300	Diesel	2		2	5	1.6 Miles/Day	0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	3.1	1.1	10.9	0.3	0.3	1.4
Sock Line Puller	300	Diesel	2		2	6		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		6	3.7	1.3	13.1	0.4	0.4	1.6
Bull Wheel Puller	350	Diesel	2		5	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	6.2	2.2	21.8	0.7	0.6	6.8
Backhoe/Front Loader	125	Diesel	2		5	8		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		8	11.6	3.5	29.2	1.0	0.9	13.8
D8 Cat	350	Diesel	1		5	8		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		8	2.5	0.9	8.7	0.3	0.3	2.7
Hughes 500 E Helicopter		Jet A	2		5	7		2.1989	1.7655	1.4214	0.0445	0.0409	763.4927	0.0000		7	30.8	24.7	19.9	0.6	0.6	26.7
Fuel, Helicopter Support Truck	300	Diesel	2		5	7		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		7	4.3	1.6	15.3	0.5	0.4	4.8
Sag Cat w/ 2 winches	350	Diesel	1		2	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	3.1	1.1	10.9	0.3	0.3	1.4
Static Truck/ Tensioner	350	Diesel	2		5	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	10.5
																Total	**237.3**	**68.3**	**384.8**	**13.4**	**12.3**	**234.5**
																Total (tons)	**0.6**	**0.2**	**1.0**	**0.0**	**0.0**	
Guard Structure Removal -- (20)				**12**	**4**		**60 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	0.8
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		4	7		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	1.3	0.0	0.1	0.0	0.0	0.0
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4		4	7		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	7	1.0	0.2	1.1	0.2	0.2	0.8
Compressor Trailer	120	Diesel	4		4	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	9.0	2.1	13.1	1.2	1.1	2.6
Extendable Flat Bed Pole Truck	350	Diesel	4		4	6	17.2 Structures/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	10.0
Water Truck	300	Diesel	2		4	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		10	8.5	2.9	24.1	0.8	0.8	7.5
R/T Crane (M)	500	Diesel	2		4	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	5.8
80ft. Hydraulic Man-lift / Bucket Truck	350	Diesel	2		4	4		0.3637	0.0870	0.9773	0.0354	0.0326	143.9610	0.0079		4	2.9	0.7	7.8	0.3	0.3	2.3
																Total	**46.2**	**12.4**	**98.6**	**4.3**	**3.9**	**29.9**
																Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Restoration -- (21)				**14**	**2**		**3.5 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	5.1	0.1	0.5	0.0	0.0	0.5
1-Ton Crew Cab, 4×4	300	Diesel	4		2	2		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	2	0.3	0.1	0.3	0.1	0.0	0.1

Motor Grader	350	Diesel	2		2	6		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		6	7.2	2.1	18.3	0.7	0.6	2.7
Water Truck	350	Diesel	2		2	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	3.3
Backhoe/Front Loader	350	Diesel	2		2	6	2.5 Miles/Day	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		6	8.7	2.6	21.9	0.8	0.7	4.1
Drum Type Compactor	250	Diesel	2		2	6		0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109		6	4.3	1.4	13.6	0.5	0.5	1.5
Track Type Dozer	350	Diesel	2		2	6		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		6	11.1	3.1	26.3	1.1	1.0	2.6
Lowboy Truck/Trailer	300	Diesel	2		2	3		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		3	2.5	0.9	7.2	0.2	0.2	1.1
															Total		**46.7**	**13.0**	**109.0**	**4.0**	**3.7**	**16.0**
															Total (tons)		**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	
Retaining walls -- (22)				**100**	23		**5 Walls**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	36.2	1.0	3.7	0.0	0.0	39.1
1-Ton Crew Cab, 4×4	300	Diesel	4		23	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	6.6
Motor Grader	250	Diesel	2		23	10		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		10	12.0	3.5	30.5	1.1	1.0	52.7
Water Truck	350	Diesel	2		23	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	48.1
Backhoe/Front Loader	125	Diesel	2		23	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	14.5	4.4	36.5	1.3	1.2	79.4
Drum Type Compactor	250	Diesel	2		23	10	4.8 days/wall	0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109		10	7.2	2.4	22.7	0.9	0.8	28.1
Track Type Dozer	350	Diesel	2		23	10		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		10	18.5	5.2	43.9	1.8	1.7	49.6
Concrete Mixer	350	Diesel	2		23	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	6.2	2.2	21.8	0.7	0.6	31.3
Excavator	250	Diesel	2		23	10		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115		10	10.2	3.3	26.3	0.0	0.0	40.0
Dump Truck	350	Diesel	2		23	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	48.1
Lowboy Truck/Trailer	300	Diesel	2		23	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		10	8.5	2.9	24.1	0.8	0.8	43.2
															Total		**133.4**	**31.8**	**262.9**	**8.7**	**8.0**	**466.1**
															Total (tons)		**1.5**	**0.4**	**3.0**	**0.1**	**0.1**	
															Grand Total (lb/day)		2259.0	525.9	4009.0	147.7	135.9	
															Grand Total (tons)		9.7	2.6	20.9	0.8	0.7	3924.3

Subtransmission Construction (Segment 1) Equipment and Workforce Estimates

Primary Equipment	Estimated Horse-Power	Probable Fuel Type	Quantity	Estimated Workforce	Estimated Schedule (Days)	Duration of Use (hrs./day)	Estimated Production Per Day															
Survey (1)				**4**	**6**		**5.3 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.4
1-Ton Truck, 4×4	300	Gas	2		6	8	1 Mile	0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.6	0.1	0.6	0.1	0.1	0.7
															Total		**2.0**	**0.2**	**0.8**	**0.1**	**0.1**	**1.1**
															Total (tons)		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
Marshaling Yard (2)				**4**			**1 Yard**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.0
1-Ton Truck, 4×4	300	Gas	1		2	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.1	0.0	0.2	0.0	0.0	0.1
R/T Forklift	125	Diesel	1		2	6		0.2158	0.0390	0.2571	0.0206	0.1358	31.2000	0.0035		6	1.3	0.2	1.5	0.1	0.8	0.2
Boom/Crane Truck	350	Diesel	1		2	2	5 Acres	0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		2	0.7	0.2	2.1	0.1	0.1	0.3
Water Truck	300	Diesel	1		2	8		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		8	3.4	1.2	9.6	0.3	0.3	1.5
Truck, Semi Tractor	400	Diesel	1		2	2		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		2	1.0	0.4	2.8	0.1	0.1	0.5
															Total		**8.0**	**2.1**	**16.4**	**0.7**	**1.3**	**2.5**
															Total (tons)		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
R/W Clearing (3)				**5**	**14**		**3.3 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.8	0.1	0.2	0.0	0.0	1.2
1-Ton Truck, 4×4	300	Gas	1		14	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.3	0.1	0.3	0.1	0.0	0.8
Backhoe/Front Loader	125	Diesel	1		14	6		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		6	4.3	1.3	11.0	0.4	0.3	14.5
Track Type Dozer	150	Diesel	1		14	6	0.25 Mile	0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		6	5.6	1.6	13.2	0.5	0.5	9.1
Motor Grader	250	Diesel	1		14	6		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		6	3.6	1.1	9.1	0.3	0.3	9.6
Water Truck	300	Diesel	1		14	8		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		8	3.4	1.2	9.6	0.3	0.3	10.5
Lowboy Truck/Trailer	450	Diesel	1		14	4		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	3.7	1.0	8.8	0.4	0.3	6.0
															Total		**22.7**	**6.3**	**52.2**	**2.0**	**1.8**	**51.7**
															Total (tons)		**0.2**	**0.0**	**0.4**	**0.0**	**0.0**	
Roads & Landing Work (4)				**5**	**4**		**2 Miles & 9 Pads**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.8	0.1	0.2	0.0	0.0	0.3
1-Ton Truck, 4×4	300	Gas	1		4	8	Existing Roads:	0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.3	0.1	0.3	0.1	0.0	0.2
Backhoe/Front Loader	125	Diesel	1		4	4	2 Miles	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		4	2.9	0.9	7.3	0.3	0.2	2.8
Track Type Dozer	150	Diesel	1		4	4	Structure Pads (Flat to Mod): 4 Pads	0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	3.7	1.0	8.8	0.4	0.3	1.7
Motor Grader	250	Diesel	1		4	6		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		6	3.6	1.1	9.1	0.3	0.3	2.7
Water Truck	300	Diesel	1		4	8		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		8	3.4	1.2	9.6	0.3	0.3	3.0
Drum Type Compactor	100	Diesel	1		4	6		0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109		6	2.2	0.7	6.8	0.3	0.2	1.5
Excavator	250	Diesel	1		3	4		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115		4	2.0	0.7	5.3	0.0	0.0	1.0
Lowboy Truck/Trailer	450	Diesel	1		4	4		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	3.7	1.0	8.8	0.4	0.3	1.7
															Total		**23.6**	**6.7**	**56.2**	**2.0**	**1.8**	**15.0**
															Total (tons)		**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	
Guard Structure Installation (5)				**6**	**14**		**70 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.2	0.1	0.2	0.0	0.0	1.4
3/4-Ton Truck, 4×4	275	Gas	1	1	14	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	6.3	0.2	0.7	0.0	0.0	20.0
1-Ton Truck, 4×4	300	Gas	1		14	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.3	0.1	0.3	0.1	0.0	0.8
Compressor Trailer	60	Diesel	1		14	4		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		4	1.3	0.3	1.9	0.2	0.2	1.3
Manlift/Bucket Truck	250	Diesel	1		14	4	5 Structures	0.3099	0.0713	0.7059	0.0319	0.0293	97.9342	0.0065		4	1.2	0.3	2.8	0.1	0.1	2.7
Boom/Crane Truck	350	Diesel	1		14	6		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	2.2	0.7	6.4	0.2	0.2	5.8
Auger Truck	210	Diesel	1		14	4		0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		4	2.5	0.8	6.4	0.2	0.2	7.6
Extendable Flat Bed Pole Truck	400	Diesel	1		14	8		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		8	4.1	1.4	11.2	0.4	0.4	12.9
															Total		**20.1**	**3.9**	**29.9**	**1.2**	**1.1**	**52.6**
															Total (tons)		**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Remove Existing Conductor & GW (6)				**14**	**8**		**4 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	5.1	0.1	0.5	0.0	0.0	1.9

1-Ton Truck, 4×4	300	Gas	2		8	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.3	0.1	0.3	0.1	0.0	0.5
Manlift/Bucket Truck	250	Diesel	2		8	8	Non-Bundled:	0.3099	0.0713	0.7059	0.0319	0.0293	97.9342	0.0065		8	5.0	1.1	11.3	0.5	0.5	6.3
Boom/Crane Truck	350	Diesel	2		8	8	0.5 Mile	0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		8	5.9	1.9	17.0	0.6	0.6	8.9
Bull Wheel Puller	350	Diesel	1		6	6		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		6	1.8	0.7	6.5	0.2	0.2	2.4
Sock Line Puller	300	Diesel	1		6	6		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		6	1.8	0.7	6.5	0.2	0.2	2.4
Static Truck/ Tensioner	350	Diesel	1		8	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	2.8	1.0	7.8	0.3	0.2	5.0
Lowboy Truck/Trailer	450	Diesel	2		8	4		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	7.4	2.1	17.6	0.7	0.7	6.9
																Total	**30.1**	**7.6**	**67.6**	**2.6**	**2.4**	**34.4**
																Total (tons)	**0.1**	**0.0**	**0.3**	**0.0**	**0.0**	
Wood/LWS Pole Removal (7)				**6**	**4**		**28 Poles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.2	0.1	0.2	0.0	0.0	0.4
1-Ton Truck, 4×4	300	Gas	2		4	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.6	0.1	0.6	0.1	0.1	0.5
Compressor Trailer	60	Diesel	1		4	4		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		4	1.3	0.3	1.9	0.2	0.2	0.4
Manlift/Bucket Truck	250	Diesel	1		4	6	9 Poles	0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	1.9	0.5	2.8	0.2	0.2	0.6
Boom/Crane Truck	350	Diesel	1		4	6		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	2.2	0.7	6.4	0.2	0.2	1.7
Flat Bed Pole Truck	400	Diesel	1		4	8		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		8	4.1	1.4	11.2	0.4	0.4	3.7
																Total	**12.3**	**3.1**	**23.1**	**1.1**	**1.0**	**7.2**
																Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
LST Removal (8)				**6**	**18**		**9 LSTs**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.2	0.1	0.2	0.0	0.0	1.8
1-Ton Truck, 4×4	300	Gas	2		18	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.3	0.1	0.3	0.1	0.0	1.0
Compressor Trailer	60	Diesel	1		18	8		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068	40	50	0.6	0.2	0.9	0.1	0.1	0.0
R/T Crane (M)	215	Diesel	1		18	6	0.5 LSTs	0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		6	2.2	0.6	5.0	0.2	0.2	5.2
Boom/Crane Truck	350	Diesel	1		18	6		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	2.2	0.7	6.4	0.2	0.2	7.5
Flat Bed Truck/Trailer	400	Diesel	1		18	4		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		4	2.1	0.7	5.6	0.2	0.2	8.3
																Total	**9.6**	**2.3**	**18.4**	**0.8**	**0.7**	**23.9**
																Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
LST Foundation Removal (9)				**4**	**5**		**9 LSTs**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.3
3/4-Ton Truck, 4×4	275	Gas	1		5	4		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	1.6	0.1	0.2	0.0	0.0	0.0
Compressor Trailer	60	Diesel	1		**5**	8		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		8	2.6	0.6	3.7	0.3	0.3	0.9
Backhoe/Front Loader	125	Diesel	1		5	6	2 LSTs	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		6	4.3	1.3	11.0	0.4	0.3	5.2
Dump Truck	350	Diesel	1		5	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	2.8	1.0	7.8	0.3	0.2	3.1
Excavator	250	Diesel	1		5	4		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115		4	2.0	0.7	5.3	0.0	0.0	1.7
																Total	**14.8**	**3.7**	**28.1**	**1.0**	**0.9**	**11.3**
																Total (tons)	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	
Install TSP Foundations (10)				**6**	**54**		**26 TSPs**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.2	0.1	0.2	0.0	0.0	5.5
3/4-Ton Truck, 4×4	275	Gas	1		54	4		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	17.0	0.6	1.9	0.0	0.0	0.0
Boom/Crane Truck	350	Diesel	1		54	4	0.5 TSPs	0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		4	1.5	0.5	4.3	0.2	0.1	15.0
Backhoe/Front Loader	125	Diesel	1		54	6		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		6	4.3	1.3	11.0	0.4	0.3	55.9
Auger Truck	210	Diesel	1		21	6		0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		6	3.7	1.2	9.6	0.3	0.3	17.1
Water Truck	300	Diesel	1		49	8		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		8	3.4	1.2	9.6	0.3	0.3	36.8
Dump Truck	350	Diesel	1		49	4		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		4	1.9	0.6	5.2	0.2	0.2	20.5
Concrete Mixer Truck	350	Diesel	3		33	2		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		2	2.8	1.0	7.8	0.3	0.2	20.7
																Total	**36.8**	**6.5**	**49.5**	**1.7**	**1.5**	**171.6**
																Total (tons)	**0.6**	**0.1**	**0.8**	**0.0**	**0.0**	
TSP Haul (11)				**4**	**7**		**26 TSPs**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.5
3/4-Ton Truck, 4×4	275	Gas	1		7	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	2.2	0.1	0.2	0.0	0.0	0.0
Boom/Crane Truck	350	Diesel	1		7	6	4 TSPs	0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	2.2	0.7	6.4	0.2	0.2	2.9
Flat Bed Pole Truck	400	Diesel	1		7	8		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		8	4.1	1.4	11.2	0.4	0.4	6.4
																Total	**10.0**	**2.2**	**18.0**	**0.6**	**0.6**	**9.8**
																Total (tons)	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	
TSP Assembly (12)				**8**	**26**		**26 TSPs**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	3.5
3/4-Ton Truck, 4×4	275	Gas	2		26	4		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	8.2	0.3	0.9	0.0	0.0	0.0
1-Ton Truck, 4×4	300	Gas	2		26	4	1 TSP	0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.3	0.1	0.3	0.1	0.0	1.5
Compressor Trailer	60	Diesel	1		26	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	1.9	0.5	2.8	0.2	0.2	3.7
Boom/Crane Truck	350	Diesel	1		26	8		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		8	2.9	0.9	8.5	0.3	0.3	14.5
																Total	**16.2**	**1.8**	**12.8**	**0.6**	**0.6**	**23.2**
																Total (tons)	**0.2**	**0.0**	**0.2**	**0.0**	**0.0**	
TSP Erection (13)				**8**	**26**		**26 TSPs**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	3.5
3/4-Ton Truck, 4×4	275	Gas	2		26	4		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	8.2	0.3	0.9	0.0	0.0	0.0
1-Ton Truck, 4×4	300	Gas	2		26	4	1 TSP	0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.3	0.1	0.3	0.1	0.0	1.5
Compressor Trailer	60	Diesel	1		26	4		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		4	1.3	0.3	1.9	0.2	0.2	2.4
Boom/Crane Truck	350	Diesel	1		26	8		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		8	2.9	0.9	8.5	0.3	0.3	14.5
																Total	**15.6**	**1.7**	**11.9**	**0.5**	**0.5**	**21.9**
																Total (tons)	**0.2**	**0.0**	**0.2**	**0.0**	**0.0**	
LWS Pole Haul (14)				**4**	**27**		**154 LWS Poles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	1.8
3/4-Ton Truck, 4×4	275	Gas	1		27	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	8.5	0.3	0.9	0.0	0.0	0.0
Boom/Crane Truck	350	Diesel	1		27	6	6 Poles	0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	2.2	0.7	6.4	0.2	0.2	11.3
Flat Bed Pole Truck	400	Diesel	1		27	8		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		8	4.1	1.4	11.2	0.4	0.4	24.8
																Total	**16.3**	**2.5**	**18.7**	**0.6**	**0.6**	**37.9**
																Total (tons)	**0.2**	**0.0**	**0.3**	**0.0**	**0.0**	
LWS Pole Assembly (15)				**8**	**39**		**154 LWS Poles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	5.3
3/4-Ton Truck, 4×4	275	Gas	2		39	4		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	12.3	0.4	1.4	0.0	0.0	0.0

1-Ton Truck, 4×4	300	Gas	2		39	4	4 Poles	0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.3	0.1	0.3	0.1	0.0	2.2
Compressor Trailer	60	Diesel	1		39	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	1.9	0.5	2.8	0.2	0.2	5.5
Boom/Crane Truck	350	Diesel	1		39	8		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		8	2.9	0.9	8.5	0.3	0.3	21.7
																Total	**20.3**	**2.0**	**13.3**	**0.6**	**0.6**	**34.7**
																Total (tons)	**0.4**	**0.0**	**0.3**	**0.0**	**0.0**	
Install LWS Pole (16)				**6**	**39**		**154 Poles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.2	0.1	0.2	0.0	0.0	4.0
1-Ton Truck, 4×4	300	Gas	1		39	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.3	0.1	0.3	0.1	0.0	2.2
Manlift/Bucket Truck	250	Diesel	1		39	6		0.3099	0.0713	0.7059	0.0319	0.0293	97.9342	0.0065		6	1.9	0.4	4.2	0.2	0.2	11.5
Boom/Crane Truck	350	Diesel	1		39	6	4 Poles	0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	2.2	0.7	6.4	0.2	0.2	16.3
Auger Truck	210	Diesel	1		39	4		0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		4	2.5	0.8	6.4	0.2	0.2	21.2
Backhoe/Front Loader	125	Diesel	1		39	8		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		8	5.8	1.7	14.6	0.5	0.5	53.8
Extendable Flat Bed Pole Truck	400	Diesel	1		39	8		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		8	4.1	1.4	11.2	0.4	0.4	35.9
																Total	**18.9**	**5.2**	**43.3**	**1.6**	**1.5**	**144.9**
																Total (tons)	**0.4**	**0.1**	**0.8**	**0.0**	**0.0**	
Install Conductor (17)				**20**	**13**		**4.3 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	7.2	0.2	0.7	0.0	0.0	4.4
1-Ton Truck, 4×4	300	Gas	3		13	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.4	0.1	0.5	0.1	0.1	1.1
Manlift/Bucket Truck	250	Diesel	4		13	8	0.33 Mile	0.3099	0.0713	0.7059	0.0319	0.0293	97.9342	0.0065		8	9.9	2.3	22.6	1.0	0.9	20.4
Boom/Crane Truck	350	Diesel	1		13	8		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		8	2.9	0.9	8.5	0.3	0.3	7.2
Dump Truck	350	Diesel	1		13	2		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		2	0.9	0.3	2.6	0.1	0.1	2.7
Wire Truck/Trailer	350	Diesel	2		13	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	5.7	1.9	15.6	0.5	0.5	16.3
Sock Line Puller	300	Diesel	1		5	6		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		6	1.8	0.7	6.5	0.2	0.2	2.0
Bull Wheel Puller	350	Diesel	1		9	6		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		6	1.8	0.7	6.5	0.2	0.2	3.7
Static Truck/ Tensioner	350	Diesel	1		13	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	2.8	1.0	7.8	0.3	0.2	8.2
Backhoe/Front Loader	125	Diesel	1		13	2		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		2	1.4	0.4	3.7	0.1	0.1	4.5
Lowboy Truck/Trailer	450	Diesel	2		13	4		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	7.4	2.1	17.6	0.7	0.7	11.2
Hughes 500 E Helicopter		Jet A	1		4	6		2.1989	1.7655	1.4214	0.0445	0.0409	763.4927	0.0000		6	13.2	10.6	8.5	0.3	0.2	9.2
Fuel, Helicopter Support Truck	300	Diesel	1		4	6		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		6	1.8	0.7	6.5	0.2	0.2	1.6
																Total	**57.5**	**21.9**	**107.7**	**4.1**	**3.7**	**92.5**
																Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Guard Structure Removal (18)				**6**	**10**		**70 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.2	0.1	0.2	0.0	0.0	1.0
3/4-Ton Truck, 4×4	275	Gas	1		10	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	3.1	0.1	0.3	0.0	0.0	0.0
1-Ton Truck, 4×4	300	Gas	1		10	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.3	0.1	0.3	0.1	0.0	0.6
Compressor Trailer	60	Diesel	1		10	4	7 Structures	0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		4	1.3	0.3	1.9	0.2	0.2	0.9
Manlift/Bucket Truck	250	Diesel	1		10	4		0.3099	0.0713	0.7059	0.0319	0.0293	97.9342	0.0065		4	1.2	0.3	2.8	0.1	0.1	2.0
Boom/Crane Truck	350	Diesel	1		10	6		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	2.2	0.7	6.4	0.2	0.2	4.2
Extendable Flat Bed Pole Truck	400	Diesel	1		10	8		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		8	4.1	1.4	11.2	0.4	0.4	9.2
																Total	**14.5**	**2.9**	**23.1**	**1.0**	**0.9**	**17.9**
																Total (tons)	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	
Restoration (19)				**7**	**4**		**3.3 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.5	0.1	0.3	0.0	0.0	0.5
1-Ton Truck, 4×4	300	Gas	2		4	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.3	0.1	0.3	0.1	0.0	0.2
Backhoe/Front Loader	125	Diesel	1		4	4		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		4	2.9	0.9	7.3	0.3	0.2	2.8
Motor Grader	250	Diesel	1		4	6	1 Mile	0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		6	3.6	1.1	9.1	0.3	0.3	2.7
Water Truck	300	Diesel	1		4	8		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		8	3.4	1.2	9.6	0.3	0.3	3.0
Drum Type Compactor	100	Diesel	1		4	4		0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109		4	1.4	0.5	4.5	0.2	0.2	1.0
Lowboy Truck/Trailer	450	Diesel	1		4	4		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	3.7	1.0	8.8	0.4	0.3	1.7
																Total	**17.8**	**4.8**	**39.9**	**1.5**	**1.4**	**11.9**
																Total (tons)	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	
Vault Installation (20)				**6**	**27**		**9 Vaults**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.2	0.1	0.2	0.0	0.0	2.8
1-Ton Truck, 4×4	300	Gas	2		27	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.3	0.1	0.3	0.1	0.0	1.6
Backhoe/Front Loader	125	Diesel	1		27	8		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		8	5.8	1.7	14.6	0.5	0.5	37.3
Excavator	250	Diesel	1		14	6		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115		6	3.1	1.0	7.9	0.0	0.0	7.3
Dump Truck	350	Diesel	2		27	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	45.1
Water Truck	300	Diesel	1		27	8	0.33 Vaults	0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		8	3.4	1.2	9.6	0.3	0.3	20.3
Crane (L)	500	Diesel	1		9	6		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		6	3.0	0.9	7.8	0.3	0.3	4.9
Concrete Mixer Truck	350	Diesel	3		14	2		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		2	2.8	1.0	7.8	0.3	0.2	8.8
Lowboy Truck/Trailer	450	Diesel	1		9	4		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	3.7	1.0	8.8	0.4	0.3	3.9
Flat Bed Truck/Trailer	400	Diesel	3		9	4		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		4	6.2	2.1	16.8	0.6	0.5	12.4
																Total	**38.0**	**11.7**	**94.6**	**3.1**	**2.9**	**144.3**
																Total (tons)	**0.2**	**0.1**	**0.4**	**0.0**	**0.0**	
Duct Bank Installation (21)				**6**	**22**		**5380 Trench Feet**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.2	0.1	0.2	0.0	0.0	2.2
1-Ton Truck, 4×4	300	Gas	2		22	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.3	0.1	0.3	0.1	0.0	1.3
Compressor Trailer	60	Diesel	1		22	4		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		4	1.3	0.3	1.9	0.2	0.2	2.1
Backhoe/Front Loader	125	Diesel	1		22	6		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		6	4.3	1.3	11.0	0.4	0.3	22.8
Dump Truck	350	Diesel	2		22	6	250 Feet	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	5.7	1.9	15.6	0.5	0.5	27.6
Pipe Truck/Trailer	275	Diesel	1		22	6		0.3761	0.1326	1.1048	0.0368	0.0339	167.0000	0.0120		6	2.3	0.8	6.6	0.2	0.2	11.0
Water Truck	300	Diesel	1		22	8		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		8	3.4	1.2	9.6	0.3	0.3	16.5
Concrete Mixer Truck	350	Diesel	3		22	2		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		2	2.8	1.0	7.8	0.3	0.2	13.8
Lowboy Truck/Trailer	450	Diesel	1		8	4		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	3.7	1.0	8.8	0.4	0.3	3.5
																Total	**25.9**	**7.7**	**61.8**	**2.3**	**2.1**	**100.7**
																Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Install Underground Cable (22)				**8**	**3**		**1 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	0.4
1-Ton Truck, 4×4	300	Gas	2		3	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.3	0.1	0.3	0.1	0.0	0.2
Manlift/Bucket Truck	250	Diesel	1		3	6	0.33 Mile	0.3099	0.0713	0.7059	0.0319	0.0293	97.9342	0.0065		6	1.9	0.4	4.2	0.2	0.2	0.9

Boom/Crane Truck	350	Diesel	1	3	6	0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106	6	2.2	0.7	6.4	0.2	0.2	1.3
Wire Truck/Trailer	350	Diesel	2	3	6	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146	6	5.7	1.9	15.6	0.5	0.5	3.8
Puller	350	Diesel	1	3	6	0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100	6	1.8	0.7	6.5	0.2	0.2	1.2
Static Truck/ Tensioner	350	Diesel	1	3	6	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146	6	2.8	1.0	7.8	0.3	0.2	1.9
													Total	**17.6**	**4.9**	**41.2**	**1.5**	**1.4**	**9.6**
													Total (tons)	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	
													Grand Total (lb/day)	448.6	111.5	828.2	31.2	29.4	
													Grand Total (tons)	3.2	0.6	5.0	0.2	0.2	1020.8

Transmission and Subtransmission Construction Equipment and Workforce Estimates

Transmission (Segment 2) Construction Equipment and Workforce Estimates

Work Activity				Activity Production				EMFAC2011 Diesel Emission Factors (gms/mi) or OFFROAD Diesel Emissions Factors (lb/hr)							Average Speed (mph)	Miles per day or Hours per day	Estimated Emissions					
								CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2	CH_4			CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e
Primary Equipment Description	Estimated Horse-Power	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (Days)	Duration of Use (Hrs/Day)	Estimated Production Per Day										(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(MT/yr)
Survey -- (1)				**4**	**4**		**5**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.3
3/4-Ton Pick-up Truck, 4×4	200	Gas	2		4	8	1.3 Miles/Day	2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	2.0	0.1	0.2	0.0	0.0	0.9
																Total	**3.5**	**0.1**	**0.4**	**0.0**	**0.0**	**1.2**
																Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
Marshaling Yard -- (2)				**4**				3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.0
1-Ton Crew Cab, 4×4	300	Diesel	1		2	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.1	0.0	0.2	0.0	0.0	0.1
R/T Crane (M)	300	Diesel	1		2	5		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	1.6	0.5	4.9	0.2	0.2	0.6
R/T Forklift	200	Diesel	1		2	5		0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		5	1.7	0.3	1.9	0.1	0.1	0.3
Water Truck	300	Diesel	1		2	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		10	4.2	1.5	12.0	0.4	0.4	1.9
Jet A Fuel Truck			1		2	4		0.6148	0.2034	1.6679	0.0579	0.0533	260.0000	0.0183		4	2.5	0.8	6.7	0.2	0.2	1.0
Truck, Semi, Tractor	350	Diesel	1		2	6		0.5063	0.1560	1.3478	0.0449	0.0413	241.2000	0.0141		6	3.0	0.9	8.1	0.3	0.2	1.4
																Total	**14.6**	**4.1**	**34.0**	**1.2**	**1.1**	**5.3**
																Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
R/W Clearing -- (3)				**5**	**16**		**5**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.8	0.1	0.2	0.0	0.0	1.4
1-Ton Crew Cab, 4×4	300	Diesel	1		16	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	0.4	0.1	0.4	0.1	0.1	1.1
Motor Grader	350	Diesel	1		16	7		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		7	4.2	1.2	10.7	0.4	0.4	12.8
Water Truck	350	Diesel	2		16	7	0.4 Miles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		7	6.6	2.3	18.2	0.6	0.6	23.4
Backhoe/Front Loader	350	Diesel	1		16	7		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	5.1	1.5	12.8	0.4	0.4	19.3
Track Type Dozer	350	Diesel	1		16	9		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		9	8.3	2.4	19.8	0.8	0.8	15.5
Lowboy Truck/Trailer	500	Diesel	1		16	5		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		5	4.6	1.3	11.0	0.5	0.4	8.6
																Total	**31.0**	**8.8**	**72.9**	**2.8**	**2.6**	**82.2**
																Total (tons)	**0.2**	**0.1**	**0.6**	**0.0**	**0.0**	
Roads & Landing Work -- (4)				**10**	**16**		**19.8 Miles & 60 Pads**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	3.6	0.1	0.4	0.0	0.0	2.7
1-Ton Crew Cab, 4×4	300	Diesel	4		16	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	0.7	0.2	0.8	0.1	0.1	2.3
Motor Grader	350	Diesel	2		16	5		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		5	6.0	1.8	15.2	0.6	0.5	18.3
Water Truck	350	Diesel	4		16	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	66.9
Backhoe/Front Loader	350	Diesel	2		16	7	1.3 Miles/Day & 5	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	10.1	3.1	25.6	0.9	0.8	38.6
Drum Type Compactor	250	Diesel	2		16	5	Structure Pads/Day	0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109		5	3.6	1.2	11.3	0.4	0.4	9.8
Track Type Dozer	350	Diesel	2		16	7		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		7	13.0	3.7	30.7	1.3	1.2	24.2
Excavator	300	Diesel	2		8	7		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115		7	7.1	2.3	18.4	0.0	0.0	9.7
Lowboy Truck/Trailer	500	Diesel	2		8	4		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	7.4	2.1	17.6	0.7	0.7	6.9
																Total	**70.4**	**20.9**	**171.9**	**5.8**	**5.4**	**179.5**
																Total (tons)	**0.3**	**0.1**	**0.7**	**0.0**	**0.0**	
Guard Structure Installation -- (5)				**12**	**7**		**86 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	1.4
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4	4	7	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	1.3	0.0	0.1	0.0	0.0	1.0
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	2		7	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.6	0.1	0.6	0.1	0.1	0.8
Compressor Trailer	120	Diesel	2		7	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	4.5	1.1	6.6	0.6	0.5	2.3
Auger Truck	500	Diesel	2		7	5	12 Structures/Day	0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		5	6.1	2.1	15.9	0.6	0.5	9.5
Extendable Flat Bed Pole Truck	350	Diesel	2		7	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	11.7
R/T Crane (M)	500	Diesel	2		7	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	10.1
Water Truck	350	Diesel	1		7	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	3.8	1.3	10.4	0.4	0.3	5.9
Extendable Flat Bed Pole Truck	350	Diesel	2		7	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	11.7
																Total	**43.6**	**12.3**	**96.5**	**3.8**	**3.5**	**54.4**
																Total (tons)	**0.2**	**0.0**	**0.3**	**0.0**	**0.0**	
Remove Existing Conductor & OHGW -- (6)				**56**	**61**		**100 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	20.3	0.6	2.1	0.0	0.0	58.0
1-Ton Crew Cab, 4×4	300	Diesel	16		61	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	5.6	1.2	6.0	1.0	1.0	70.1
Man-lift / Bucket Truck	350	Diesel	12		61	10		0.3637	0.0870	0.9773	0.0354	0.1358	143.9610	0.0079		10	43.6	10.4	117.3	4.3	16.3	526.9
Sleeving Truck	300	Diesel	4		61	5		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		5	8.5	2.9	24.1	0.8	0.8	114.7
R/T Crane (M)	300	Diesel	4	4	61	5		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	6.5	2.2	19.7	0.7	0.6	76.6
Flat Bed Trailer	N/A	N/A	12		55	3	1.7 Miles/Day	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		3	0.0	0.0	0.0	0.0	0.0	0.0
Truck, Semi, Tractor	350	Diesel	4		55	3		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		3	5.7	1.9	15.6	0.5	0.5	69.0
Bull Wheel Puller	500	Diesel	4		41	5		0.6064	0.2032	1.8639	0.0630	0.0580	265.0000	0.0183		5	12.1	4.1	37.3	1.3	1.2	108.7
Water Truck	350	Diesel	4		41	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	102.8
Hydraulic Rewind Puller	300	Diesel	4		41	5		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	6.2	2.2	21.8	0.7	0.6	55.8
																Total	**119.7**	**29.5**	**275.1**	**10.4**	**21.9**	**1182.5**
																Total (tons)	**2.5**	**0.6**	**5.6**	**0.2**	**0.4**	
Remove Existing Lattice Steel Towers -- (7)				**32**	**22**		**55 Towers**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	11.6	0.3	1.2	0.0	0.0	12.0
1-Ton Crew Cab, 4×4	300	Diesel	8		22	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	2.3	0.5	2.4	0.4	0.4	10.1

R/T Crane (M)	215	Diesel	8		22	5		0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		5	15.0	3.9	33.0	1.4	1.3	42.8
Compressor Trailer	120	Diesel	8		22	10	2.5 Towers/Day	0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		10	25.7	6.1	37.5	3.3	3.1	41.3
Flat Bed Truck/Trailer	350	Diesel	4		22	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	15.1	5.2	41.6	1.4	1.3	73.6
Water Truck	350	Diesel	4		22	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	55.2
																Total	**80.9**	**19.9**	**146.9**	**7.7**	**7.1**	**234.9**
																Total (tons)	**0.9**	**0.2**	**1.6**	**0.1**	**0.1**	
Remove Existing Foundations -- (8)				**16**	**22**		**56**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	5.8	0.2	0.6	0.0	0.0	6.0
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4		22	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	6.3
Dump Truck	350	Diesel	4		22	10	2.5 Towers/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	92.0
Backhoe/Front Loader	350	Diesel	4		22	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	151.8
Water Truck	350	Diesel	4		22	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	92.0
																Total	**73.9**	**22.2**	**179.2**	**6.4**	**5.8**	**348.0**
																Total (tons)	**0.8**	**0.2**	**2.0**	**0.1**	**0.1**	
Remove Existing Tubular Steel Poles -- (9)				**24**	**2**		**1 TSP**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.8
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8		2	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090		8	182.8	6.6	20.1	0.3	0.3	41.5
R/T Crane (M)	300	Diesel	4		2	5	3.8 Steel Poles/Day	0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	6.5	2.2	19.7	0.7	0.6	2.5
Compressor Trailer	120	Diesel	4		2	10		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		10	12.9	3.0	18.7	1.7	1.5	1.9
Water Truck	350	Diesel	4		2	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	8.4
																Total	**229.7**	**18.5**	**111.5**	**4.4**	**4.1**	**55.1**
																Total (tons)	**0.2**	**0.0**	**0.1**	**0.0**	**0.0**	
Install LST Foundations -- (10)				**28**	**18**		**59 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	10.1	0.3	1.0	0.0	0.0	8.6
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8		18	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.4	0.3	1.5	0.3	0.2	5.2
R/T Crane (M)	300	Diesel	4		18	7		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		7	9.1	3.0	27.6	1.0	0.9	31.7
Backhoe/Front Loader	200	Diesel	4		18	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	124.2
Auger Truck	500	Diesel	4		18	10		0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		10	24.5	8.3	63.8	2.3	2.1	97.9
10-cu. yd. Dump Truck	350	Diesel	8		18	10	3.2 LSTs/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	37.7	13.0	104.1	3.6	3.3	150.5
Kaman K-MAX		Jet A	1		18	7		1.3532	1.1287	7.4027	0.2005	0.1845	1930.3207	0.0000		7	9.5	7.9	51.8	1.4	1.3	121.6
4000 gallon Water Truck	350	Diesel	4		18	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	75.2
10-cu. yd. Concrete Mixer Truck	425	Diesel	12		18	7		0.5422	0.1843	1.4476	0.0507	0.0467	240.5000	0.0166		7	45.5	15.5	121.6	4.3	3.9	181.8
																Total	**185.7**	**63.5**	**496.5**	**17.1**	**15.7**	**796.6**
																Total (tons)	**1.7**	**0.6**	**4.5**	**0.2**	**0.1**	
LST Steel Haul -- (11)				**8**	**24**		**59 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	3.3
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4		24	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	6.9
Truck/Trailer	400	Diesel	4		24	10		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		10	20.7	7.1	55.9	1.9	1.8	110.4
Bell 212		Jet A	2		14	7	2.5 LSTs/Day	1.2590	1.0558	9.3516	0.2472	0.2275	2198.7342	0.0000		7	17.6	14.8	130.9	3.5	3.2	215.5
4000 gallon Water Truck	350	Diesel	4		24	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	100.3
R/T Forklift	200	Diesel	2		24	6		0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		6	4.0	0.6	4.7	0.3	0.2	8.1
																Total	**65.5**	**29.4**	**245.4**	**7.7**	**7.1**	**444.4**
																Total (tons)	**0.8**	**0.4**	**2.9**	**0.1**	**0.1**	
LST Steel Assembly -- (12)				**40**	**44**		**59 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	14.5	0.4	1.5	0.0	0.0	29.9
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		44	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	5	2.5	0.1	0.3	0.0	0.0	12.6
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	6		44	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.1	0.2	1.1	0.2	0.2	9.5
R/T Forklift	125	Diesel	4		44	7	1.4 LSTs/Day	0.2158	0.0390	0.2571	0.0206	0.0190	31.2000	0.0035		7	6.0	1.1	7.2	0.6	0.5	19.2
R/T Crane (L)	300	Diesel	4		44	10		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		10	13.0	4.3	39.5	1.4	1.3	110.5
Kaman K-MAX		Jet A	1		44	7		1.3532	1.1287	7.4027	0.2005	0.1845	1930.3207	0.0000		7	9.5	7.9	51.8	1.4	1.3	297.3
Compressor Trailer	120	Diesel	4		44	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	7.7	1.8	11.2	1.0	0.9	24.8
																Total	**54.2**	**15.8**	**112.6**	**4.6**	**4.2**	**503.8**
																Total (tons)	**1.2**	**0.3**	**2.5**	**0.1**	**0.1**	
LST Erection -- (13)				**48**	**31**		**59 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	17.4	0.5	1.8	0.0	0.0	25.3
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8		31	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	8.1	0.3	0.9	0.0	0.0	28.4
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8		31	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	2.3	0.5	2.4	0.4	0.4	14.2
4000 gallon Water Truck	350	Diesel	4		31	10	2 LSTs/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	129.6
R/T Crane (M)	215	Diesel	4		31	7		0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		7	10.5	2.7	23.1	1.0	0.9	42.2
R/T Crane (L)	350	Diesel	4		31	7		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		7	10.3	3.3	29.8	1.1	1.0	60.4
																Total	**67.3**	**13.8**	**110.0**	**4.3**	**4.0**	**300.1**
																Total (tons)	**1.0**	**0.2**	**1.7**	**0.1**	**0.1**	
Install Tubular Steel Pole Foundations -- (14)				**24**	**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	12		1	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	2.1	0.5	2.3	0.4	0.4	0.4
R/T Crane (M)	300	Diesel	4		1	7		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		7	9.1	3.0	27.6	1.0	0.9	1.8
Backhoe/Front Loader	200	Diesel	4		1	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	6.9
Auger Truck	500	Diesel	4		1	10	2.5 TSPs/Day	0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		10	24.5	8.3	63.8	2.3	2.1	5.4
4000 gallon Water Truck	350	Diesel	4		1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
10-cu. yd. Dump Truck	350	Diesel	8		1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	37.7	13.0	104.1	3.6	3.3	8.4
10-cu. yd. Concrete Mixer Truck	425	Diesel	12		1	6		0.6064	0.2032	1.8639	0.0630	0.0580	265.0000	0.0183		6	43.7	14.6	134.2	4.5	4.2	9.5
																Total	**173.6**	**54.8**	**457.9**	**16.1**	**14.8**	**37.0**
																Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Steel Pole Haul -- (15)				**8**	**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	0.1
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		1	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	4.0	0.1	0.4	0.0	0.0	0.5
4000 gallon Water Truck	350	Diesel	4		1	10	10 Steel Poles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
R/T Crane (L)	350	Diesel	2		1	10		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		10	7.3	2.3	21.3	0.8	0.7	1.4
40' Flat Bed Truck/ Trailer	350	Diesel	4		1	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	15.1	5.2	41.6	1.4	1.3	3.3
																Total	**48.2**	**14.3**	**115.7**	**4.0**	**3.7**	**9.5**
																Total (tons)	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	

Steel Pole Assembly -- (16)				**24**		**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8			1	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090		8	182.8	6.6	20.1	0.3	0.3	20.7
4000 gallon Water Truck	350	Diesel	4			1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			1	6	5 Steel Poles/Day	0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	6	1.7	0.4	1.8	0.3	0.3	0.3
Compressor Trailer	120	Diesel	4			1	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	7.7	1.8	11.2	1.0	0.9	0.6
R/T Crane (L)	350	Diesel	4			1	6		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	8.8	2.8	25.5	0.9	0.8	1.7
																	Total	**228.6**	**18.4**	**111.6**	**4.3**	**3.9**	**27.9**
																	Total (tons)	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	
Steel Pole Erection -- (17)				**24**		**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8			1	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090		5	114.3	4.1	12.6	0.2	0.2	13.0
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			1	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.4	0.3	1.5	0.3	0.2	0.3
4000 gallon Water Truck	350	Diesel	4			1	10	5 Steel Poles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
Compressor Trailer	120	Diesel	4			1	5		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		5	6.4	1.5	9.4	0.8	0.8	0.5
R/T Crane (L)	350	Diesel	4			1	6		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	8.8	2.8	25.5	0.9	0.8	1.7
																	Total	**158.4**	**15.5**	**101.9**	**4.0**	**3.7**	**20.0**
																	Total (tons)	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	
H-Frame Installation -- (18)				**12**		**5**		**1 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	1.0
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4			5	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	4.0	0.1	0.4	0.0	0.0	2.3
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	2			5	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.6	0.1	0.6	0.1	0.1	0.6
Compressor Trailer	120	Diesel	2			5	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	4.5	1.1	6.6	0.6	0.5	1.6
Auger Truck	500	Diesel	2			5	5		0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		5	6.1	2.1	15.9	0.6	0.5	6.8
Extendable Flat Bed Pole Truck	350	Diesel	2			5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	8.4
R/T Crane (M)	500	Diesel	2			5	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	7.2
Water Truck	350	Diesel	1			5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	3.8	1.3	10.4	0.4	0.3	4.2
Extendable Flat Bed Pole Truck	350	Diesel	2			5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	8.4
																	Total	46.3	12.4	96.8	3.8	3.5	40.4
																	Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Install Conductor -- (19)				**220**		**12**		**18.7 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	79.6	2.2	8.1	0.1	0.1	44.8
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4	4		12	10		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	3.8	0.1	0.4	0.0	0.0	1.7
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			12	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	2.8	0.6	3.0	0.5	0.5	6.9
Wire Truck/Trailer	350	Diesel	4			8	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	33.4
R/T Crane (M)	215	Diesel	4			12	10		0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		10	15.0	3.9	33.0	1.4	1.3	23.3
Dump Truck	350	Diesel	2			12	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	25.1
Bucket Truck	350	Diesel	4			12	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	50.2
22-Ton Manitex	350	Diesel	4			12	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	12.3	4.4	43.6	1.4	1.3	32.6
Splicing Rig	350	Diesel	2			3	5		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	3.1	1.1	10.9	0.3	0.3	2.0
Splicing Lab	300	Diesel	2			3	5	1.6 Miles/Day	0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	3.1	1.1	10.9	0.3	0.3	2.0
Sock Line Puller	300	Diesel	2			3	6		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		6	3.7	1.3	13.1	0.4	0.4	2.4
Bull Wheel Puller	350	Diesel	2			7	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	6.2	2.2	21.8	0.7	0.6	9.5
Backhoe/Front Loader	125	Diesel	2			7	8		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		8	11.6	3.5	29.2	1.0	0.9	19.3
D8 Cat	350	Diesel	1			7	8		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		8	2.5	0.9	8.7	0.3	0.3	3.8
Hughes 500 E Helicopter		Jet A	2			7	7		2.1989	1.7655	1.4214	0.0445	0.0409	763.4927	0.0000		7	30.8	24.7	19.9	0.6	0.6	37.4
Fuel, Helicopter Support Truck	300	Diesel	2			7	7		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		7	4.3	1.6	15.3	0.5	0.4	6.7
Sag Cat w/ 2 winches	350	Diesel	1			3	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	3.1	1.1	10.9	0.3	0.3	2.0
Static Truck/ Tensioner	350	Diesel	2			7	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	14.6
																	Total	**238.2**	**68.4**	**384.9**	**13.4**	**12.3**	**318.0**
																	Total (tons)	**0.8**	**0.2**	**1.3**	**0.0**	**0.0**	
Guard Structure Removal -- (20)				**12**		**5**		**86 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	1.0
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4			5	7		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	1.6	0.1	0.2	0.0	0.0	0.0
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4			5	7		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	7	1.0	0.2	1.1	0.2	0.2	1.0
Compressor Trailer	120	Diesel	4			5	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	9.0	2.1	13.1	1.2	1.1	3.3
Extendable Flat Bed Pole Truck	350	Diesel	4			5	6	17.2 Structures/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	12.5
Water Truck	300	Diesel	2			5	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		10	8.5	2.9	24.1	0.8	0.8	9.4
R/T Crane (M)	500	Diesel	2			5	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	7.2
80ft. Hydraulic Man-lift / Bucket Truck	350	Diesel	2			5	4		0.3637	0.0870	0.9773	0.0354	0.1358	143.9610	0.0079		4	2.9	0.7	7.8	0.3	1.1	2.9
																	Total	**46.5**	**12.4**	**98.6**	**4.3**	**4.8**	**37.3**
																	Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Restoration -- (21)				**14**		**2**		**5 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	5.1	0.1	0.5	0.0	0.0	0.5
1-Ton Crew Cab, 4×4	300	Diesel	4			2	2		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	2	0.3	0.1	0.3	0.1	0.0	0.1
Motor Grader	350	Diesel	2			2	6		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		6	7.2	2.1	18.3	0.7	0.6	2.7
Water Truck	350	Diesel	2			2	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	3.3
Backhoe/Front Loader	350	Diesel	2			2	6	2.5 Miles/Day	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		6	8.7	2.6	21.9	0.8	0.7	4.1
Drum Type Compactor	250	Diesel	2			2	6		0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109		6	4.3	1.4	13.6	0.5	0.5	1.5
Track Type Dozer	350	Diesel	2			2	6		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		6	11.1	3.1	26.3	1.1	1.0	2.6
Lowboy Truck/Trailer	300	Diesel	2			2	3		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		3	2.5	0.9	7.2	0.2	0.2	1.1
																	Total	**46.7**	**13.0**	**109.0**	**4.0**	**3.7**	**16.0**
																	Total (tons)	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	
Retaining walls -- (22)				**100**		33		**7 Walls**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	36.2	1.0	3.7	0.0	0.0	56.1
1-Ton Crew Cab, 4×4	300	Diesel	4			33	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	9.5
Motor Grader	250	Diesel	2			33	10		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		10	12.0	3.5	30.5	1.1	1.0	75.6
Water Truck	350	Diesel	2			33	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	69.0
Backhoe/Front Loader	125	Diesel	2			33	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	14.5	4.4	36.5	1.3	1.2	113.9

Drum Type Compactor	250	Diesel	2	33	10	4.8 days/wall	0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109	10	7.2	2.4	22.7	0.9	0.8	40.4
Track Type Dozer	350	Diesel	2	33	10		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236	10	18.5	5.2	43.9	1.8	1.7	71.2
Concrete Mixer	350	Diesel	2	33	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100	10	6.2	2.2	21.8	0.7	0.6	44.9
Excavator	250	Diesel	2	33	10		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115	10	10.2	3.3	26.3	0.0	0.0	57.4
Dump Truck	350	Diesel	2	33	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146	10	9.4	3.2	26.0	0.9	0.8	69.0
Lowboy Truck/Trailer	300	Diesel	2	33	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133	10	8.5	2.9	24.1	0.8	0.8	62.0
														Total	**133.4**	**31.8**	**262.9**	**8.7**	**8.0**	**668.8**
														Total (tons)	**2.2**	**0.5**	**4.3**	**0.1**	**0.1**	
														Grand Total (lb/day)	2159.9	499.6	3791.9	138.7	140.8	
														Grand Total (tons)	13.4	3.7	29.3	1.1	1.2	5363.0

Transmission and Subtransmission Construction Equipment and Workforce Estimates

Transmission (Segment 3) Construction Equipment and Workforce Estimates

Work Activity				Activity Production				EMFAC2011 Diesel Emission Factors (gms/mi) or OFFROAD Diesel Emissions Factors (lb/hr)							Average Speed (mph)	Miles per day or Hours per day	Estimated Emissions					
								CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2	CH_4			CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e
Primary Equipment Description	Estimated Horse-Power	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (Days)	Duration of Use (Hrs/Day)	Estimated Production Per Day										(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(MT/yr)
Survey -- (1)				**4**	**8**		**10**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.5
3/4-Ton Pick-up Truck, 4×4	200	Gas	2		8	8	1.3 Miles/Day	2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	2.0	0.1	0.2	0.0	0.0	1.8
																Total	**3.5**	**0.1**	**0.4**	**0.0**	**0.0**	**2.4**
																Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
Marshaling Yard -- (2)				**4**				3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.0
1-Ton Crew Cab, 4×4	300	Diesel	1		2	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.1	0.0	0.2	0.0	0.0	0.1
R/T Crane (M)	300	Diesel	1		2	5		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	1.6	0.5	4.9	0.2	0.2	0.6
R/T Forklift	200	Diesel	1		2	5		0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		5	1.7	0.3	1.9	0.1	0.1	0.3
Water Truck	300	Diesel	1		2	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		10	4.2	1.5	12.0	0.4	0.4	1.9
Jet A Fuel Truck			1		2	4		0.6148	0.2034	1.6679	0.0579	0.0533	260.0000	0.0183		4	2.5	0.8	6.7	0.2	0.2	1.0
Truck, Semi, Tractor	350	Diesel	1		2	6		0.5063	0.1560	1.3478	0.0449	0.0413	241.2000	0.0141		6	3.0	0.9	8.1	0.3	0.2	1.4
																Total	**14.6**	**4.1**	**34.0**	**1.2**	**1.1**	**5.3**
																Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
R/W Clearing -- (3)				**5**	**32**		**10 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.8	0.1	0.2	0.0	0.0	2.7
1-Ton Crew Cab, 4×4	300	Diesel	1		32	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	0.4	0.1	0.4	0.1	0.1	2.3
Motor Grader	350	Diesel	1		32	7		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		7	4.2	1.2	10.7	0.4	0.4	25.6
Water Truck	350	Diesel	2		32	7	0.4 Miles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		7	6.6	2.3	18.2	0.6	0.6	46.8
Backhoe/Front Loader	350	Diesel	1		32	7		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	5.1	1.5	12.8	0.4	0.4	38.6
Track Type Dozer	350	Diesel	1		32	9		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		9	8.3	2.4	19.8	0.8	0.8	31.1
Lowboy Truck/Trailer	500	Diesel	1		32	5		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		5	4.6	1.3	11.0	0.5	0.4	17.3
																Total	**31.0**	**8.8**	**72.9**	**2.8**	**2.6**	**164.5**
																Total (tons)	**0.5**	**0.1**	**1.2**	**0.0**	**0.0**	
Roads & Landing Work -- (4)				**10**	**32**		**39.6 Miles & 121 Pads**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	3.6	0.1	0.4	0.0	0.0	5.4
1-Ton Crew Cab, 4×4	300	Diesel	4		32	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	0.7	0.2	0.8	0.1	0.1	4.6
Motor Grader	350	Diesel	2		32	5		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		5	6.0	1.8	15.2	0.6	0.5	36.6
Water Truck	350	Diesel	4		32	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	133.8
Backhoe/Front Loader	350	Diesel	2		32	7	1.3 Miles/Day & 5	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	10.1	3.1	25.6	0.9	0.8	77.3
Drum Type Compactor	250	Diesel	2		32	5	Structure Pads/Day	0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109		5	3.6	1.2	11.3	0.4	0.4	19.6
Track Type Dozer	350	Diesel	2		32	7		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		7	13.0	3.7	30.7	1.3	1.2	48.3
Excavator	300	Diesel	2		16	7		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115		7	7.1	2.3	18.4	0.0	0.0	19.5
Lowboy Truck/Trailer	500	Diesel	2		16	4		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	7.4	2.1	17.6	0.7	0.7	13.8
																Total	**70.4**	**20.9**	**171.9**	**5.8**	**5.4**	**358.9**
																Total (tons)	**0.6**	**0.2**	**1.4**	**0.0**	**0.0**	
Guard Structure Installation -- (5)				**12**	**15**		**172 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	3.1
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4	4	15	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	1.3	0.0	0.1	0.0	0.0	2.1
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	2		15	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.6	0.1	0.6	0.1	0.1	1.7
Compressor Trailer	120	Diesel	2		15	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	4.5	1.1	6.6	0.6	0.5	4.9
Auger Truck	500	Diesel	2		15	5	12 Structures/Day	0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		5	6.1	2.1	15.9	0.6	0.5	20.4
Extendable Flat Bed Pole Truck	350	Diesel	2		15	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	25.1
R/T Crane (M)	500	Diesel	2		15	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	21.6
Water Truck	350	Diesel	1		15	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	3.8	1.3	10.4	0.4	0.3	12.5
Extendable Flat Bed Pole Truck	350	Diesel	2		15	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	25.1
																Total	**43.6**	**12.3**	**96.5**	**3.8**	**3.5**	**116.6**
																Total (tons)	**0.3**	**0.1**	**0.7**	**0.0**	**0.0**	
Remove Existing Conductor & OHGW -- (6)				**56**	**122**		**200 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	20.3	0.6	2.1	0.0	0.0	116.1
1-Ton Crew Cab, 4×4	300	Diesel	16		122	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	5.6	1.2	6.0	1.0	1.0	140.1
Man-lift / Bucket Truck	350	Diesel	12		122	10		0.3637	0.0870	0.9773	0.0354	0.1358	143.9610	0.0079		10	43.6	10.4	117.3	4.3	16.3	1053.8
Sleeving Truck	300	Diesel	4		122	5		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		5	8.5	2.9	24.1	0.8	0.8	229.4
R/T Crane (M)	300	Diesel	4	4	122	5		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	6.5	2.2	19.7	0.7	0.6	153.2
Flat Bed Trailer	N/A	N/A	12		110	3	1.7 Miles/Day	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		3	0.0	0.0	0.0	0.0	0.0	0.0
Truck, Semi, Tractor	350	Diesel	4		110	3		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		3	5.7	1.9	15.6	0.5	0.5	137.9
Bull Wheel Puller	500	Diesel	4		83	5		0.6064	0.2032	1.8639	0.0630	0.0580	265.0000	0.0183		5	12.1	4.1	37.3	1.3	1.2	220.0
Water Truck	350	Diesel	4		83	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	208.2
Hydraulic Rewind Puller	300	Diesel	4		83	5		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	6.2	2.2	21.8	0.7	0.6	112.9
																Total	**119.7**	**29.5**	**275.1**	**10.4**	**21.9**	**2371.5**
																Total (tons)	**5.0**	**1.2**	**11.4**	**0.4**	**0.9**	
Remove Existing Lattice Steel Towers -- (7)				**32**	**45**		**111 Towers**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	11.6	0.3	1.2	0.0	0.0	24.5
1-Ton Crew Cab, 4×4	300	Diesel	8		45	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	2.3	0.5	2.4	0.4	0.4	20.7

R/T Crane (M)	215	Diesel	8		45	5		0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		5	15.0	3.9	33.0	1.4	1.3	87.5
Compressor Trailer	120	Diesel	8		45	10	2.5 Towers/Day	0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		10	25.7	6.1	37.5	3.3	3.1	84.5
Flat Bed Truck/Trailer	350	Diesel	4		45	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	15.1	5.2	41.6	1.4	1.3	150.5
Water Truck	350	Diesel	4		45	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	112.9
															Total		**80.9**	**19.9**	**146.9**	**7.7**	**7.1**	**480.5**
															Total (tons)		**1.8**	**0.4**	**3.3**	**0.2**	**0.2**	
Remove Existing Foundations -- (8)				**16**	**45**		**111 Towers**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	5.8	0.2	0.6	0.0	0.0	12.2
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4		45	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	12.9
Dump Truck	350	Diesel	4		45	10	2.5 Towers/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	188.1
Backhoe/Front Loader	350	Diesel	4		45	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	310.5
Water Truck	350	Diesel	4		45	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	188.1
															Total		**73.9**	**22.2**	**179.2**	**6.4**	**5.8**	**711.9**
															Total (tons)		**1.7**	**0.5**	**4.0**	**0.1**	**0.1**	
Remove Existing Tubular Steel Poles -- (9)				**24**	**2**		**5 TSP**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.8
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8		2	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090		8	182.8	6.6	20.1	0.3	0.3	41.5
R/T Crane (M)	300	Diesel	4		2	5	3.8 Steel Poles/Day	0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	6.5	2.2	19.7	0.7	0.6	2.5
Compressor Trailer	120	Diesel	4		2	10		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		10	12.9	3.0	18.7	1.7	1.5	1.9
Water Truck	350	Diesel	4		2	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	8.4
															Total		**229.7**	**18.5**	**111.5**	**4.4**	**4.1**	**55.1**
															Total (tons)		**0.2**	**0.0**	**0.1**	**0.0**	**0.0**	
Install LST Foundations -- (10)				**28**	**37**		**118 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	10.1	0.3	1.0	0.0	0.0	17.6
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8		37	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.4	0.3	1.5	0.3	0.2	10.6
R/T Crane (M)	300	Diesel	4		37	7		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		7	9.1	3.0	27.6	1.0	0.9	65.1
Backhoe/Front Loader	200	Diesel	4		37	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	255.3
Auger Truck	500	Diesel	4		37	10		0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		10	24.5	8.3	63.8	2.3	2.1	201.3
10-cu. yd. Dump Truck	350	Diesel	8		37	10	3.2 LSTs/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	37.7	13.0	104.1	3.6	3.3	309.3
Kaman K-MAX		Jet A	1		37	7		1.3532	1.1287	7.4027	0.2005	0.1845	1930.3207	0.0000		7	9.5	7.9	51.8	1.4	1.3	250.0
4000 gallon Water Truck	350	Diesel	4		37	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	154.7
10-cu. yd. Concrete Mixer Truck	425	Diesel	12		37	7		0.5422	0.1843	1.4476	0.0507	0.0467	240.5000	0.0166		7	45.5	15.5	121.6	4.3	3.9	373.7
															Total		**185.7**	**63.5**	**496.5**	**17.1**	**15.7**	**1637.6**
															Total (tons)		**3.4**	**1.2**	**9.2**	**0.3**	**0.3**	
LST Steel Haul -- (11)				**8**	**47**		**118 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	6.4
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4		47	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	13.5
Truck/Trailer	400	Diesel	4		47	10		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		10	20.7	7.1	55.9	1.9	1.8	216.2
Bell 212		Jet A	2		27	7	2.5 LSTs/Day	1.2590	1.0558	9.3516	0.2472	0.2275	2198.7342	0.0000		7	17.6	14.8	130.9	3.5	3.2	415.6
4000 gallon Water Truck	350	Diesel	4		47	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	196.5
R/T Forklift	200	Diesel	2		47	6		0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		6	4.0	0.6	4.7	0.3	0.2	15.8
															Total		**65.5**	**29.4**	**245.4**	**7.7**	**7.1**	**863.9**
															Total (tons)		**1.5**	**0.7**	**5.8**	**0.2**	**0.2**	
LST Steel Assembly -- (12)				**40**	**88**		**118 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	14.5	0.4	1.5	0.0	0.0	59.8
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		88	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	5	2.5	0.1	0.3	0.0	0.0	25.2
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	6		88	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.1	0.2	1.1	0.2	0.2	19.0
R/T Forklift	125	Diesel	4		88	7	1.4 LSTs/Day	0.2158	0.0390	0.2571	0.0206	0.0190	31.2000	0.0035		7	6.0	1.1	7.2	0.6	0.5	38.4
R/T Crane (L)	300	Diesel	4		88	10		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		10	13.0	4.3	39.5	1.4	1.3	221.1
Kaman K-MAX		Jet A	1		88	7		1.3532	1.1287	7.4027	0.2005	0.1845	1930.3207	0.0000		7	9.5	7.9	51.8	1.4	1.3	594.5
Compressor Trailer	120	Diesel	4		88	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	7.7	1.8	11.2	1.0	0.9	49.6
															Total		**54.2**	**15.8**	**112.6**	**4.6**	**4.2**	**1007.5**
															Total (tons)		**2.4**	**0.7**	**5.0**	**0.2**	**0.2**	
LST Erection -- (13)				**48**	**62**		**118 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	17.4	0.5	1.8	0.0	0.0	50.6
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8		62	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	8.1	0.3	0.9	0.0	0.0	56.7
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8		62	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	2.3	0.5	2.4	0.4	0.4	28.5
4000 gallon Water Truck	350	Diesel	4		62	10	2 LSTs/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	259.2
R/T Crane (M)	215	Diesel	4		62	7		0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		7	10.5	2.7	23.1	1.0	0.9	84.4
R/T Crane (L)	350	Diesel	4		62	7		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		7	10.3	3.3	29.8	1.1	1.0	120.8
															Total		**67.3**	**13.8**	**110.0**	**4.3**	**4.0**	**600.1**
															Total (tons)		**2.1**	**0.4**	**3.4**	**0.1**	**0.1**	
Install Tubular Steel Pole Foundations -- (14)				**24**	**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	12		1	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	2.1	0.5	2.3	0.4	0.4	0.4
R/T Crane (M)	300	Diesel	4		1	7		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		7	9.1	3.0	27.6	1.0	0.9	1.8
Backhoe/Front Loader	200	Diesel	4		1	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	6.9
Auger Truck	500	Diesel	4		1	10	2.5 TSPs/Day	0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		10	24.5	8.3	63.8	2.3	2.1	5.4
4000 gallon Water Truck	350	Diesel	4		1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
10-cu. yd. Dump Truck	350	Diesel	8		1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	37.7	13.0	104.1	3.6	3.3	8.4
10-cu. yd. Concrete Mixer Truck	425	Diesel	12		1	6		0.6064	0.2032	1.8639	0.0630	0.0580	265.0000	0.0183		6	43.7	14.6	134.2	4.5	4.2	9.5
															Total		**173.6**	**54.8**	**457.9**	**16.1**	**14.8**	**37.0**
															Total (tons)		**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Steel Pole Haul -- (15)				**8**	**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	0.1
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		1	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	4.0	0.1	0.4	0.0	0.0	0.5
4000 gallon Water Truck	350	Diesel	4		1	10	10 Steel Poles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
R/T Crane (L)	350	Diesel	2		1	10		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		10	7.3	2.3	21.3	0.8	0.7	1.4
40' Flat Bed Truck/ Trailer	350	Diesel	4		1	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	15.1	5.2	41.6	1.4	1.3	3.3
															Total		**48.2**	**14.3**	**115.7**	**4.0**	**3.7**	**9.5**
															Total (tons)		**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	

Steel Pole Assembly -- (16)				**24**		**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8			1	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090		8	182.8	6.6	20.1	0.3	0.3	20.7
4000 gallon Water Truck	350	Diesel	4			1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			1	6	5 Steel Poles/Day	0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	6	1.7	0.4	1.8	0.3	0.3	0.3
Compressor Trailer	120	Diesel	4			1	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	7.7	1.8	11.2	1.0	0.9	0.6
R/T Crane (L)	350	Diesel	4			1	6		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	8.8	2.8	25.5	0.9	0.8	1.7
																	Total	**228.6**	**18.4**	**111.6**	**4.3**	**3.9**	**27.9**
																	Total (tons)	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	
Steel Pole Erection -- (17)				**24**		**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8			1	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090		5	114.3	4.1	12.6	0.2	0.2	13.0
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			1	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.4	0.3	1.5	0.3	0.2	0.3
4000 gallon Water Truck	350	Diesel	4			1	10	5 Steel Poles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
Compressor Trailer	120	Diesel	4			1	5		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		5	6.4	1.5	9.4	0.8	0.8	0.5
R/T Crane (L)	350	Diesel	4			1	6		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	8.8	2.8	25.5	0.9	0.8	1.7
																	Total	**158.4**	**15.5**	**101.9**	**4.0**	**3.7**	**20.0**
																	Total (tons)	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	
H-Frame Installation -- (18)				**12**		**5**		**1 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	1.0
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4			5	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	4.0	0.1	0.4	0.0	0.0	2.3
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	2			5	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.6	0.1	0.6	0.1	0.1	0.6
Compressor Trailer	120	Diesel	2			5	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	4.5	1.1	6.6	0.6	0.5	1.6
Auger Truck	500	Diesel	2			5	5		0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		5	6.1	2.1	15.9	0.6	0.5	6.8
Extendable Flat Bed Pole Truck	350	Diesel	2			5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	8.4
R/T Crane (M)	500	Diesel	2			5	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	7.2
Water Truck	350	Diesel	1			5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	3.8	1.3	10.4	0.4	0.3	4.2
Extendable Flat Bed Pole Truck	350	Diesel	2			5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	8.4
																	Total	46.3	12.4	96.8	3.8	3.5	40.4
																	Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Install Conductor -- (19)				**220**		**25**		**37.4 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	79.6	2.2	8.1	0.1	0.1	93.4
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		4	25	10		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	7.9	0.3	0.9	0.0	0.0	3.6
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			25	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	2.8	0.6	3.0	0.5	0.5	14.4
Wire Truck/Trailer	350	Diesel	4			17	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	71.1
R/T Crane (M)	215	Diesel	4			25	10		0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		10	15.0	3.9	33.0	1.4	1.3	48.6
Dump Truck	350	Diesel	2			25	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	52.3
Bucket Truck	350	Diesel	4			25	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	104.5
22-Ton Manitex	350	Diesel	4			25	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	12.3	4.4	43.6	1.4	1.3	68.0
Splicing Rig	350	Diesel	2			7	5		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	3.1	1.1	10.9	0.3	0.3	4.8
Splicing Lab	300	Diesel	2			7	5	1.6 Miles/Day	0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	3.1	1.1	10.9	0.3	0.3	4.8
Sock Line Puller	300	Diesel	2			7	6		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		6	3.7	1.3	13.1	0.4	0.4	5.7
Bull Wheel Puller	350	Diesel	2			13	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	6.2	2.2	21.8	0.7	0.6	17.7
Backhoe/Front Loader	125	Diesel	2			13	8		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		8	11.6	3.5	29.2	1.0	0.9	35.9
D8 Cat	350	Diesel	1			13	8		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		8	2.5	0.9	8.7	0.3	0.3	7.1
Hughes 500 E Helicopter		Jet A	2			13	7		2.1989	1.7655	1.4214	0.0445	0.0409	763.4927	0.0000		7	30.8	24.7	19.9	0.6	0.6	69.5
Fuel, Helicopter Support Truck	300	Diesel	2			13	7		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		7	4.3	1.6	15.3	0.5	0.4	12.4
Sag Cat w/ 2 winches	350	Diesel	1			7	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	3.1	1.1	10.9	0.3	0.3	4.8
Static Truck/ Tensioner	350	Diesel	2			13	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	27.2
																	Total	**242.3**	**68.5**	**385.3**	**13.4**	**12.3**	**645.4**
																	Total (tons)	**1.6**	**0.4**	**2.5**	**0.1**	**0.1**	
Guard Structure Removal -- (20)				**12**		**10**		**172 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	2.0
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4			10	7		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	3.1	0.1	0.3	0.0	0.0	0.0
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4			10	7		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	7	1.0	0.2	1.1	0.2	0.2	2.0
Compressor Trailer	120	Diesel	4			10	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	9.0	2.1	13.1	1.2	1.1	6.6
Extendable Flat Bed Pole Truck	350	Diesel	4			10	6	17.2 Structures/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	25.1
Water Truck	300	Diesel	2			10	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		10	8.5	2.9	24.1	0.8	0.8	18.8
R/T Crane (M)	500	Diesel	2			10	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	14.4
80ft. Hydraulic Man-lift / Bucket Truck	350	Diesel	2			10	4		0.3637	0.0870	0.9773	0.0354	0.1358	143.9610	0.0079		4	2.9	0.7	7.8	0.3	1.1	5.8
																	Total	**48.1**	**12.5**	**98.8**	**4.3**	**4.8**	**74.7**
																	Total (tons)	**0.2**	**0.1**	**0.5**	**0.0**	**0.0**	
Restoration -- (21)				**14**		**4**		**10 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	5.1	0.1	0.5	0.0	0.0	1.0
1-Ton Crew Cab, 4×4	300	Diesel	4			4	2		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	2	0.3	0.1	0.3	0.1	0.0	0.2
Motor Grader	350	Diesel	2			4	6		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		6	7.2	2.1	18.3	0.7	0.6	5.5
Water Truck	350	Diesel	2			4	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	6.7
Backhoe/Front Loader	350	Diesel	2			4	6	2.5 Miles/Day	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		6	8.7	2.6	21.9	0.8	0.7	8.3
Drum Type Compactor	250	Diesel	2			4	6		0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109		6	4.3	1.4	13.6	0.5	0.5	2.9
Track Type Dozer	350	Diesel	2			4	6		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		6	11.1	3.1	26.3	1.1	1.0	5.2
Lowboy Truck/Trailer	300	Diesel	2			4	3		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		3	2.5	0.9	7.2	0.2	0.2	2.3
																	Total	**46.7**	**13.0**	**109.0**	**4.0**	**3.7**	**32.0**
																	Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Retaining walls -- (22)				**100**		66		**14 Walls**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	36.2	1.0	3.7	0.0	0.0	112.1
1-Ton Crew Cab, 4×4	300	Diesel	4			66	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	19.0
Motor Grader	250	Diesel	2			66	10		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		10	12.0	3.5	30.5	1.1	1.0	151.1
Water Truck	350	Diesel	2			66	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	137.9
Backhoe/Front Loader	125	Diesel	2			66	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	14.5	4.4	36.5	1.3	1.2	227.7

Drum Type Compactor	250	Diesel	2	66	10	4.8 days/wall	0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109	10	7.2	2.4	22.7	0.9	0.8	80.7
Track Type Dozer	350	Diesel	2	66	10		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236	10	18.5	5.2	43.9	1.8	1.7	142.4
Concrete Mixer	350	Diesel	2	66	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100	10	6.2	2.2	21.8	0.7	0.6	89.8
Excavator	250	Diesel	2	66	10		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115	10	10.2	3.3	26.3	0.0	0.0	114.8
Dump Truck	350	Diesel	2	66	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146	10	9.4	3.2	26.0	0.9	0.8	137.9
Lowboy Truck/Trailer	300	Diesel	2	66	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133	10	8.5	2.9	24.1	0.8	0.8	124.1
														Total	**133.4**	**31.8**	**262.9**	**8.7**	**8.0**	**1337.6**
														Total (tons)	**4.4**	**1.1**	**8.7**	**0.3**	**0.3**	
														Grand Total (lb/day)	2165.6	499.8	3792.6	138.7	140.8	
														Grand Total (tons)	26.3	7.2	58.0	2.1	2.5	10600.2

Transmission and Subtransmission Construction Equipment and Workforce Estimates

Transmission (Segment 4) Construction Equipment and Workforce Estimates

Work Activity				Activity Production				EMFAC2011 Diesel Emission Factors (gms/mi) or OFFROAD Diesel Emissions Factors (lb/hr)							Average Speed (mph)	Miles per day or Hours per day	Estimated Emissions					
								CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2	CH_4			CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e
Primary Equipment Description	Estimated Horse-Power	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (Days)	Duration of Use (Hrs/Day)	Estimated Production Per Day										(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(MT/yr)
Survey -- (1)				**4**	**10**		**12**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.7
3/4-Ton Pick-up Truck, 4×4	200	Gas	2		10	8	1.3 Miles/Day	2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	2.0	0.1	0.2	0.0	0.0	2.3
																Total	**3.5**	**0.1**	**0.4**	**0.0**	**0.0**	**3.0**
																Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
Marshaling Yard -- (2)				**4**				3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.0
1-Ton Crew Cab, 4×4	300	Diesel	1		2	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.1	0.0	0.2	0.0	0.0	0.1
R/T Crane (M)	300	Diesel	1		2	5		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	1.6	0.5	4.9	0.2	0.2	0.6
R/T Forklift	200	Diesel	1		2	5		0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		5	1.7	0.3	1.9	0.1	0.1	0.3
Water Truck	300	Diesel	1		2	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		10	4.2	1.5	12.0	0.4	0.4	1.9
Jet A Fuel Truck			1		2	4		0.6148	0.2034	1.6679	0.0579	0.0533	260.0000	0.0183		4	2.5	0.8	6.7	0.2	0.2	1.0
Truck, Semi, Tractor	350	Diesel	1		2	6		0.5063	0.1560	1.3478	0.0449	0.0413	241.2000	0.0141		6	3.0	0.9	8.1	0.3	0.2	1.4
																Total	**14.6**	**4.1**	**34.0**	**1.2**	**1.1**	**5.3**
																Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
R/W Clearing -- (3)				**5**	**39**		**12 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.8	0.1	0.2	0.0	0.0	3.3
1-Ton Crew Cab, 4×4	300	Diesel	1		39	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	0.4	0.1	0.4	0.1	0.1	2.8
Motor Grader	350	Diesel	1		39	7		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		7	4.2	1.2	10.7	0.4	0.4	31.3
Water Truck	350	Diesel	2		39	7	0.4 Miles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		7	6.6	2.3	18.2	0.6	0.6	57.1
Backhoe/Front Loader	350	Diesel	1		39	7		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	5.1	1.5	12.8	0.4	0.4	47.1
Track Type Dozer	350	Diesel	1		39	9		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		9	8.3	2.4	19.8	0.8	0.8	37.9
Lowboy Truck/Trailer	500	Diesel	1		39	5		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		5	4.6	1.3	11.0	0.5	0.4	21.0
																Total	**31.0**	**8.8**	**72.9**	**2.8**	**2.6**	**200.4**
																Total (tons)	**0.6**	**0.2**	**1.4**	**0.1**	**0.1**	
Roads & Landing Work -- (4)				**10**	**38**		**47.3 Miles & 144 Pads**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	3.6	0.1	0.4	0.0	0.0	6.5
1-Ton Crew Cab, 4×4	300	Diesel	4		38	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	0.7	0.2	0.8	0.1	0.1	5.5
Motor Grader	350	Diesel	2		38	5		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		5	6.0	1.8	15.2	0.6	0.5	43.5
Water Truck	350	Diesel	4		38	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	158.8
Backhoe/Front Loader	350	Diesel	2		38	7	1.3 Miles/Day & 5	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	10.1	3.1	25.6	0.9	0.8	91.8
Drum Type Compactor	250	Diesel	2		38	5	Structure Pads/Day	0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109		5	3.6	1.2	11.3	0.4	0.4	23.2
Track Type Dozer	350	Diesel	2		38	7		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		7	13.0	3.7	30.7	1.3	1.2	57.4
Excavator	300	Diesel	2		19	7		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115		7	7.1	2.3	18.4	0.0	0.0	23.1
Lowboy Truck/Trailer	500	Diesel	2		19	4		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	7.4	2.1	17.6	0.7	0.7	16.4
																Total	**70.4**	**20.9**	**171.9**	**5.8**	**5.4**	**426.2**
																Total (tons)	**0.7**	**0.2**	**1.6**	**0.1**	**0.1**	
Guard Structure Installation -- (5)				**12**	**17**		**206 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	3.5
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4	4	17	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	1.3	0.0	0.1	0.0	0.0	2.4
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	2		17	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.6	0.1	0.6	0.1	0.1	2.0
Compressor Trailer	120	Diesel	2		17	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	4.5	1.1	6.6	0.6	0.5	5.6
Auger Truck	500	Diesel	2		17	5		0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		5	6.1	2.1	15.9	0.6	0.5	23.1
Extendable Flat Bed Pole Truck	350	Diesel	2		17	8	12 Structures/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	28.4
R/T Crane (M)	500	Diesel	2		17	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	24.5
Water Truck	350	Diesel	1		17	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	3.8	1.3	10.4	0.4	0.3	14.2
Extendable Flat Bed Pole Truck	350	Diesel	2		17	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	28.4
																Total	**43.6**	**12.3**	**96.5**	**3.8**	**3.5**	**132.1**
																Total (tons)	**0.4**	**0.1**	**0.8**	**0.0**	**0.0**	
Remove Existing Conductor & OHGW -- (6)				**56**	**146**		**240 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	20.3	0.6	2.1	0.0	0.0	138.9
1-Ton Crew Cab, 4×4	300	Diesel	16		146	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	5.6	1.2	6.0	1.0	1.0	167.7
Man-lift / Bucket Truck	350	Diesel	12		146	10		0.3637	0.0870	0.9773	0.0354	0.0326	143.9610	0.0079		10	43.6	10.4	117.3	4.3	3.9	1261.1
Sleeving Truck	300	Diesel	4		146	5		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		5	8.5	2.9	24.1	0.8	0.8	274.5
R/T Crane (M)	300	Diesel	4	4	146	5		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	6.5	2.2	19.7	0.7	0.6	183.4
Flat Bed Trailer	N/A	N/A	12		131	3	1.7 Miles/Day	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		3	0.0	0.0	0.0	0.0	0.0	0.0
Truck, Semi, Tractor	350	Diesel	4		131	3		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		3	5.7	1.9	15.6	0.5	0.5	164.3
Bull Wheel Puller	500	Diesel	4		99	5		0.6064	0.2032	1.8639	0.0630	0.0580	265.0000	0.0183		5	12.1	4.1	37.3	1.3	1.2	262.4
Water Truck	350	Diesel	4		99	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	248.3
Hydraulic Rewind Puller	300	Diesel	4		99	5		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	6.2	2.2	21.8	0.7	0.6	134.6
																Total	**119.7**	**29.5**	**275.1**	**10.4**	**9.6**	**2835.1**
																Total (tons)	**5.9**	**1.5**	**13.6**	**0.5**	**0.5**	
Remove Existing Lattice Steel Towers -- (7)				**32**	**53**		**132 Towers**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	11.6	0.3	1.2	0.0	0.0	28.8
1-Ton Crew Cab, 4×4	300	Diesel	8		53	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	2.3	0.5	2.4	0.4	0.4	24.3

R/T Crane (M)	215	Diesel	8		53	5		0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		5	15.0	3.9	33.0	1.4	1.3	103.0
Compressor Trailer	120	Diesel	8		53	10	2.5 Towers/Day	0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		10	25.7	6.1	37.5	3.3	3.1	99.5
Flat Bed Truck/Trailer	350	Diesel	4		53	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	15.1	5.2	41.6	1.4	1.3	177.2
Water Truck	350	Diesel	4		53	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	132.9
															Total		**80.9**	**19.9**	**146.9**	**7.7**	**7.1**	**565.9**
															Total (tons)		**2.1**	**0.5**	**3.9**	**0.2**	**0.2**	
Remove Existing Foundations -- (8)				**16**	**54**		**132**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	5.8	0.2	0.6	0.0	0.0	14.7
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4		54	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	15.5
Dump Truck	350	Diesel	4		54	10	2.5 Towers/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	225.7
Backhoe/Front Loader	350	Diesel	4		54	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	372.6
Water Truck	350	Diesel	4		54	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	225.7
															Total		**73.9**	**22.2**	**179.2**	**6.4**	**5.8**	**854.2**
															Total (tons)		**2.0**	**0.6**	**4.8**	**0.2**	**0.2**	
Remove Existing Tubular Steel Poles -- (9)				**24**	**1**		**1 TSP**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8		1	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090		8	182.8	6.6	20.1	0.3	0.3	20.7
R/T Crane (M)	300	Diesel	4		1	5	3.8 Steel Poles/Day	0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	6.5	2.2	19.7	0.7	0.6	1.3
Compressor Trailer	120	Diesel	4		1	10		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		10	12.9	3.0	18.7	1.7	1.5	0.9
Water Truck	350	Diesel	4		1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
															Total		**229.7**	**18.5**	**111.5**	**4.4**	**4.1**	**27.5**
															Total (tons)		**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	
Install LST Foundations -- (10)				**28**	**44**		**141 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	10.1	0.3	1.0	0.0	0.0	20.9
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8		44	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.4	0.3	1.5	0.3	0.2	12.6
R/T Crane (M)	300	Diesel	4		44	7		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		7	9.1	3.0	27.6	1.0	0.9	77.4
Backhoe/Front Loader	200	Diesel	4		44	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	303.6
Auger Truck	500	Diesel	4		44	10	3.2 LSTs/Day	0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		10	24.5	8.3	63.8	2.3	2.1	239.4
10-cu. yd. Dump Truck	350	Diesel	8		44	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	37.7	13.0	104.1	3.6	3.3	367.8
Kaman K-MAX		Jet A	1		44	7		1.3532	1.1287	7.4027	0.2005	0.1845	1930.3207	0.0000		7	9.5	7.9	51.8	1.4	1.3	297.3
4000 gallon Water Truck	350	Diesel	4		44	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	183.9
10-cu. yd. Concrete Mixer Truck	425	Diesel	12		44	7		0.5422	0.1843	1.4476	0.0507	0.0467	240.5000	0.0166		7	45.5	15.5	121.6	4.3	3.9	444.4
															Total		**185.7**	**63.5**	**496.5**	**17.1**	**15.7**	**1947.4**
															Total (tons)		**4.1**	**1.4**	**10.9**	**0.4**	**0.3**	
LST Steel Haul -- (11)				**8**	**56**		**141 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	7.6
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4		56	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	16.1
Truck/Trailer	400	Diesel	4		56	10		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		10	20.7	7.1	55.9	1.9	1.8	257.6
Bell 212		Jet A	2		33	7	2.5 LSTs/Day	1.2590	1.0558	9.3516	0.2472	0.2275	2198.7342	0.0000		7	17.6	14.8	130.9	3.5	3.2	507.9
4000 gallon Water Truck	350	Diesel	4		56	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	234.1
R/T Forklift	200	Diesel	2		56	6		0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		6	4.0	0.6	4.7	0.3	0.2	18.8
															Total		**65.5**	**29.4**	**245.4**	**7.7**	**7.1**	**1042.1**
															Total (tons)		**1.8**	**0.8**	**6.9**	**0.2**	**0.2**	
LST Steel Assembly -- (12)				**40**	**105**		**141 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	14.5	0.4	1.5	0.0	0.0	71.3
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		105	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	5	2.5	0.1	0.3	0.0	0.0	30.0
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	6		105	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.1	0.2	1.1	0.2	0.2	22.6
R/T Forklift	125	Diesel	4		105	7	1.4 LSTs/Day	0.2158	0.0390	0.2571	0.0206	0.0190	31.2000	0.0035		7	6.0	1.1	7.2	0.6	0.5	45.9
R/T Crane (L)	300	Diesel	4		105	10		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		10	13.0	4.3	39.5	1.4	1.3	263.8
Kaman K-MAX		Jet A	1		105	7		1.3532	1.1287	7.4027	0.2005	0.1845	1930.3207	0.0000		7	9.5	7.9	51.8	1.4	1.3	709.4
Compressor Trailer	120	Diesel	4		105	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	7.7	1.8	11.2	1.0	0.9	59.2
															Total		**54.2**	**15.8**	**112.6**	**4.6**	**4.2**	**1202.1**
															Total (tons)		**2.8**	**0.8**	**5.9**	**0.2**	**0.2**	
LST Erection -- (13)				**48**	**73**		**141 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	17.4	0.5	1.8	0.0	0.0	59.5
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8		73	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	8.1	0.3	0.9	0.0	0.0	66.8
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8		73	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	2.3	0.5	2.4	0.4	0.4	33.5
4000 gallon Water Truck	350	Diesel	4		73	10	2 LSTs/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	305.1
R/T Crane (M)	215	Diesel	4		73	7		0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		7	10.5	2.7	23.1	1.0	0.9	99.3
R/T Crane (L)	350	Diesel	4		73	7		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		7	10.3	3.3	29.8	1.1	1.0	142.3
															Total		**67.3**	**13.8**	**110.0**	**4.3**	**4.0**	**706.6**
															Total (tons)		**2.5**	**0.5**	**4.0**	**0.2**	**0.1**	
Install Tubular Steel Pole Foundations -- (14)				**24**	**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	12		1	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	2.1	0.5	2.3	0.4	0.4	0.4
R/T Crane (M)	300	Diesel	4		1	7		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		7	9.1	3.0	27.6	1.0	0.9	1.8
Backhoe/Front Loader	200	Diesel	4		1	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	6.9
Auger Truck	500	Diesel	4		1	10	2.5 TSPs/Day	0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		10	24.5	8.3	63.8	2.3	2.1	5.4
4000 gallon Water Truck	350	Diesel	4		1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
10-cu. yd. Dump Truck	350	Diesel	8		1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	37.7	13.0	104.1	3.6	3.3	8.4
10-cu. yd. Concrete Mixer Truck	425	Diesel	12		1	6		0.6064	0.2032	1.8639	0.0630	0.0580	265.0000	0.0183		6	43.7	14.6	134.2	4.5	4.2	9.5
															Total		**173.6**	**54.8**	**457.9**	**16.1**	**14.8**	**37.0**
															Total (tons)		**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Steel Pole Haul -- (15)				**8**	**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	0.1
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		1	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	4.0	0.1	0.4	0.0	0.0	0.5
4000 gallon Water Truck	350	Diesel	4		1	10	10 Steel Poles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
R/T Crane (L)	350	Diesel	2		1	10		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		10	7.3	2.3	21.3	0.8	0.7	1.4
40' Flat Bed Truck/ Trailer	350	Diesel	4		1	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	15.1	5.2	41.6	1.4	1.3	3.3
															Total		**48.2**	**14.3**	**115.7**	**4.0**	**3.7**	**9.5**
															Total (tons)		**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	

Steel Pole Assembly -- (16)				**24**		**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8			1	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090		8	182.8	6.6	20.1	0.3	0.3	20.7
4000 gallon Water Truck	350	Diesel	4			1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			1	6	5 Steel Poles/Day	0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	6	1.7	0.4	1.8	0.3	0.3	0.3
Compressor Trailer	120	Diesel	4			1	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	7.7	1.8	11.2	1.0	0.9	0.6
R/T Crane (L)	350	Diesel	4			1	6		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	8.8	2.8	25.5	0.9	0.8	1.7
																	Total	**228.6**	**18.4**	**111.6**	**4.3**	**3.9**	**27.9**
																	Total (tons)	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	
Steel Pole Erection -- (17)				**24**		**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8			1	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090		5	114.3	4.1	12.6	0.2	0.2	13.0
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			1	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.4	0.3	1.5	0.3	0.2	0.3
4000 gallon Water Truck	350	Diesel	4			1	10	5 Steel Poles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
Compressor Trailer	120	Diesel	4			1	5		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		5	6.4	1.5	9.4	0.8	0.8	0.5
R/T Crane (L)	350	Diesel	4			1	6		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	8.8	2.8	25.5	0.9	0.8	1.7
																	Total	**158.4**	**15.5**	**101.9**	**4.0**	**3.7**	**20.0**
																	Total (tons)	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	
H-Frame Installation -- (18)				**12**		**5**		**1 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	1.0
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4			5	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	4.0	0.1	0.4	0.0	0.0	2.3
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	2			5	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.6	0.1	0.6	0.1	0.1	0.6
Compressor Trailer	120	Diesel	2			5	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	4.5	1.1	6.6	0.6	0.5	1.6
Auger Truck	500	Diesel	2			5	5		0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		5	6.1	2.1	15.9	0.6	0.5	6.8
Extendable Flat Bed Pole Truck	350	Diesel	2			5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	8.4
R/T Crane (M)	500	Diesel	2			5	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	7.2
Water Truck	350	Diesel	1			5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	3.8	1.3	10.4	0.4	0.3	4.2
Extendable Flat Bed Pole Truck	350	Diesel	2			5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	8.4
																	Total	46.3	12.4	96.8	3.8	3.5	40.4
																	Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Install Conductor -- (19)				**220**		**30**		**45 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	79.6	2.2	8.1	0.1	0.1	112.1
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		4	30	10		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	9.4	0.3	1.0	0.0	0.0	4.3
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			30	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	2.8	0.6	3.0	0.5	0.5	17.2
Wire Truck/Trailer	350	Diesel	4			20	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	83.6
R/T Crane (M)	215	Diesel	4			30	10		0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		10	15.0	3.9	33.0	1.4	1.3	58.3
Dump Truck	350	Diesel	2			30	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	62.7
Bucket Truck	350	Diesel	4			30	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	125.4
22-Ton Manitex	350	Diesel	4			30	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	12.3	4.4	43.6	1.4	1.3	81.6
Splicing Rig	350	Diesel	2			8	5		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	3.1	1.1	10.9	0.3	0.3	5.4
Splicing Lab	300	Diesel	2			8	5	1.6 Miles/Day	0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	3.1	1.1	10.9	0.3	0.3	5.4
Sock Line Puller	300	Diesel	2			8	6		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		6	3.7	1.3	13.1	0.4	0.4	6.5
Bull Wheel Puller	350	Diesel	2			16	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	6.2	2.2	21.8	0.7	0.6	21.8
Backhoe/Front Loader	125	Diesel	2			16	8		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		8	11.6	3.5	29.2	1.0	0.9	44.2
D8 Cat	350	Diesel	1			16	8		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		8	2.5	0.9	8.7	0.3	0.3	8.7
Hughes 500 E Helicopter		Jet A	2			16	7		2.1989	1.7655	1.4214	0.0445	0.0409	763.4927	0.0000		7	30.8	24.7	19.9	0.6	0.6	85.5
Fuel, Helicopter Support Truck	300	Diesel	2			16	7		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		7	4.3	1.6	15.3	0.5	0.4	15.2
Sag Cat w/ 2 winches	350	Diesel	1			8	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	3.1	1.1	10.9	0.3	0.3	5.4
Static Truck/ Tensioner	350	Diesel	2			16	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	33.4
																	Total	**243.9**	**68.6**	**385.5**	**13.4**	**12.3**	**776.9**
																	Total (tons)	**2.0**	**0.5**	**3.1**	**0.1**	**0.1**	
Guard Structure Removal -- (20)				**12**		**12**		**206 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	2.4
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4			12	7		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	3.8	0.1	0.4	0.0	0.0	0.0
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4			12	7		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	7	1.0	0.2	1.1	0.2	0.2	2.4
Compressor Trailer	120	Diesel	4			12	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	9.0	2.1	13.1	1.2	1.1	7.9
Extendable Flat Bed Pole Truck	350	Diesel	4			12	6	17.2 Structures/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	30.1
Water Truck	300	Diesel	2			12	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		10	8.5	2.9	24.1	0.8	0.8	22.6
R/T Crane (M)	500	Diesel	2			12	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	17.3
80ft. Hydraulic Man-lift / Bucket Truck	350	Diesel	2			12	4		0.3637	0.0870	0.9773	0.0354	0.0326	143.9610	0.0079		4	2.9	0.7	7.8	0.3	0.3	6.9
																	Total	**48.7**	**12.5**	**98.9**	**4.3**	**3.9**	**89.6**
																	Total (tons)	**0.3**	**0.1**	**0.6**	**0.0**	**0.0**	
Restoration -- (21)				**14**		**5**		**12 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	5.1	0.1	0.5	0.0	0.0	1.2
1-Ton Crew Cab, 4×4	300	Diesel	4			5	2		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	2	0.3	0.1	0.3	0.1	0.0	0.3
Motor Grader	350	Diesel	2			5	6		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		6	7.2	2.1	18.3	0.7	0.6	6.9
Water Truck	350	Diesel	2			5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	8.4
Backhoe/Front Loader	350	Diesel	2			5	6	2.5 Miles/Day	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		6	8.7	2.6	21.9	0.8	0.7	10.4
Drum Type Compactor	250	Diesel	2			5	6		0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109		6	4.3	1.4	13.6	0.5	0.5	3.7
Track Type Dozer	350	Diesel	2			5	6		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		6	11.1	3.1	26.3	1.1	1.0	6.5
Lowboy Truck/Trailer	300	Diesel	2			5	3		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		3	2.5	0.9	7.2	0.2	0.2	2.8
																	Total	**46.7**	**13.0**	**109.0**	**4.0**	**3.7**	**40.0**
																	Total (tons)	**0.1**	**0.0**	**0.3**	**0.0**	**0.0**	
Retaining walls -- (22)				**100**		79		**16 Walls**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	36.2	1.0	3.7	0.0	0.0	134.2
1-Ton Crew Cab, 4×4	300	Diesel	4			79	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	22.7
Motor Grader	250	Diesel	2			79	10		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		10	12.0	3.5	30.5	1.1	1.0	180.9
Water Truck	350	Diesel	2			79	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	165.1
Backhoe/Front Loader	125	Diesel	2			79	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	14.5	4.4	36.5	1.3	1.2	272.6

Drum Type Compactor	250	Diesel	2	79	10	4.8 days/wall	0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109	10	7.2	2.4	22.7	0.9	0.8	96.6
Track Type Dozer	350	Diesel	2	79	10		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236	10	18.5	5.2	43.9	1.8	1.7	170.5
Concrete Mixer	350	Diesel	2	79	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100	10	6.2	2.2	21.8	0.7	0.6	107.4
Excavator	250	Diesel	2	79	10		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115	10	10.2	3.3	26.3	0.0	0.0	137.5
Dump Truck	350	Diesel	2	79	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146	10	9.4	3.2	26.0	0.9	0.8	165.1
Lowboy Truck/Trailer	300	Diesel	2	79	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133	10	8.5	2.9	24.1	0.8	0.8	148.5
														Total	**133.4**	**31.8**	**262.9**	**8.7**	**8.0**	**1601.1**
														Total (tons)	**5.3**	**1.3**	**10.4**	**0.3**	**0.3**	
														Grand Total (lb/day)	2167.8	499.8	3792.8	138.7	127.6	
														Grand Total (tons)	31.1	8.6	69.0	2.5	2.3	12590.4

Transmission and Subtransmission Construction Equipment and Workforce Estimates

Transmission (Segment 5) Construction Equipment and Workforce Estimates

Work Activity				Activity Production				EMFAC2011 Diesel Emission Factors (gms/mi) or OFFROAD Diesel Emissions Factors (lb/hr)							Average Speed (mph)	Miles per day or Hours per day	Estimated Emissions					
								CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2	CH_4			CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e
Primary Equipment Description	Estimated Horse-Power	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (Days)	Duration of Use (Hrs/Day)	Estimated Production Per Day										(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(MT/yr)
Survey -- (1)				**4**	**8**		**9 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.5
3/4-Ton Pick-up Truck, 4×4	200	Gas	2		8	8	1.3 Miles/Day	2.8566	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.5	0.1	0.3	0.0	0.0	0.0
																Total	**4.0**	**0.1**	**0.4**	**0.0**	**0.0**	**0.5**
																Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
Marshalling Yard -- (2)				**1**				3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	0.4	0.0	0.0	0.0	0.0	0.0
1-Ton Crew Cab, 4×4	300	Diesel	1		2	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.1	0.0	0.2	0.0	0.0	0.1
R/T Crane (M)	300	Diesel	1		2	5		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	1.6	0.5	4.9	0.2	0.2	0.6
4,000g Water Truck	350	Diesel	1		2	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	4.7	1.6	13.0	0.4	0.4	2.1
Jet A Fuel Truck			1		2	4		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		4	1.9	0.6	5.2	0.2	0.2	0.8
R/T Fork Lift	200	Diesel	1		2	5		0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		5	1.7	0.3	1.9	0.1	0.1	0.3
Truck, Semi, Tractor	350	Diesel	1		2	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	2.8	1.0	7.8	0.3	0.2	1.3
																Total	**13.2**	**4.1**	**33.1**	**1.2**	**1.1**	**5.1**
																Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
R/W Clearing -- (3)				**5**	**29**		**9Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.8	0.1	0.2	0.0	0.0	2.5
1-Ton Crew Cab, 4×4	300	Diesel	1		29	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	0.4	0.1	0.4	0.1	0.1	2.1
Motor Grader	350	Diesel	1		29	7		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		7	4.2	1.2	10.7	0.4	0.4	23.2
Water Truck	350	Diesel	2		29	7	0.4 Miles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		7	6.6	2.3	18.2	0.6	0.6	42.4
Backhoe/Front Loader	350	Diesel	1		29	7		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	5.1	1.5	12.8	0.4	0.4	35.0
Track Type Dozer	350	Diesel	1		29	9		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		9	8.3	2.4	19.8	0.8	0.8	28.2
Lowboy Truck/Trailer	500	Diesel	1		29	5		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		5	4.6	1.3	11.0	0.5	0.4	15.6
																Total	**31.0**	**8.8**	**72.9**	**2.8**	**2.6**	**149.0**
																Total (tons)	**0.4**	**0.1**	**1.1**	**0.0**	**0.0**	
Roads & Landing Work -- (4)				**10**	**22**		**13.7 Miles & 108 Pads**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	3.6	0.1	0.4	0.0	0.0	3.7
1-Ton Crew Cab, 4×4	300	Diesel	4		22	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	0.7	0.2	0.8	0.1	0.1	3.2
Motor Grader	350	Diesel	2		22	5		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		5	6.0	1.8	15.2	0.6	0.5	25.2
Water Truck	350	Diesel	4		22	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	92.0
Backhoe/Front Loader	350	Diesel	2		22	7	2.5 Miles/Day & 10	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	10.1	3.1	25.6	0.9	0.8	53.1
Drum Type Compactor	250	Diesel	2		22	5	Structure Pads/Day	0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109		5	3.6	1.2	11.3	0.4	0.4	13.5
Track Type Dozer	350	Diesel	2		22	7		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		7	13.0	3.7	30.7	1.3	1.2	33.2
Excavator	300	Diesel	2		11	7		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115		7	7.1	2.3	18.4	0.0	0.0	13.4
Lowboy Truck/Trailer	500	Diesel	2		11	4		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	7.4	2.1	17.6	0.7	0.7	9.5
																Total	**70.4**	**20.9**	**171.9**	**5.8**	**5.4**	**246.8**
																Total (tons)	**0.4**	**0.1**	**0.9**	**0.0**	**0.0**	
Guard Structure Installation -- (5)				**12**	**1**		**6 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	0.2
3/4-Ton Pick-up Truck, 4×4	275	Diesel	4	4	1	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	1.3	0.0	0.1	0.0	0.0	0.1
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	2		1	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.6	0.1	0.6	0.1	0.1	0.1
Compressor Trailer	120	Diesel	2		1	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	4.5	1.1	6.6	0.6	0.5	0.3
Auger Truck	500	Diesel	2		1	5	12 Structures/Day	0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		5	6.1	2.1	15.9	0.6	0.5	1.4
Extendable Flat Bed Pole Truck	350	Diesel	2		1	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	1.7
R/T Crane (M)	500	Diesel	2		1	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	1.4
Water Truck	350	Diesel	4		1	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	15.1	5.2	41.6	1.4	1.3	3.3
Man-lift/Bucket Truck	350	Diesel	2		1	8		0.3637	0.0870	0.9773	0.0354	0.1358	143.9610	0.0079		8	5.8	1.4	15.6	0.6	2.2	1.2
																Total	**53.1**	**14.9**	**122.5**	**4.7**	**6.0**	**9.8**
																Total (tons)	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	
Install LST Foundations -- (6)				**28**	**23**		**72 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	10.1	0.3	1.0	0.0	0.0	10.9
3/4-Ton Pick-up Truck, 4×4	275	Diesel	4	4	23	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	1.3	0.0	0.1	0.0	0.0	3.3
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8		23	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.4	0.3	1.5	0.3	0.2	6.6
Backhoe/Front Loader	200	Diesel	4		23	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	158.7
Auger Truck	500	Diesel	4		23	10	3.2 LSTs/Day	0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		10	24.5	8.3	63.8	2.3	2.1	125.1
Dump Truck	350	Diesel	8		23	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	37.7	13.0	104.1	3.6	3.3	192.3
4000 gallon Water Truck	350	Diesel	4		23	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	96.1
Concrete Mixer Truck	425	Diesel	12		23	7		0.6064	0.2032	1.8639	0.0630	0.0580	265.0000	0.0183		7	50.9	17.1	156.6	5.3	4.9	256.0
																Total	**173.8**	**54.2**	**452.1**	**15.7**	**14.5**	**849.1**
																Total (tons)	**2.0**	**0.6**	**5.2**	**0.2**	**0.2**	
LST Steel Haul -- (7)				**8**	**29**		**72 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	3.9
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4		29	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	8.3
Water Truck	350	Diesel	2		29	10	2.5 LSTs/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	60.6
Flat Bed Truck/Trailer	350	Diesel	2		29	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	60.6

Rough Terrain Fork Lift	200	Diesel	2			29	8		0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		8	5.3	0.8	6.2	0.3	0.3	13.0
																Total		**28.4**	**7.7**	**60.0**	**2.4**	**2.2**	**146.5**
																Total (tons)		**0.4**	**0.1**	**0.9**	**0.0**	**0.0**	
LST Steel Assembly -- (8)				**40**		**54**		**72 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	14.5	0.4	1.5	0.0	0.0	36.7
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		4	54	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	1.3	0.0	0.1	0.0	0.0	7.7
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	6			54	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.1	0.2	1.1	0.2	0.2	11.6
Rough Terrain Fork Lift	200	Diesel	4			54	7	1.4 LSTs/Day	0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		7	9.3	1.5	10.9	0.6	0.6	42.4
R/T Crane (L)	300	Diesel	4			54	10		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		10	13.0	4.3	39.5	1.4	1.3	135.6
Compressor Trailer	120	Diesel	4			54	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	9.0	2.1	13.1	1.2	1.1	35.5
																Total		**48.0**	**8.6**	**66.2**	**3.4**	**3.1**	**269.6**
																Total (tons)		**1.3**	**0.2**	**1.8**	**0.1**	**0.1**	
LST Erection -- (9)				**48**		**38**		**72 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	17.4	0.5	1.8	0.0	0.0	31.0
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8		8	38	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	2.5	0.1	0.3	0.0	0.0	10.9
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			38	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.4	0.3	1.5	0.3	0.2	10.9
Water Truck	350	Diesel	2			38	10	2 LSTs/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	79.4
R/T Crane (M)	500	Diesel	4			38	7		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		7	13.9	4.1	36.3	1.3	1.2	95.8
Compressor Trailer	120	Diesel	4			38	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	9.0	2.1	13.1	1.2	1.1	25.0
R/T Crane (L)	350	Diesel	4			38	7		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		7	10.3	3.3	29.8	1.1	1.0	74.1
																Total		**65.1**	**13.9**	**110.6**	**4.8**	**4.4**	**327.0**
																Total (tons)		**1.2**	**0.3**	**2.1**	**0.1**	**0.1**	
Install Tubular Steel Pole Foundations -- (10)				**24**		**15**		**36 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	6.1
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	12			15	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	2.1	0.5	2.3	0.4	0.4	6.5
R/T Crane (M)	300	Diesel	4			15	7		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		7	9.1	3.0	27.6	1.0	0.9	26.4
Backhoe/Front Loader	200	Diesel	4			15	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	103.5
Auger Truck	500	Diesel	4			11	10	2.5 TSPs/Day	0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		10	24.5	8.3	63.8	2.3	2.1	59.8
4000 gallon Water Truck	350	Diesel	4			15	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	62.7
Dump Truck	350	Diesel	8			15	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	37.7	13.0	104.1	3.6	3.3	125.4
Concrete Mixer Truck	425	Diesel	12			11	6		0.6064	0.2032	1.8639	0.0630	0.0580	265.0000	0.0183		6	43.7	14.6	134.2	4.5	4.2	104.9
																Total		**174.8**	**55.1**	**460.0**	**16.1**	**14.9**	**495.3**
																Total (tons)		**1.0**	**0.3**	**2.5**	**0.1**	**0.1**	
Steel Pole Haul -- (11)				**8**		**4**		**36 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	0.5
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		4	4	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	1.3	0.0	0.1	0.0	0.0	0.6
4000 gallon Water Truck	350	Diesel	4			4	10	10 Steel Poles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	16.7
R/T Crane (M)	350	Diesel	2			4	6		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	4.4	1.4	12.8	0.5	0.4	3.3
40' Flat Bed Truck/ Trailer	400	Diesel	4			4	10		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		10	20.7	7.1	55.9	1.9	1.8	18.4
																Total		**48.1**	**15.1**	**121.2**	**4.2**	**3.9**	**39.6**
																Total (tons)		**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Steel Pole Assembly -- (12)				**24**		**8**		**36 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	3.3
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8		8	8	6		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	2.5	0.1	0.3	0.0	0.0	2.3
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			8	6		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	6	1.7	0.4	1.8	0.3	0.3	2.8
4000 gallon Water Truck	350	Diesel	4			8	10	5 Steel Poles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	33.4
Compressor Trailer	120	Diesel	4			8	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	7.7	1.8	11.2	1.0	0.9	4.5
R/T Crane (L)	350	Diesel	4			8	7		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		7	10.3	3.3	29.8	1.1	1.0	15.6
																Total		**49.7**	**12.3**	**96.0**	**4.2**	**3.8**	**61.8**
																Total (tons)		**0.2**	**0.0**	**0.4**	**0.0**	**0.0**	
Steel Pole Erection -- (13)				**24**		**8**		**36 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	3.3
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8		8	8	6		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	2.5	0.1	0.3	0.0	0.0	2.3
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			8	6		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	6	1.7	0.4	1.8	0.3	0.3	2.8
4000 gallon Water Truck	350	Diesel	4			8	10	5 Steel Poles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	33.4
Compressor Trailer	120	Diesel	4			8	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	7.7	1.8	11.2	1.0	0.9	4.5
R/T Crane (L)	350	Diesel	4			8	7		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		7	10.3	3.3	29.8	1.1	1.0	15.6
																Total		**49.7**	**12.3**	**96.0**	**4.2**	**3.8**	**61.8**
																Total (tons)		**0.2**	**0.0**	**0.4**	**0.0**	**0.0**	
Install Conductor -- (14)				**220**		**24**		**36 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	79.6	2.2	8.1	0.1	0.1	89.7
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		4	24	10		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	1.3	0.0	0.1	0.0	0.0	3.4
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			24	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	2.8	0.6	3.0	0.5	0.5	13.8
Wire Truck/Trailer	350	Diesel	4			17	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	42.6
Dump Truck (Trash)	350	Diesel	2			24	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	50.2
R/T Crane (M)	350	Diesel	2			24	10		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		10	7.3	2.3	21.3	0.8	0.7	33.4
Bucket Truck	350	Diesel	4			24	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	100.3
22-Ton Manitex	350	Diesel	4			24	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	12.3	4.4	43.6	1.4	1.3	65.3
Splicing Rig	350	Diesel	2			7	2	1.6 Miles/Day	0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		2	1.2	0.4	4.4	0.1	0.1	1.9
Splicing Lab	300	Diesel	2			7	2		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		2	1.2	0.4	4.4	0.1	0.1	1.9
Splicing Cart	10	Diesel	4			7	10		0.0391	0.0066	0.0466	0.0018	0.0017	6.4000	0.0006		10	1.6	0.3	1.9	0.1	0.1	0.9
3 Drum Straw line Puller	300	Diesel	2			13	7		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		7	4.3	1.6	15.3	0.5	0.4	12.4
D8 Cat	350	Diesel	1			24	7		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		7	2.2	0.8	7.6	0.2	0.2	11.4
Sag Cat W/ 2 Winches	350	Diesel	1			24	7		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		7	2.2	0.8	7.6	0.2	0.2	11.4
Hughes 500 E Helicopter		Jet A	2			24	7		2.1989	1.7655	1.4214	0.0445	0.0409	763.4927	0.0000		7	30.8	24.7	19.9	0.6	0.6	128.3
Fuel, Helicopter Support Truck	300	Diesel	2			24	7		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		7	5.9	2.1	16.8	0.6	0.5	31.6
Static Truck/ Tensioner	350	Diesel	2			13	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	5.7	1.9	15.6	0.5	0.5	16.3
																Total		**197.9**	**56.3**	**278.8**	**9.6**	**8.8**	**614.8**
																Total (tons)		**1.3**	**0.4**	**1.8**	**0.1**	**0.1**	
Guard Structure Removal -- (15)				**12**		**1**		**6 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	0.2

3/4-Ton Pick-up Truck, 4×4	300	Diesel	4	4	1	7		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	1.3	0.0	0.1	0.0	0.0	0.1
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4		1	7		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	7	1.0	0.2	1.1	0.2	0.2	0.2
Compressor Trailer	120	Diesel	4		1	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	9.0	2.1	13.1	1.2	1.1	0.7
Water Truck	350	Diesel	2		1	10	17.2 Structures/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	2.1
Extendable Flat Bed Pole Truck	350	Diesel	4		1	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	2.5
R/T Crane (M)	500	Diesel	2		1	10		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		10	9.9	2.9	26.0	0.9	0.9	1.8
80ft. Hydraulic Man-lift / Bucket Truck	350	Diesel	2		1	7		0.3637	0.0870	0.9773	0.0354	0.1358	143.9610	0.0079		7	5.1	1.2	13.7	0.5	1.9	1.0
																Total	**51.3**	**13.8**	**111.6**	**4.8**	**5.8**	**8.6**
																Total (tons)	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	
Restoration -- (16)				**14**	**4**		**9 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	5.1	0.1	0.5	0.0	0.0	1.0
1-Ton Crew Cab, 4×4	300	Diesel	4		4	2		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	2	0.3	0.1	0.3	0.1	0.0	0.2
Motor Grader	350	Diesel	2		4	6		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		6	7.2	2.1	18.3	0.7	0.6	5.5
Water Truck	350	Diesel	2		4	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	6.7
Backhoe/Front Loader	350	Diesel	2		4	6	2.5 Miles/Day	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		6	8.7	2.6	21.9	0.8	0.7	8.3
Drum Type Compactor	250	Diesel	2		4	6		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		6	3.7	1.3	13.1	0.4	0.4	3.3
Track Type Dozer	350	Diesel	2		4	6		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		6	11.1	3.1	26.3	1.1	1.0	5.2
Lowboy Truck/Trailer	300	Diesel	2		4	3		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		3	2.5	0.9	7.2	0.2	0.2	2.3
																Total	**46.1**	**12.9**	**108.5**	**3.9**	**3.6**	**32.3**
																Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
																Grand Total (lb/day)	1104.8	311.0	2362.0	87.8	83.9	
																Grand Total (Tons)	8.7	2.3	17.7	0.7	0.6	3317.7

Transmission Construction Equipment and Workforce Estimates (Segment 5-Alternative)

Work Activity				Activity Production																		
Primary Equipment Description	Estimated Horse-Power	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (Days)	Duration of Use (Hrs/Day)	Estimated Production Per Day															
Survey -- (1)				**4**	**8**		**10 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.5
3/4-Ton Pick-up Truck, 4×4	200	Gas	2		8	8	1.3 Miles/Day	2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	2.5	0.1	0.3	0.0	0.0	0.0
																Total	**4.0**	**0.1**	**0.4**	**0.0**	**0.0**	**0.5**
																Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
Marshaling Yard -- (2)				**1**				3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	0.4	0.0	0.0	0.0	0.0	0.0
1-Ton Crew Cab, 4×4	300	Diesel	1		2	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.1	0.0	0.2	0.0	0.0	0.1
R/T Crane (M)	300	Diesel	1		2	5		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	1.6	0.5	4.9	0.2	0.2	0.6
4,000g Water Truck	350	Diesel	1		2	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	4.7	1.6	13.0	0.4	0.4	2.1
Jet A Fuel Truck			1		2	4		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		4	1.9	0.6	5.2	0.2	0.2	0.8
R/T Fork Lift	200	Diesel	1		2	5		0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		5	1.7	0.3	1.9	0.1	0.1	0.3
Truck, Semi, Tractor	350	Diesel	1		2	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	2.8	1.0	7.8	0.3	0.2	1.3
																Total	**13.2**	**4.1**	**33.1**	**1.2**	**1.1**	**5.1**
																Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
R/W Clearing -- (3)				**5**	**32**		**10 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.8	0.1	0.2	0.0	0.0	2.7
1-Ton Crew Cab, 4×4	300	Diesel	1		32	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	0.4	0.1	0.4	0.1	0.1	2.3
Motor Grader	350	Diesel	1		32	7		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		7	4.2	1.2	10.7	0.4	0.4	25.6
Water Truck	350	Diesel	2		32	7	0.4 Miles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		7	6.6	2.3	18.2	0.6	0.6	46.8
Backhoe/Front Loader	350	Diesel	1		32	7		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	5.1	1.5	12.8	0.4	0.4	38.6
Track Type Dozer	350	Diesel	1		32	9		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		9	8.3	2.4	19.8	0.8	0.8	31.1
Lowboy Truck/Trailer	500	Diesel	1		32	5		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		5	4.6	1.3	11.0	0.5	0.4	17.3
																Total	**31.0**	**8.8**	**73.0**	**2.8**	**2.6**	**164.5**
																Total (tons)	**0.5**	**0.1**	**1.2**	**0.0**	**0.0**	
Roads & Landing Work -- (4)				**10**	**22**		**4.7 Miles & 110 Pads**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	3.6	0.1	0.4	0.0	0.0	3.7
1-Ton Crew Cab, 4×4	300	Diesel	4		22	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	0.7	0.2	0.8	0.1	0.1	3.2
Motor Grader	350	Diesel	2		22	5		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		5	6.0	1.8	15.2	0.6	0.5	25.2
Water Truck	350	Diesel	4		22	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	92.0
Backhoe/Front Loader	350	Diesel	2		22	7	2.5 Miles/Day & 10 Structure Pads/Day	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	10.1	3.1	25.6	0.9	0.8	53.1
Drum Type Compactor	250	Diesel	2		22	5		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	3.1	1.1	10.9	0.3	0.3	15.0
Track Type Dozer	350	Diesel	2		22	7		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		7	13.0	3.7	30.7	1.3	1.2	33.2
Excavator	300	Diesel	2		11	7		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115		7	7.1	2.3	18.4	0.0	0.0	13.4
Lowboy Truck/Trailer	500	Diesel	2		11	4		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	7.4	2.1	17.6	0.7	0.7	9.5
																Total	**70.4**	**20.9**	**172.7**	**5.8**	**5.3**	**248.3**
																Total (tons)	**0.4**	**0.1**	**0.9**	**0.0**	**0.0**	
Guard Structure Installation -- (5)				**12**	**1**		**6 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	0.2
3/4-Ton Pick-up Truck, 4×4	275	Diesel	4		1	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	0.3	0.0	0.0	0.0	0.0	0.0
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	2		1	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.6	0.1	0.6	0.1	0.1	0.1
Compressor Trailer	120	Diesel	2		1	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	4.5	1.1	6.6	0.6	0.5	0.3
Auger Truck	500	Diesel	2		1	5	12 Structures/Day	0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		5	6.1	2.1	15.9	0.6	0.5	1.4
Extendable Flat Bed Pole Truck	350	Diesel	2		1	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	1.7
R/T Crane (M)	500	Diesel	2		1	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	1.4
Water Truck	350	Diesel	4		1	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	15.1	5.2	41.6	1.4	1.3	3.3
Man-lift/Bucket Truck	350	Diesel	2		1	8		0.3637	0.0870	0.9773	0.0354	0.0326	143.9610	0.0079		8	5.8	1.4	15.6	0.6	0.5	1.2
																Total	**52.6**	**15.0**	**123.4**	**4.8**	**4.4**	**9.6**
																Total (tons)	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	
Install LST Foundations -- (6)				**28**	**24**		**74 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	10.1	0.3	1.0	0.0	0.0	11.4

3/4-Ton Pick-up Truck, 4x4	275	Diesel	4		24	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	7.6	0.3	0.8	0.0	0.0	0.0
1-Ton Crew Cab Flat Bed, 4x4	300	Diesel	8		24	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.4	0.3	1.5	0.3	0.2	6.9
Backhoe/Front Loader	200	Diesel	4		24	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	165.6
Auger Truck	500	Diesel	4		24	10	3.2 LSTs/Day	0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		10	24.5	8.3	63.8	2.3	2.1	130.6
Dump Truck	350	Diesel	8		24	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	37.7	13.0	104.1	3.6	3.3	200.6
4000 gallon Water Truck	350	Diesel	4		24	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	100.3
Concrete Mixer Truck	425	Diesel	12		24	7		0.6064	0.2032	1.8639	0.0630	0.0580	265.0000	0.0183		7	50.9	17.1	156.6	5.3	4.9	267.1
																Total	**180.1**	**54.4**	**452.9**	**15.7**	**14.5**	**882.5**
																Total (tons)	**2.2**	**0.7**	**5.4**	**0.2**	**0.2**	
LST Steel Haul -- (7)				**8**	**30**		**74 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	4.1
1-Ton Crew Cab Flat Bed, 4x4	300	Diesel	4		30	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	8.6
Water Truck	350	Diesel	2		30	10	2.5 LSTs/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	62.7
Flat Bed Truck/Trailer	350	Diesel	2		30	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	62.7
Rough Terrain Fork Lift	200	Diesel	2		30	8		0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		8	5.3	0.8	6.2	0.3	0.3	13.5
																Total	**30.6**	**8.4**	**65.5**	**2.6**	**2.4**	**151.6**
																Total (tons)	**0.5**	**0.1**	**1.0**	**0.0**	**0.0**	
LST Steel Assembly -- (8)				**40**	**56**		**74 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	14.5	0.4	1.5	0.0	0.0	38.1
3/4-Ton Pick-up Truck, 4x4	300	Diesel	4		56	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	17.6	0.6	1.9	0.0	0.0	0.0
1-Ton Crew Cab Flat Bed, 4x4	300	Diesel	6		56	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.1	0.2	1.1	0.2	0.2	12.1
Rough Terrain Fork Lift	200	Diesel	4		56	7	1.4 LSTs/Day	0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		7	9.3	1.5	10.9	0.6	0.6	44.0
R/T Crane (L)	300	Diesel	4		56	10		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		10	13.0	4.3	39.5	1.4	1.3	140.7
Compressor Trailer	120	Diesel	4		56	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	9.0	2.1	13.1	1.2	1.1	36.8
																Total	**64.9**	**9.3**	**69.0**	**3.4**	**3.2**	**271.6**
																Total (tons)	**1.8**	**0.3**	**1.9**	**0.1**	**0.1**	
LST Erection -- (9)				**48**	**39**		**74 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	17.4	0.5	1.8	0.0	0.0	31.8
3/4-Ton Pick-up Truck, 4x4	300	Diesel	8		39	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	12.3	0.4	1.4	0.0	0.0	0.0
1-Ton Crew Cab Flat Bed, 4x4	300	Diesel	8		39	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.4	0.3	1.5	0.3	0.2	11.2
Water Truck	350	Diesel	2		39	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	81.5
R/T Crane (M)	500	Diesel	4		39	7	2 LSTs/Day	0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		7	13.9	4.1	36.3	1.3	1.2	98.3
Compressor Trailer	120	Diesel	4		39	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	9.0	2.1	13.1	1.2	1.1	25.6
R/T Crane (L)	350	Diesel	4		39	7		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		7	10.3	3.3	29.8	1.1	1.0	76.0
																Total	**75.4**	**14.3**	**111.8**	**4.8**	**4.4**	**324.4**
																Total (tons)	**1.5**	**0.3**	**2.2**	**0.1**	**0.1**	
Install Tubular Steel Pole Foundations -- (10)				**24**	**15**		**36 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	6.1
1-Ton Crew Cab Flat Bed, 4x4	300	Diesel	12		15	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	2.1	0.5	2.3	0.4	0.4	6.5
R/T Crane (M)	300	Diesel	4		15	7		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		7	9.1	3.0	27.6	1.0	0.9	26.4
Backhoe/Front Loader	200	Diesel	4		15	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	103.5
Auger Truck	500	Diesel	4		11	10	2.5 TSPs/Day	0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		10	24.5	8.3	63.8	2.3	2.1	59.8
4000 gallon Water Truck	350	Diesel	4		15	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	62.7
Dump Truck	350	Diesel	8		15	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	37.7	13.0	104.1	3.6	3.3	125.4
Concrete Mixer Truck	425	Diesel	12		11	6		0.5422	0.1843	1.4476	0.0507	0.0467	240.5000	0.0166		6	39.0	13.3	104.2	3.7	3.4	95.2
																Total	**170.4**	**53.7**	**430.1**	**15.3**	**14.0**	**485.6**
																Total (tons)	**0.9**	**0.3**	**2.4**	**0.1**	**0.1**	
Steel Pole Haul -- (11)				**8**	**4**		**36 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	0.5
3/4-Ton Pick-up Truck, 4x4	300	Diesel	4		4	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	1.3	0.0	0.1	0.0	0.0	0.0
4000 gallon Water Truck	350	Diesel	4		4	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	16.7
R/T Crane (M)	350	Diesel	2		4	6	10 Steel Poles/Day	0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	4.4	1.4	12.8	0.5	0.4	3.3
40' Flat Bed Truck/ Trailer	400	Diesel	4		4	10		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		10	20.7	7.1	55.9	1.9	1.8	18.4
																Total	**49.1**	**15.4**	**123.5**	**4.3**	**3.9**	**39.0**
																Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Steel Pole Assembly -- (12)				**24**	**8**		**36 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	3.3
3/4-Ton Pick-up Truck, 4x4	300	Diesel	8		8	6		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	2.5	0.1	0.3	0.0	0.0	0.0
1-Ton Crew Cab Flat Bed, 4x4	300	Diesel	8		8	6		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	6	1.7	0.4	1.8	0.3	0.3	2.8
4000 gallon Water Truck	350	Diesel	4		8	10	5 Steel Poles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	33.4
Compressor Trailer	120	Diesel	4		8	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	7.7	1.8	11.2	1.0	0.9	4.5
R/T Crane (L)	350	Diesel	4		8	7		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		7	10.3	3.3	29.8	1.1	1.0	15.6
																Total	**49.8**	**12.3**	**96.3**	**4.2**	**3.8**	**59.6**
																Total (tons)	**0.2**	**0.0**	**0.4**	**0.0**	**0.0**	
Steel Pole Erection -- (13)				**24**	**8**		**36 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	3.3
3/4-Ton Pick-up Truck, 4x4	300	Diesel	8		8	6		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	2.5	0.1	0.3	0.0	0.0	0.0
1-Ton Crew Cab Flat Bed, 4x4	300	Diesel	8		8	6		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	6	1.7	0.4	1.8	0.3	0.3	2.8
4000 gallon Water Truck	350	Diesel	4		8	10	5 Steel Poles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	33.4
Compressor Trailer	120	Diesel	4		8	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	7.7	1.8	11.2	1.0	0.9	4.5
R/T Crane (L)	350	Diesel	4		8	7		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		7	10.3	3.3	29.8	1.1	1.0	15.6
																Total	**49.9**	**12.3**	**96.4**	**4.2**	**3.9**	**59.6**
																Total (tons)	**0.2**	**0.0**	**0.4**	**0.0**	**0.0**	
Install Conductor -- (14)				**220**	**27**		**40 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	79.6	2.2	8.1	0.1	0.1	100.9
3/4-Ton Pick-up Truck, 4x4	300	Diesel	4		27	10		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	8.5	0.3	0.9	0.0	0.0	0.0
1-Ton Crew Cab Flat Bed, 4x4	300	Diesel	8		27	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	40	50	2.4	0.5	2.5	0.4	0.4	0.0
Wire Truck/Trailer	350	Diesel	4		19	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	47.7
Dump Truck (Trash)	350	Diesel	2		27	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	56.4
R/T Crane (M)	350	Diesel	2		19	10		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		10	7.3	2.3	21.3	0.8	0.7	26.4

Bucket Truck	350	Diesel	4		19	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	79.4
22-Ton Manitex	350	Diesel	4		19	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	12.3	4.4	43.6	1.4	1.3	51.7
Splicing Rig	350	Diesel	2		8	2	1.6 Miles/Day	0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		2	1.2	0.4	4.4	0.1	0.1	2.2
Splicing Lab	300	Diesel	2		8	2		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		2	1.2	0.4	4.4	0.1	0.1	2.2
Splicing Cart	10	Diesel	4		8	10		0.0391	0.0066	0.0466	0.0018	0.0017	6.4000	0.0006		10	1.6	0.3	1.9	0.1	0.1	1.0
3 Drum Straw line Puller	300	Diesel	2		15	7		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		7	4.3	1.6	15.3	0.5	0.4	14.3
D8 Cat	350	Diesel	1		19	7		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		7	2.2	0.8	7.6	0.2	0.2	9.0
Sag Cat W/ 2 Winches	350	Diesel	1		15	7		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		7	2.2	0.8	7.6	0.2	0.2	7.1
Hughes 500 E Helicopter		Jet A	2		8	7		2.1989	1.7655	1.4214	0.0445	0.0409	763.4927	0.0000		7	30.8	24.7	19.9	0.6	0.6	42.8
Fuel, Helicopter Support Truck	300	Diesel	2		8	7		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		7	5.9	2.1	16.8	0.6	0.5	10.5
Static Truck/ Tensioner	350	Diesel	2		15	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	5.7	1.9	15.6	0.5	0.5	18.8
															Total		**204.9**	**56.5**	**279.5**	**9.5**	**8.7**	**470.5**
															Total (tons)		**1.5**	**0.4**	**2.1**	**0.1**	**0.1**	
Guard Structure Removal -- (15)				**12**	**1**		**6 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	0.2
3/4-Ton Pick-up Truck, 4x4	300	Diesel	4		1	7		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	0.3	0.0	0.0	0.0	0.0	0.0
1-Ton Crew Cab Flat Bed, 4x4	300	Diesel	4		1	7		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	40	50	0.1	0.0	0.1	0.0	0.0	0.0
Compressor Trailer	120	Diesel	4		1	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	9.0	2.1	13.1	1.2	1.1	0.7
Water Truck	350	Diesel	2		1	10	17.2 Structures/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	2.1
Extendable Flat Bed Pole Truck	350	Diesel	4		1	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	2.5
R/T Crane (M)	500	Diesel	2		1	10		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		10	9.9	2.9	26.0	0.9	0.9	1.8
80ft. Hydraulic Man-lift / Bucket Truck	350	Diesel	2		1	7		0.3637	0.0870	0.9773	0.0354	0.1358	143.9610	0.0079		7	5.1	1.2	13.7	0.5	1.9	1.0
															Total		**51.0**	**14.0**	**112.6**	**4.7**	**5.7**	**8.3**
															Total (tons)		**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	
Restoration -- (16)				**14**	**4**		**10 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	5.1	0.1	0.5	0.0	0.0	1.0
1-Ton Crew Cab, 4x4	300	Diesel	4		4	2		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	40	50	0.4	0.1	0.4	0.1	0.1	0.0
Motor Grader	350	Diesel	2		4	6		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		6	7.2	2.1	18.3	0.7	0.6	5.5
Water Truck	350	Diesel	2		4	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	6.7
Backhoe/Front Loader	350	Diesel	2		4	6	2.5 Miles/Day	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		6	8.7	2.6	21.9	0.8	0.7	8.3
Drum Type Compactor	250	Diesel	2		4	6		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		6	3.7	1.3	13.1	0.4	0.4	3.3
Track Type Dozer	350	Diesel	2		4	6		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		6	11.1	3.1	26.3	1.1	1.0	5.2
Lowboy Truck/Trailer	300	Diesel	2		4	3		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		3	2.5	0.9	7.2	0.2	0.2	2.3
															Total		**46.2**	**12.9**	**108.6**	**4.0**	**3.6**	**32.1**
															Total (tons)		**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
															Grand Total (lb/day)		1143.5	312.5	2348.8	87.2	81.7	
															Grand Total (Tons)		9.9	2.5	18.5	0.7	0.6	3212.7

Transmission and Subtransmission Construction Equipment and Workforce Estimates

Transmission (Segment 6) Construction Equipment and Workforce Estimates

Work Activity				Activity Production				EMFAC2011 Diesel Emission Factors (gms/mi) or OFFROAD Diesel Emissions Factors (lb/hr)							Average Speed (mph)	Miles per day or Hours per day	Estimated Emissions					
								CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2	CH_4			CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e
Primary Equipment Description	Estimated Horse-Power	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (Days)	Duration of Use (Hrs/Day)	Estimated Production Per Day										(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(MT/yr)
Survey -- (1)				**4**	**6**		**8**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.4
3/4-Ton Pick-up Truck, 4×4	200	Gas	2		6	8	1.3 Miles/Day	2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	2.0	0.1	0.2	0.0	0.0	1.4
																Total	**3.5**	**0.1**	**0.4**	**0.0**	**0.0**	**1.8**
																Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
Marshaling Yard -- (2)				**4**				3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.4	0.0	0.1	0.0	0.0	0.0
1-Ton Crew Cab, 4×4	300	Diesel	1		2	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.1	0.0	0.2	0.0	0.0	0.1
R/T Crane (M)	300	Diesel	1		2	5		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	1.6	0.5	4.9	0.2	0.2	0.6
R/T Forklift	200	Diesel	1		2	5		0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		5	1.7	0.3	1.9	0.1	0.1	0.3
Water Truck	300	Diesel	1		2	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		10	4.2	1.5	12.0	0.4	0.4	1.9
Jet A Fuel Truck			1		2	4		0.6148	0.2034	1.6679	0.0579	0.0533	260.0000	0.0183		4	2.5	0.8	6.7	0.2	0.2	1.0
Truck, Semi, Tractor	350	Diesel	1		2	6		0.5063	0.1560	1.3478	0.0449	0.0413	241.2000	0.0141		6	3.0	0.9	8.1	0.3	0.2	1.4
																Total	**14.6**	**4.1**	**34.0**	**1.2**	**1.1**	**5.3**
																Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
R/W Clearing -- (3)				**5**	**26**		**8 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	1.8	0.1	0.2	0.0	0.0	2.2
1-Ton Crew Cab, 4×4	300	Diesel	1		26	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	0.4	0.1	0.4	0.1	0.1	1.9
Motor Grader	350	Diesel	1		26	7		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		7	4.2	1.2	10.7	0.4	0.4	20.8
Water Truck	350	Diesel	2		26	7	0.4 Miles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		7	6.6	2.3	18.2	0.6	0.6	38.0
Backhoe/Front Loader	350	Diesel	1		26	7		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	5.1	1.5	12.8	0.4	0.4	31.4
Track Type Dozer	350	Diesel	1		26	9		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		9	8.3	2.4	19.8	0.8	0.8	25.2
Lowboy Truck/Trailer	500	Diesel	1		26	5		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		5	4.6	1.3	11.0	0.5	0.4	14.0
																Total	**31.0**	**8.8**	**72.9**	**2.8**	**2.6**	**133.6**
																Total (tons)	**0.4**	**0.1**	**0.9**	**0.0**	**0.0**	
Roads & Landing Work -- (4)				**10**	**25**		**31.7 Miles & 97 Pads**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	3.6	0.1	0.4	0.0	0.0	4.2
1-Ton Crew Cab, 4×4	300	Diesel	4		25	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	0.7	0.2	0.8	0.1	0.1	3.6
Motor Grader	350	Diesel	2		25	5		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		5	6.0	1.8	15.2	0.6	0.5	28.6
Water Truck	350	Diesel	4		25	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	104.5
Backhoe/Front Loader	350	Diesel	2		25	7	1.3 Miles/Day & 5	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	10.1	3.1	25.6	0.9	0.8	60.4
Drum Type Compactor	250	Diesel	2		25	5	Structure Pads/Day	0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109		5	3.6	1.2	11.3	0.4	0.4	15.3
Track Type Dozer	350	Diesel	2		25	7		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		7	13.0	3.7	30.7	1.3	1.2	37.8
Excavator	300	Diesel	2		13	7		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115		7	7.1	2.3	18.4	0.0	0.0	15.8
Lowboy Truck/Trailer	500	Diesel	2		13	4		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	7.4	2.1	17.6	0.7	0.7	11.2
																Total	**70.4**	**20.9**	**171.9**	**5.8**	**5.4**	**281.4**
																Total (tons)	**0.5**	**0.1**	**1.1**	**0.0**	**0.0**	
Guard Structure Installation -- (5)				**12**	**12**		**138 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	2.4
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4	4	12	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	1.3	0.0	0.1	0.0	0.0	1.7
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	2		12	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.6	0.1	0.6	0.1	0.1	1.4
Compressor Trailer	120	Diesel	2		12	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	4.5	1.1	6.6	0.6	0.5	3.9
Auger Truck	500	Diesel	2		12	5	12 Structures/Day	0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		5	6.1	2.1	15.9	0.6	0.5	16.3
Extendable Flat Bed Pole Truck	350	Diesel	2		12	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	20.1
R/T Crane (M)	500	Diesel	2		12	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	17.3
Water Truck	350	Diesel	1		12	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	3.8	1.3	10.4	0.4	0.3	10.0
Extendable Flat Bed Pole Truck	350	Diesel	2		12	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	20.1
																Total	**43.6**	**12.3**	**96.5**	**3.8**	**3.5**	**93.2**
																Total (tons)	**0.3**	**0.1**	**0.6**	**0.0**	**0.0**	
Remove Existing Conductor & OHGW -- (6)				**56**	**97**		**161 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	20.3	0.6	2.1	0.0	0.0	92.3
1-Ton Crew Cab, 4×4	300	Diesel	16		97	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	5.6	1.2	6.0	1.0	1.0	111.4
Man-lift / Bucket Truck	350	Diesel	12		97	10		0.3637	0.0870	0.9773	0.0354	0.0326	143.9610	0.0079		10	43.6	10.4	117.3	4.3	3.9	837.9
Sleeving Truck	300	Diesel	4		97	5		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		5	8.5	2.9	24.1	0.8	0.8	182.4
R/T Crane (M)	300	Diesel	4	4	97	5		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	6.5	2.2	19.7	0.7	0.6	121.8
Flat Bed Trailer	N/A	N/A	12		88	3	1.7 Miles/Day	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		3	0.0	0.0	0.0	0.0	0.0	0.0
Truck, Semi, Tractor	350	Diesel	4		88	3		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		3	5.7	1.9	15.6	0.5	0.5	110.4
Bull Wheel Puller	500	Diesel	4		66	5		0.6064	0.2032	1.8639	0.0630	0.0580	265.0000	0.0183		5	12.1	4.1	37.3	1.3	1.2	174.9
Water Truck	350	Diesel	4		66	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	165.5
Hydraulic Rewind Puller	300	Diesel	4		66	5		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	6.2	2.2	21.8	0.7	0.6	89.8
																Total	**119.7**	**29.5**	**275.1**	**10.4**	**9.6**	**1886.3**
																Total (tons)	**4.0**	**1.0**	**9.1**	**0.3**	**0.3**	
Remove Existing Lattice Steel Towers -- (7)				**32**	**36**		**89 Towers**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	11.6	0.3	1.2	0.0	0.0	19.6
1-Ton Crew Cab, 4×4	300	Diesel	8		36	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	2.3	0.5	2.4	0.4	0.4	16.5

R/T Crane (M)	215	Diesel	8		36	5		0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		5	15.0	3.9	33.0	1.4	1.3	70.0
Compressor Trailer	120	Diesel	8		36	10	2.5 Towers/Day	0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		10	25.7	6.1	37.5	3.3	3.1	67.6
Flat Bed Truck/Trailer	350	Diesel	4		36	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	15.1	5.2	41.6	1.4	1.3	120.4
Water Truck	350	Diesel	4		36	6		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	90.3
															Total		**80.9**	**19.9**	**146.9**	**7.7**	**7.1**	**384.4**
															Total (tons)		**1.5**	**0.4**	**2.6**	**0.1**	**0.1**	
Remove Existing Foundations -- (8)				**16**	**36**		**89 Towers**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	5.8	0.2	0.6	0.0	0.0	9.8
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4		36	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	10.3
Dump Truck	350	Diesel	4		36	10	2.5 Towers/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	150.5
Backhoe/Front Loader	350	Diesel	4		36	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	248.4
Water Truck	350	Diesel	4		36	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	150.5
															Total		**73.9**	**22.2**	**179.2**	**6.4**	**5.8**	**569.5**
															Total (tons)		**1.3**	**0.4**	**3.2**	**0.1**	**0.1**	
Remove Existing Tubular Steel Poles -- (9)				**24**	**2**		**1 TSP**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.8
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8		2	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090		8	182.8	6.6	20.1	0.3	0.3	41.5
R/T Crane (M)	300	Diesel	4		2	5	3.8 Steel Poles/Day	0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		5	6.5	2.2	19.7	0.7	0.6	2.5
Compressor Trailer	120	Diesel	4		2	10		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		10	12.9	3.0	18.7	1.7	1.5	1.9
Water Truck	350	Diesel	4		2	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	8.4
															Total		**229.7**	**18.5**	**111.5**	**4.4**	**4.1**	**55.1**
															Total (tons)		**0.2**	**0.0**	**0.1**	**0.0**	**0.0**	
Install LST Foundations -- (10)				**28**	**30**		**94 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	10.1	0.3	1.0	0.0	0.0	14.3
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8		30	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.4	0.3	1.5	0.3	0.2	8.6
R/T Crane (M)	300	Diesel	4		30	7		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		7	9.1	3.0	27.6	1.0	0.9	52.8
Backhoe/Front Loader	200	Diesel	4		30	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	207.0
Auger Truck	500	Diesel	4		30	10		0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		10	24.5	8.3	63.8	2.3	2.1	163.2
10-cu. yd. Dump Truck	350	Diesel	8		30	10	3.2 LSTs/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	37.7	13.0	104.1	3.6	3.3	250.8
Kaman K-MAX		Jet A	1		30	7		1.3532	1.1287	7.4027	0.2005	0.1845	1930.3207	0.0000		7	9.5	7.9	51.8	1.4	1.3	202.7
4000 gallon Water Truck	350	Diesel	4		30	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	125.4
10-cu. yd. Concrete Mixer Truck	425	Diesel	12		30	7		0.5422	0.1843	1.4476	0.0507	0.0467	240.5000	0.0166		7	45.5	15.5	121.6	4.3	3.9	303.0
															Total		**185.7**	**63.5**	**496.5**	**17.1**	**15.7**	**1327.7**
															Total (tons)		**2.8**	**1.0**	**7.4**	**0.3**	**0.2**	
LST Steel Haul -- (11)				**8**	**38**		**94 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	5.2
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4		38	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	10.9
Truck/Trailer	400	Diesel	4		38	10		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		10	20.7	7.1	55.9	1.9	1.8	174.8
Bell 212		Jet A	2		22	7	2.5 LSTs/Day	1.2590	1.0558	9.3516	0.2472	0.2275	2198.7342	0.0000		7	17.6	14.8	130.9	3.5	3.2	338.6
4000 gallon Water Truck	350	Diesel	4		38	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	158.8
R/T Forklift	200	Diesel	2		38	6		0.3311	0.0524	0.3883	0.0214	0.0197	56.1000	0.0047		6	4.0	0.6	4.7	0.3	0.2	12.8
															Total		**65.5**	**29.4**	**245.4**	**7.7**	**7.1**	**701.1**
															Total (tons)		**1.2**	**0.6**	**4.7**	**0.1**	**0.1**	
LST Steel Assembly -- (12)				**40**	**71**		**94 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	14.5	0.4	1.5	0.0	0.0	48.2
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		71	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	5	2.5	0.1	0.3	0.0	0.0	20.3
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	6		71	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.1	0.2	1.1	0.2	0.2	15.3
R/T Forklift	125	Diesel	4		71	7	1.4 LSTs/Day	0.2158	0.0390	0.2571	0.0206	0.0190	31.2000	0.0035		7	6.0	1.1	7.2	0.6	0.5	31.0
R/T Crane (L)	300	Diesel	4		71	10		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		10	13.0	4.3	39.5	1.4	1.3	178.4
Kaman K-MAX		Jet A	1		71	7		1.3532	1.1287	7.4027	0.2005	0.1845	1930.3207	0.0000		7	9.5	7.9	51.8	1.4	1.3	479.7
Compressor Trailer	120	Diesel	4		71	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	7.7	1.8	11.2	1.0	0.9	40.0
															Total		**54.2**	**15.8**	**112.6**	**4.6**	**4.2**	**812.9**
															Total (tons)		**1.9**	**0.6**	**4.0**	**0.2**	**0.1**	
LST Erection -- (13)				**48**	**49**		**94 LST's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	17.4	0.5	1.8	0.0	0.0	40.0
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8		49	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	8.1	0.3	0.9	0.0	0.0	44.8
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8		49	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	2.3	0.5	2.4	0.4	0.4	22.5
4000 gallon Water Truck	350	Diesel	4		49	10	2 LSTs/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	204.8
R/T Crane (M)	215	Diesel	4		49	7		0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		7	10.5	2.7	23.1	1.0	0.9	66.7
R/T Crane (L)	350	Diesel	4		49	7		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		7	10.3	3.3	29.8	1.1	1.0	95.5
															Total		**67.3**	**13.8**	**110.0**	**4.3**	**4.0**	**474.3**
															Total (tons)		**1.6**	**0.3**	**2.7**	**0.1**	**0.1**	
Install Tubular Steel Pole Foundations -- (14)				**24**	**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	12		1	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	2.1	0.5	2.3	0.4	0.4	0.4
R/T Crane (M)	300	Diesel	4		1	7		0.3243	0.1077	0.9866	0.0348	0.0320	125.6000	0.0097		7	9.1	3.0	27.6	1.0	0.9	1.8
Backhoe/Front Loader	200	Diesel	4		1	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	29.0	8.7	73.0	2.5	2.3	6.9
Auger Truck	500	Diesel	4		1	10	2.5 TSPs/Day	0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		10	24.5	8.3	63.8	2.3	2.1	5.4
4000 gallon Water Truck	350	Diesel	4		1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
10-cu. yd. Dump Truck	350	Diesel	8		1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	37.7	13.0	104.1	3.6	3.3	8.4
10-cu. yd. Concrete Mixer Truck	425	Diesel	12		1	6		0.6064	0.2032	1.8639	0.0630	0.0580	265.0000	0.0183		6	43.7	14.6	134.2	4.5	4.2	9.5
															Total		**173.6**	**54.8**	**457.9**	**16.1**	**14.8**	**37.0**
															Total (tons)		**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Steel Pole Haul -- (15)				**8**	**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	0.1
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		1	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	4.0	0.1	0.4	0.0	0.0	0.5
4000 gallon Water Truck	350	Diesel	4		1	10	10 Steel Poles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
R/T Crane (L)	350	Diesel	2		1	10		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		10	7.3	2.3	21.3	0.8	0.7	1.4
40' Flat Bed Truck/ Trailer	350	Diesel	4		1	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	15.1	5.2	41.6	1.4	1.3	3.3
															Total		**48.2**	**14.3**	**115.7**	**4.0**	**3.7**	**9.5**
															Total (tons)		**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	

Steel Pole Assembly -- (16)				**24**		**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8			1	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090		8	182.8	6.6	20.1	0.3	0.3	20.7
4000 gallon Water Truck	350	Diesel	4			1	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			1	6	5 Steel Poles/Day	0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	6	1.7	0.4	1.8	0.3	0.3	0.3
Compressor Trailer	120	Diesel	4			1	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	7.7	1.8	11.2	1.0	0.9	0.6
R/T Crane (L)	350	Diesel	4			1	6		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	8.8	2.8	25.5	0.9	0.8	1.7
																	Total	**228.6**	**18.4**	**111.6**	**4.3**	**3.9**	**27.9**
																	Total (tons)	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	
Steel Pole Erection -- (17)				**24**		**1**		**1 TSP's**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	0.4
3/4-Ton Pick-up Truck, 4×4	300	Diesel	8			1	5		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090		5	114.3	4.1	12.6	0.2	0.2	13.0
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			1	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.4	0.3	1.5	0.3	0.2	0.3
4000 gallon Water Truck	350	Diesel	4			1	10	5 Steel Poles/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	4.2
Compressor Trailer	120	Diesel	4			1	5		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		5	6.4	1.5	9.4	0.8	0.8	0.5
R/T Crane (L)	350	Diesel	4			1	6		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		6	8.8	2.8	25.5	0.9	0.8	1.7
																	Total	**158.4**	**15.5**	**101.9**	**4.0**	**3.7**	**20.0**
																	Total (tons)	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	
H-Frame Installation -- (18)				**12**		**5**		**1 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	1.0
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4			5	8		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	8	4.0	0.1	0.4	0.0	0.0	2.3
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	2			5	8		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	8	0.6	0.1	0.6	0.1	0.1	0.6
Compressor Trailer	120	Diesel	2			5	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	4.5	1.1	6.6	0.6	0.5	1.6
Auger Truck	500	Diesel	2			5	5		0.6134	0.2065	1.5945	0.0567	0.0522	272.0000	0.0186		5	6.1	2.1	15.9	0.6	0.5	6.8
Extendable Flat Bed Pole Truck	350	Diesel	2			5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	8.4
R/T Crane (M)	500	Diesel	2			5	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	7.2
Water Truck	350	Diesel	1			5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	3.8	1.3	10.4	0.4	0.3	4.2
Extendable Flat Bed Pole Truck	350	Diesel	2			5	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	8.4
																	Total	46.3	12.4	96.8	3.8	3.5	40.4
																	Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Install Conductor -- (19)				**220**		**20**		**30 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	79.6	2.2	8.1	0.1	0.1	74.7
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4		4	20	10		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	6.3	0.2	0.7	0.0	0.0	2.9
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	8			20	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	2.8	0.6	3.0	0.5	0.5	11.5
Wire Truck/Trailer	350	Diesel	4			14	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	58.5
R/T Crane (M)	215	Diesel	4			20	10		0.3745	0.0978	0.8256	0.0361	0.0332	97.2000	0.0088		10	15.0	3.9	33.0	1.4	1.3	38.9
Dump Truck	350	Diesel	2			20	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	41.8
Bucket Truck	350	Diesel	4			20	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	18.8	6.5	52.0	1.8	1.6	83.6
22-Ton Manitex	350	Diesel	4			20	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	12.3	4.4	43.6	1.4	1.3	54.4
Splicing Rig	350	Diesel	2			5	5		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	3.1	1.1	10.9	0.3	0.3	3.4
Splicing Lab	300	Diesel	2			5	5	1.6 Miles/Day	0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		5	3.1	1.1	10.9	0.3	0.3	3.4
Sock Line Puller	300	Diesel	2			5	6		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		6	3.7	1.3	13.1	0.4	0.4	4.1
Bull Wheel Puller	350	Diesel	2			10	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	6.2	2.2	21.8	0.7	0.6	13.6
Backhoe/Front Loader	125	Diesel	2			10	8		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		8	11.6	3.5	29.2	1.0	0.9	27.6
D8 Cat	350	Diesel	1			10	8		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		8	2.5	0.9	8.7	0.3	0.3	5.4
Hughes 500 E Helicopter		Jet A	2			10	7		2.1989	1.7655	1.4214	0.0445	0.0409	763.4927	0.0000		7	30.8	24.7	19.9	0.6	0.6	53.4
Fuel, Helicopter Support Truck	300	Diesel	2			10	7		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		7	4.3	1.6	15.3	0.5	0.4	9.5
Sag Cat w/ 2 winches	350	Diesel	1			5	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	3.1	1.1	10.9	0.3	0.3	3.4
Static Truck/ Tensioner	350	Diesel	2			10	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	20.9
																	Total	**240.8**	**68.4**	**385.2**	**13.4**	**12.3**	**511.1**
																	Total (tons)	**1.2**	**0.3**	**1.9**	**0.1**	**0.1**	
Guard Structure Removal -- (20)				**12**		**8**		**138 Structures**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	4.3	0.1	0.4	0.0	0.0	1.6
3/4-Ton Pick-up Truck, 4×4	300	Diesel	4			8	7		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	40	50	2.5	0.1	0.3	0.0	0.0	0.0
1-Ton Crew Cab Flat Bed, 4×4	300	Diesel	4			8	7		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	7	1.0	0.2	1.1	0.2	0.2	1.6
Compressor Trailer	120	Diesel	4			8	7		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		7	9.0	2.1	13.1	1.2	1.1	5.3
Extendable Flat Bed Pole Truck	350	Diesel	4			8	6	17.2 Structures/Day	0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		6	11.3	3.9	31.2	1.1	1.0	20.1
Water Truck	300	Diesel	2			8	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		10	8.5	2.9	24.1	0.8	0.8	15.0
R/T Crane (M)	500	Diesel	2			8	8		0.4948	0.1468	1.2979	0.0470	0.0432	180.0000	0.0132		8	7.9	2.3	20.8	0.8	0.7	11.5
80ft. Hydraulic Man-lift / Bucket Truck	350	Diesel	2			8	4		0.3637	0.0870	0.9773	0.0354	0.1358	143.9610	0.0079		4	2.9	0.7	7.8	0.3	1.1	4.6
																	Total	**47.5**	**12.4**	**98.7**	**4.3**	**4.8**	**59.7**
																	Total (tons)	**0.2**	**0.0**	**0.4**	**0.0**	**0.0**	
Restoration -- (21)				**14**		**3**		**8 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	5.1	0.1	0.5	0.0	0.0	0.7
1-Ton Crew Cab, 4×4	300	Diesel	4			3	2		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	2	0.3	0.1	0.3	0.1	0.0	0.2
Motor Grader	350	Diesel	2			3	6		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		6	7.2	2.1	18.3	0.7	0.6	4.1
Water Truck	350	Diesel	2			3	8		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		8	7.5	2.6	20.8	0.7	0.7	5.0
Backhoe/Front Loader	350	Diesel	2			3	6	2.5 Miles/Day	0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		6	8.7	2.6	21.9	0.8	0.7	6.2
Drum Type Compactor	250	Diesel	2			3	6		0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109		6	4.3	1.4	13.6	0.5	0.5	2.2
Track Type Dozer	350	Diesel	2			3	6		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		6	11.1	3.1	26.3	1.1	1.0	3.9
Lowboy Truck/Trailer	300	Diesel	2			3	3		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		3	2.5	0.9	7.2	0.2	0.2	1.7
																	Total	**46.7**	**13.0**	**109.0**	**4.0**	**3.7**	**24.0**
																	Total (tons)	**0.1**	**0.0**	**0.2**	**0.0**	**0.0**	
Retaining walls -- (22)				**100**		53		**11 Walls**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	36.2	1.0	3.7	0.0	0.0	90.0
1-Ton Crew Cab, 4×4	300	Diesel	4			53	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.4	0.3	1.5	0.3	0.2	15.2
Motor Grader	250	Diesel	2			53	10		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		10	12.0	3.5	30.5	1.1	1.0	121.4
Water Truck	350	Diesel	2			53	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	110.8
Backhoe/Front Loader	125	Diesel	2			53	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	14.5	4.4	36.5	1.3	1.2	182.9

Drum Type Compactor	250	Diesel	2	53	10	4.8 days/wall	0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109	10	7.2	2.4	22.7	0.9	0.8	64.8
Track Type Dozer	350	Diesel	2	53	10		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236	10	18.5	5.2	43.9	1.8	1.7	114.4
Concrete Mixer	350	Diesel	2	53	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100	10	6.2	2.2	21.8	0.7	0.6	72.1
Excavator	250	Diesel	2	53	10		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115	10	10.2	3.3	26.3	0.0	0.0	92.2
Dump Truck	350	Diesel	2	53	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146	10	9.4	3.2	26.0	0.9	0.8	110.8
Lowboy Truck/Trailer	300	Diesel	2	53	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133	10	8.5	2.9	24.1	0.8	0.8	99.6
														Total	**133.4**	**31.8**	**262.9**	**8.7**	**8.0**	**1074.1**
														Total (tons)	**3.5**	**0.8**	**7.0**	**0.2**	**0.2**	
														Grand Total (tlb/day)	2163.4	499.7	3792.3	138.7	128.4	
														Grand Total (tons)	21.1	5.8	46.6	1.7	1.6	8530.4

Transmission and Subtransmission Construction Equipment and Workforce Estimates

Shoo-Fly Construction Equipment and Workforce Estimates

Work Activity				Activity Production				EMFAC2011 Diesel Emission Factors (gms/mi) or OFFROAD Diesel Emissions Factors (lb/hr)							Average Speed (mph)	Miles per day or Hours per day	Estimated Emissions					
								CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2	CH_4			CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e
Primary Equipment Description	Estimated Horse-Power	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (Days)	Duration of Use (Hrs/Day)	Estimated Production Per Day										(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(MT/yr)
Survey -- (1)				**16**	**26**		**20 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	5.8	0.2	0.6	0.0	0.0	7.1
1Ton Pick-up Truck, 4×4	300	Gas	8		26	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	2.8	0.6	3.0	0.5	0.5	14.9
																Total	**8.6**	**0.8**	**3.6**	**0.5**	**0.5**	**22.0**
																Total (tons)	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	
R/W Clearing -- (3)				**15**	**14**		**20 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	5.4	0.2	0.6	0.0	0.0	3.6
1-Ton Truck, 4×4	300	Gas	3		14	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	1.1	0.2	1.1	0.2	0.2	3.0
Backhoe/Front Loader	350	Diesel	3		14	7		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		7	12.6	3.7	32.0	1.2	1.1	33.7
Track Type Dozer	350	Diesel	3		14	7		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		7	9.9	3.4	27.3	0.9	0.9	30.7
Road Grader	350	Diesel	3		14	7		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	15.2	4.6	38.3	1.3	1.2	50.7
Water Truck	300	Diesel	6		14	9		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		9	50.0	14.2	118.5	4.9	4.5	81.6
Lowboy Truck/Trailer	500	Diesel	3		14	5		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		5	13.9	3.9	32.9	1.4	1.3	22.7
																Total	**108.1**	**30.2**	**250.8**	**9.9**	**9.1**	**225.9**
																Total (tons)	**0.8**	**0.2**	**1.8**	**0.1**	**0.1**	
Roads & Landing Work -- (4)				**24**	**60**		**13.7 Miles & 108 Pads**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	8.7	0.2	0.9	0.0	0.0	24.5
1-Ton Truck, 4×4	300	Gas	8		60	5		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	5	1.4	0.3	1.5	0.3	0.2	17.2
Backhoe/Front Loader	350	Diesel	4		60	7		0.5992	0.1759	1.5242	0.0550	0.0506	229.0000	0.1398		7	16.8	4.9	42.7	1.5	1.4	192.4
Track Type Dozer	350	Diesel	4		60	7		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		7	13.2	4.5	36.4	1.3	1.2	175.6
Motor Grader	350	Diesel	4		60	5		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		5	14.5	4.4	36.5	1.3	1.2	207.0
Water Truck	300	Diesel	8		60	10		0.3595	0.1207	1.1333	0.0429	0.0395	122.2913	0.0109		10	28.8	9.7	90.7	3.4	3.2	293.5
Drum Type Compactor	250	Diesel	4		60	5		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		5	18.5	5.2	43.9	1.8	1.7	129.5
Excavator	300	Diesel	4		36	7		0.5102	0.1657	1.3127	0.0023	0.0021	174.0000	0.0115		7	14.3	4.6	36.8	0.1	0.1	87.7
Lowboy Truck/Trailer	500	Diesel	4		36	4		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		4	14.8	4.2	35.1	1.5	1.3	62.2
																Total	**130.9**	**38.1**	**324.4**	**11.1**	**10.2**	**1189.4**
																Total (tons)	**2.4**	**0.7**	**5.8**	**0.2**	**0.2**	
Shoo-fly Direct Buried Steel/Wood Poles (DBSP) Haul (5)				**8**	**120**		**300 DBSP Poles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	16.3
¾-Ton Truck, 4×4	275	Gas	2		120	10		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	10	2.5	0.1	0.3	0.0	0.0	34.3
Water Truck	300	Diesel	1		120	10		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		10	9.3	2.6	21.9	0.9	0.8	129.5
Boom/Crane Truck	350	Diesel	2		120	8		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		8	5.9	1.9	17.0	0.6	0.6	133.6
Flat Bed Pole Truck	400	Diesel	2		120	10		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		10	10.4	3.5	28.0	1.0	0.9	276.0
																Total	**30.9**	**8.2**	**67.5**	**2.5**	**2.3**	**589.7**
																Total (tons)	**1.9**	**0.5**	**4.1**	**0.2**	**0.1**	
Shoo-fly Direct Buried Steel/Wood Pole Assembly (6)				**18**	**150**		**300 DBSP Poles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	6.5	0.2	0.7	0.0	0.0	45.9
¾-Ton Truck, 4×4	275	Gas	2		150	6		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	6	1.5	0.1	0.2	0.0	0.0	25.7
Compressor Trailer	120	Diesel	1		150	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	1.9	0.5	2.8	0.2	0.2	21.1
1-Ton Truck, 4×4	300	Diesel	2		150	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649		10	16.0	3.5	17.1	3.0	2.7	488.4
4,000g Water Truck	350	Diesel	1		150	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	4.7	1.6	13.0	0.4	0.4	156.8
Boom/Crane Truck	350	Diesel	1		150	8		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		8	2.9	0.9	8.5	0.3	0.3	83.5
																Total	**33.6**	**6.7**	**42.3**	**4.0**	**3.6**	**821.4**
																Total (tons)	**2.5**	**0.5**	**3.2**	**0.3**	**0.3**	
Install Shoo-fly Direct Buried Steel/Wood Pole (7)				**18**	**100**		**300 DBSP Poles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	6.5	0.2	0.7	0.0	0.0	30.6
1-Ton Truck, 4×4	300	Diesel	2		100	6		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	6	0.4	0.1	0.5	0.1	0.1	8.6
Manlift/Bucket Truck	350	Diesel	2		100	10		0.3637	0.0870	0.9773	0.0014	0.0013	143.9610	0.0079		10	7.3	1.7	19.5	0.0	0.0	144.0
Boom/Crane Truck	350	Diesel	2		100	7		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		7	5.1	1.6	14.9	0.5	0.5	97.4
Auger Truck	210	Diesel	2		70	8		0.1342	0.5792	1.0283	0.0459	0.0422	144.6000	0.0121		8	2.1	9.3	16.5	0.7	0.7	81.0
Water Truck	300	Diesel	2		100	10		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		10	18.5	5.2	43.9	1.8	1.7	215.8
Backhoe/Front Loader	125	Diesel	2		100	10		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		10	14.5	4.4	36.5	1.3	1.2	345.0
Extendable Flat Bed Pole Truck	400	Diesel	2		100	6		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		6	6.2	2.1	16.8	0.6	0.5	138.0
																Total	**60.7**	**24.7**	**149.2**	**5.0**	**4.6**	**1060.4**
																Total (tons)	**3.0**	**1.2**	**7.5**	**0.3**	**0.2**	
Install Conductor/GW (8)				**165**	**20**		**20 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	59.7	1.7	6.1	0.1	0.1	56.1
¾-Ton Truck, 4×4	275	Gas	3		20	10		2.8566	0.1034	0.3141	0.0043	0.0039	648.3268	0.1090	20	10	3.8	0.1	0.4	0.0	0.0	8.6
1-Ton Truck, 4×4	300	Diesel	6		20	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649		10	48.0	10.5	51.4	8.9	8.1	195.4
Manlift/Bucket Truck	350	Diesel	3		20	10		0.3637	0.0870	0.9773	0.0354	0.0326	143.9610	0.0079		10	10.9	2.6	29.3	1.1	1.0	43.2
Boom/Crane Truck	350	Diesel	3		20	10		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		10	11.0	3.5	31.9	1.1	1.0	41.8
R/T Crane (M)	215	Diesel	3		20	10		0.3745	0.0978	0.8256	0.0361	0.0332	97.2067	0.0088		10	11.2	2.9	24.8	1.1	1.0	29.2
Dump Truck	350	Diesel	2		20	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	41.8
Wire Truck/Trailer	350	Diesel	3		5.4	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	14.1	4.9	39.0	1.3	1.2	16.9
Sock Line Puller	300	Diesel	2		5.4	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	6.2	2.2	21.8	0.7	0.6	7.3
Bull Wheel Puller	350	Diesel	2		10	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	6.2	2.2	21.8	0.7	0.6	13.6

Static Truck/ Tensioner	350	Diesel	2		20	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	41.8
Splicing Rig	350	Diesel	2		5.4	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	6.2	2.2	21.8	0.7	0.6	7.3
Spacing Cart	10	Diesel	4		5.4	10		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	12.3	4.4	43.6	1.4	1.3	14.7
Backhoe/Front Loader	125	Diesel	2		4	8		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		8	11.6	3.5	29.2	1.0	0.9	11.0
D8 Cat	350	Diesel	1		4	8		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		8	2.5	0.9	8.7	0.3	0.3	2.2
Sag Cat w/ 2 winches	*350*	*Diesel*	*1*		*4*	*10*		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		10	3.1	1.1	10.9	0.3	0.3	2.7
Lowboy Truck/Trailer	450	Diesel	3		20	10		0.5659	0.1917	1.4966	0.0527	0.0485	251.0000	0.0173		10	17.0	5.8	44.9	1.6	1.5	75.3
Hughes 500 E		Jet A	2		4	7		2.1989	1.7655	1.4214	0.0445	0.0409	763.4927	0.0000		7	30.8	24.7	19.9	0.6	0.6	21.4
Fuel, Helicopter Support Truck	300	Diesel	2		4	7		0.4236	0.1474	1.2027	0.0408	0.1358	188.0000	0.0133		7	5.9	2.1	16.8	0.6	1.9	5.3
																Total	**279.2**	**81.9**	**474.4**	**23.2**	**22.7**	**635.5**
																Total (tons)	**0.6**	**0.2**	**0.9**	**0.0**	**0.0**	
Remove Shoo-fly Conductor & GW (9)				**28**	**20**		**20 Circuit Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	10.1	0.3	1.0	0.0	0.0	9.5
1-Ton Truck, 4×4	300	Diesel	8		20	10		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	10	2.8	0.6	3.0	0.5	0.5	11.5
Manlift/Bucket Truck	250	Diesel	6		20	10		0.3099	0.0713	0.7059	0.0319	0.0293	97.9342	0.0065		10	18.6	4.3	42.4	1.9	1.8	58.8
Sleeving Truck	300	Diesel	4		20	5		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		5	8.5	2.9	24.1	0.8	0.8	37.6
Boom/Crane Truck	350	Diesel	4		20	5		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		5	7.3	2.3	21.3	0.8	0.7	27.8
Bull Wheel Puller	500	Diesel	2		14	5		0.6064	0.2032	1.8639	0.0630	0.0580	265.0000	0.0183		5	6.1	2.0	18.6	0.6	0.6	18.6
Truck, Semi-Tractor	350	Diesel	2		10	2		0.3637	0.0870	0.9773	0.0354	0.0326	143.9610	0.0079		2	1.5	0.3	3.9	0.1	0.1	2.9
Hydraulic Rewind Puller	300	Diesel	2		14	5		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		5	4.7	1.6	13.0	0.4	0.4	14.6
4,000g Water Truck	350	Diesel	2		20	10		0.4710	0.1622	1.3007	0.0448	0.0412	209.0000	0.0146		10	9.4	3.2	26.0	0.9	0.8	41.8
Lowboy Truck/Trailer	450	Diesel	6		20	3		0.5659	0.1917	1.4966	0.0527	0.0485	251.0000	0.0173		3	10.2	3.5	26.9	0.9	0.9	45.2
																Total	**79.2**	**21.2**	**180.3**	**7.1**	**6.5**	**268.2**
																Total (tons)	**0.8**	**0.2**	**1.8**	**0.1**	**0.1**	
Shoo-fly Pole Removal (10)				**8**	**80**		**300 LWS Poles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	2.9	0.1	0.3	0.0	0.0	10.9
1-Ton Truck, 4×4	300	Diesel	2		80	6		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	6	0.4	0.1	0.5	0.1	0.1	6.9
Compressor Trailer	60	Diesel	2		80	6		0.3216	0.0758	0.4682	0.0416	0.0383	46.9502	0.0068		6	3.9	0.9	5.6	0.5	0.5	22.5
Water Truck	300	Diesel	2		80	10		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236		10	18.5	5.2	43.9	1.8	1.7	172.6
Manlift/Bucket Truck	250	Diesel	2		80	10		0.3099	0.0713	0.7059	0.0319	0.0293	97.9342	0.0065		10	6.2	1.4	14.1	0.6	0.6	78.3
Boom/Crane Truck	350	Diesel	2		80	7		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		7	5.1	1.6	14.9	0.5	0.5	78.0
Flat Bed Truck/Trailer	400	Diesel	2		80	6		0.5185	0.1769	1.3986	0.0487	0.0448	230.0000	0.0160		6	6.2	2.1	16.8	0.6	0.5	110.4
																Total	**43.3**	**11.5**	**96.1**	**4.2**	**3.8**	**479.6**
																Total (tons)	**1.7**	**0.5**	**3.8**	**0.2**	**0.2**	
Restoration (11)				**21**	**8**		**20 Miles**	3.2811	0.0923	0.3335	0.0038	0.0035	308.2209	0.0518	40	50	7.6	0.2	0.8	0.0	0.0	2.9
1-Ton Truck, 4×4	300	Diesel	6		8	4		0.7994	0.1746	0.8563	0.1476	0.1358	325.6138	0.0649	20	4	0.8	0.2	0.9	0.2	0.1	1.4
Backhoe/Front Loader	125	Diesel	3		8	7		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	15.2	4.6	38.3	1.3	1.2	29.0
Motor Grader	250	Diesel	3		8	7		0.7245	0.2186	1.8255	0.0627	0.0577	345.0000	0.0197		7	15.2	4.6	38.3	1.3	1.2	29.0
Water Truck	300	Diesel	3		8	10		0.4236	0.1474	1.2027	0.0408	0.0375	188.0000	0.0133		10	12.7	4.4	36.1	1.2	1.1	22.6
Drum Type Compactor	100	Diesel	3		8	7		0.3081	0.1111	1.0899	0.0346	0.0318	136.0000	0.0100		7	6.5	2.3	22.9	0.7	0.7	11.4
Lowboy Truck/Trailer	450	Diesel	3		8	3		0.5659	0.1917	1.4966	0.0527	0.0485	251.0000	0.0173		3	5.1	1.7	13.5	0.5	0.4	9.0
																Total	**63.1**	**18.1**	**150.8**	**5.2**	**4.8**	**105.2**
																Total (tons)	**0.3**	**0.1**	**0.6**	**0.0**	**0.0**	
																Grand Total (lb/day)	837.6	241.3	1739.3	72.8	68.3	
																Grand Total (tons)	14.0	4.0	29.5	1.3	1.2	5397.4

Underground Subtransmission Line Installation

Distribution Land Disturbance

Project Feature	Site Quantity	Disturbed Acreage Calculation (L x W)	Total Acres Disturbed During Construction	Acres to be Restored	Acres Permanently Disturbed
Underground conduit Installation	7,920 linear feet	Linear feet x 15’	2.7	2.7	0
Vault	10	55’ x 40’	0.5	0.5	0
Distribution Pole Removal	34	5’ x 5’	<0.1	<0.1	0
Potential Replacement of Existing Subtransmission Wood Poles with LWS Poles	21	150’ x 75’	5.3	5.3	0
Total Estimated Disturbance Acreage			8.6	8.6	0

Underground Subtransmission Line Installation

Underground Subtransmission Construction Equipment and Workforce Estimates

Activity	Fuel Type	Equipment and Quantity	Number of Work Days	Duration of Use (Hours)	Estimated Workforce	EMFAC2011 Diesel Emission Factors (gms/mi) or OFFROAD Diesel Emissions Factors (lb/hr)						
						CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2	CH_4
Location 1	Diesel	2 – Line Truck	3	7	8	0.79937	0.174588	0.856323	0.147556	0.135752	325.6138	0.0649
	Diesel	2 – Pickup Truck	3	7		2.856639	0.103398	0.314083	0.004281	0.003916	648.3268	0.109
Location 2	Diesel	2 – Line Truck	3	7	8	0.79937	0.174588	0.856323	0.147556	0.135752	325.6138	0.0649
	Diesel	2 – Pickup Truck	3	7		2.856639	0.103398	0.314083	0.004281	0.003916	648.3268	0.109
Location 3	Diesel	2 – Line Truck	6	7	8	0.79937	0.174588	0.856323	0.147556	0.135752	325.6138	0.0649
	Diesel	2 – Pickup Truck	6	7		2.856639	0.103398	0.314083	0.004281	0.003916	648.3268	0.109
Location 4	Diesel	1 – Rodder Truck	5	6	7	0.79937	0.174588	0.856323	0.147556	0.135752	325.6138	0.0649
	-	1 – Cable Dolley	5	6								
	Diesel	1 – Reel Truck	5	6		0.79937	0.174588	0.856323	0.147556	0.135752	325.6138	0.0649
	Diesel	1 – Concrete Truck	20	4		0.47102	0.16216	1.30068	0.04476	0.041179	209	0.01464
	Diesel	1 – Dump Truck	20	6		0.47102	0.16216	1.30068	0.04476	0.041179	209	0.01464
	Diesel	1 – Backhoe	20	8		0.7245	0.2186	1.8255	0.0627	0.057684	345	0.0197

Telecommunications System Installation

Telecommunications System Land Disturbance

Project Feature	Site Quantity	Disturbance Acreage Calculation (L × W)	Acres Disturbed During Construction	Acres to be Restored*	Acres Permanently Disturbed
New cable to Banning Substation					
Devers-Valley No.2 M21-T1, trenching	1	690'x25'	0.4	0.4	None
Old Idyllwild Rd Crossing 500 kV, trenching	1	470'x25'	0.27	0.27	None
Crossing Lincoln St to Banning MEER, trenching	1	230'x25'	0.13	0.13	None
New cable to Maraschino Substation					
Devers-Valley No.2 M24-T1, trenching	1	1,460' × 25'	0.84	0.84	None
4x4 manholes	3	40'x50'	0.14	0.14	None
SCE vault to ECS manhole, trenching	1	1,550'x25'	0.89	0.89	None
Connect Devers-Vista OPGW to Banning Sub					
D-V 12, trenching	1	560' × 25'	0.32	0.32	None
Connect Devers-Vista OPGW to Maraschino Sub					
D-V 133, trenching	1	800' × 25'	0.46	0.46	None
Connect Devers-Vista OPGW to El Casco Sub east					
D-V 110, trenching	1	120' × 25'	0.07	0.07	None
Connect Devers-Vista OPGW to El Casco Sub west					
D-V 87, trenching	1	100' × 25'	0.06	0.06	None
Fiber Optic Cable Entrance at Devers					
D-EC 136 D-V 243 Trenching	2	80'x25' 329'x25'	0.24	0.24	None
Fiber Optic Cable Entrance at El Casco					
Tie between towers D-EC 2 EC-SB 96, Trenching	3	200'x25' 840'x25' 200'x25'	0.71	0.71	None
Fiber Optic Cable Entrance at San Bernardino					
SB-V 1 EC-SB 1, trenching	2	350'X25' 350'X25'	0.4	0.4	None
Connect San Bernardino to Inland District Office					
SB-V 7, trenching	1	200'X25'	0.11	0.11	None
Fiber Optic Cable Entrance at Vista					
D-V 1, trenching	1	1,000'x25'	0.57	0.57	None
New cable to Banning Substation					
Devers-Valley No.2 M21-T1, trenching	1	690'x25'	0.4	0.4	0
Old Idyllwild Rd Crossing 500 kV, trenching	1	470'x25'	0.3	0.3	0
Crossing Lincoln St to Banning MEER, trenching	1	230'x25'	0.1	0.1	0
New cable to Maraschino Substation					
Devers-Valley No.2 M24-T1, trenching	1	1,460' × 25'	0.8	0.8	0
4x4 manholes	3	40'x40'	0.1	0.1	0
SCE vault to ECS manhole, trenching	1	1,550'x25'	0.9	0.9	0
Connect Devers-Vista OPGW to Banning Sub					
D-V 12, trenching	1	560' × 25'	0.3	0.3	0
Connect Devers-Vista OPGW to Maraschino Sub					
D-V 133, trenching	1	800' × 25'	0.5	0.5	0
Connect Devers-Vista OPGW to El Casco Sub east					
D-V 110, trenching	1	120' × 25'	0.1	0.1	0
Connect Devers-Vista OPGW to El Casco Sub west					
D-V 87, trenching	1	100' × 25'	0.1	0.1	0
Fiber Optic Cable Entrance at Devers					
D-EC 136 D-V 243 Trenching	2	80'x25' 329'x25'	0.2	0.2	0

Fiber Optic Cable Entrance at El Casco					
Tie between towers D-EC 2 EC-SB 96, Trenching	3	200'x25' 840'x25' 200'x25'	0.7	0.7	0
Fiber Optic Cable Entrance at San Bernardino					
SB-V 1 EC-SB 1, trenching	2	350'X25' 350'X25'	0.4	0.4	0
Connect San Bernardino to Inland District Office					
SB-V 7, trenching	1	200'X25'	0.1	0.1	0
Fiber Optic Cable Entrance at Vista					
D-V 1, trenching	1	1,000'x25'	0.6	0.6	0
Total Estimate Disturbance Area			5.6	5.6	0

Telecommunications System Land Disturbance Alternative (Segment 5)

Project Feature	Site Quantity	Disturbance Acreage Calculation (L × W)	Acres Disturbed During Construction	Acres to be Restored*	Acres Permanently Disturbed
Restore Connection to Inland District Office					
Redlands Blvd at Bryn Mawr Trenching	1	560'x25'	0.3	0.5	0

Telecommunications System Installation

Telecommunication System Construction Equipment and Workforce Estimates

Primary Equipment Description	Estimated Horse-Power	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (Days)	Duration of Use (Hrs./day)	EMFAC2011 Diesel Emission Factors (gms/mi) or OFFROAD Diesel Emissions Factors (lb/hr)							Average Speed (mph)	Miles per day or Hours per day	Estimated Emissions					
							CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2	CH_4			CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2e
																(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(MT/yr)
Telecommunications work for OPGW and work to accommodate construction																					
Bucket Truck	300	Diesel	6	12	24	7	0.42356	0.14738	1.20274	0.04078	0.037518	188	0.01332		7	17.8	6.2	50.5	1.7	1.6	94.8
Crew Truck	300	Diesel	3	3	24	8	0.79937	0.174588	0.856323	0.147556	0.135752	325.6138	0.0649	20	8	0.8	0.2	0.9	0.2	0.1	4.1
Back hoe	200	Diesel	2	4	40	7	0.7245	0.2186	1.8255	0.0627	0.057684	345	0.0197		7	10.1	3.1	25.6	0.9	0.8	96.6
Dump truck	350	Diesel	2	3	17	3	0.47102	0.16216	1.30068	0.04476	0.041179	209	0.01464		3	2.8	1.0	7.8	0.3	0.2	10.7
Material Transport	350	Diesel	1	1	4	4	0.47102	0.16216	1.30068	0.04476	0.041179	209	0.01464		4	1.9	0.6	5.2	0.2	0.2	1.7
Fork lift	200	Diesel	1	1	4	1	0.3311	0.0524	0.3883	0.0214	0.019688	56.1	0.0047		1	0.3	0.1	0.4	0.0	0.0	0.1
Splice Lab	300	Diesel	6	12	36	7	0.42356	0.14738	1.20274	0.04078	0.037518	188	0.01332		7	17.8	6.2	50.5	1.7	1.6	142.1
															Total	51.6	17.3	140.9	4.9	4.5	350.1
															Total (tons)	**0.9**	**0.3**	**2.5**	**0.1**	**0.1**	
Telecommunications work inside the MEER																					
Crew Truck	300	Gas	3	3	30	8	2.856639	0.103398	0.314083	0.004281	0.003916	648.3268	0.129	20	8	3.0	0.1	0.3	0.0	0.0	10.3
															Total (tons)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	
															Grand Total (tons)	1.0	0.3	2.5	0.1	0.1	360.3
															Fugitive Dust				5.0	1.0	
															Peak Phase Emission	51.6	17.3	140.9	9.9	5.6	

Note: The fugitive dust emissions were calculated using the maximum daily disturbed area. To calculate the maximum emissions, the fugitive dust emissions were added to the peak phase emissions

Work Activity				Activity Production				EMFAC2011 Diesel Emission Factors (gms/mi) or OFFROAD Diesel Emissions Factors (lb/hr)							Average Speed (mph)	Miles per day or Hours per day	Estimated Emissions					
Primary Equipment Description	Estimated Horse-Power	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (Days)	Duration of Use (Hrs/Day)	Estimated Production Per Day	CO	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO_2	CH_4			**CO** (lbs/day)	**ROG** (lbs/day)	**NO_X** (lbs/day)	**PM_{10}** (lbs/day)	**$PM_{2.5}$** (lbs/day)	**CO_2e** (MT/yr)
1-Ton Truck, 4×4	300	Diesel	5		12			0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236	20	48	0.5	0.1	1.2	0.0	0.0	0.7
Hughes 500 E		Jet A	1		12	2		2.1989	1.7655	1.4214	0.0445	0.0409	763.4927	0.0000		2	4.4	3.5	2.8	0.1	0.1	9.2
3/4-Ton Pick-up Truck, 4:	300	Diesel	2		12	8		0.9259	0.2622	2.1947	0.0916	0.0843	215.8000	0.0236	40	8	1.3	0.4	3.1	0.1	0.1	1.8
Boom/Crane Truck	350	Diesel	2		12	7		0.3669	0.1175	1.0644	0.0378	0.0348	139.2000	0.0106		7	5.1	1.6	14.9	0.5	0.5	11.7
																Total	11.3	5.7	22.0	0.8	0.7	23.4

Total Construction Emissions

	Estimated Daily Emissions (lbs/day)				
Construction Activity	**CO**	**ROG**	**NOX**	**PM10**	**PM2.5**
Devers Substation	19.4	4.3	31.4	2.6	1.6
El Casco Substation	16.3	3.7	28.8	2.0	1.3
Vista Substation	17.0	3.7	28.9	2.2	1.3
San Bernardino Substation	19.4	4.3	31.4	4.1	2.0
Etiwanda Substation	1.0	0.0	0.1	0.0	0.0
Timoteo Substation	2.2	0.1	0.6	0.1	0.0
Tennessee Substation	2.2	0.1	0.6	0.0	0.0
220 kV Transmission Line	2,259.0	525.9	4,009.0	243.4	156.0
Shoo-Fly	837.6	241.3	1,739.3	165.2	87.7
66 kV Subtransmission Line	448.6	111.5	828.2	57.1	34.8
Telecommunications System	54.6	17.4	141.2	9.9	5.6
Total	3,677.3	912.2	6,839.5	486.8	290.4
SCAQMD Regional Threshold	**550**	**75**	**100**	**150**	**55**
Exceed SCAQMD Threshold?	**TRUE**	**TRUE**	**TRUE**	**TRUE**	**TRUE**

Total Construction Emissions after Implementation of APMs

	Estimated Daily Emissions (lbs/day)				
Construction Activity	**CO**	**ROG**	**NOX**	**PM10**	**PM2.5**
Devers Substation	19.4	4.3	25.1	2.3	1.6
El Casco Substation	16.3	3.7	23.0	1.8	1.2
Vista Substation	17.0	3.7	23.1	1.9	1.3
San Bernardino Substation	19.4	4.3	25.1	3.5	1.8
Etiwanda Substation	1.0	0.0	0.1	0.0	0.0
Timoteo Substation	2.2	0.1	0.5	0.1	0.0
Tennessee Substation	2.2	0.1	0.5	0.0	0.0
220 kV Transmission Line	2,259.0	525.9	3,207.2	195.6	145.9
Shoo-Fly	837.6	241.3	1,391.4	119.0	78.0
66 kV Subtransmission Line	448.6	111.5	662.5	44.1	32.1
Telecommunications System	54.6	17.4	113.0	7.4	5.1
Total	3,677.3	912.2	5,471.6	375.8	267.1
SCAQMD Regional Threshold	**550**	**75**	**100**	**150**	**55**
Exceed SCAQMD Threshold?	**TRUE**	**TRUE**	**TRUE**	**TRUE**	**TRUE**

Note: APMs reduce the NOx exhaust emissions by 20% and the fugitive dust (PM10 and PM2.5) emissions by 50%

Localized Significance Threshold Analysis

Activity	CO	ROG	NOX	PM10	PM2.5	
Substations						
Devers Substation Peak Phase	19.4	4.3	31.4	2.1	1.5	
El Casco Substation Peak Phase	16.3	3.7	28.8	1.6	1.2	
Vista Substation Peak Phase	17.0	3.7	28.9	1.7	1.2	
San Bernardino Substation Peak Phase	19.4	4.3	31.4	2.8	1.7	
Etiwanda Substation Peak Phase	1.0	0.0	0.1	0.0	0.0	
Timoteo Substation Peak Phase	2.2	0.1	0.6	0.0	0.0	
Tennessee Substation Peak Phase	2.2	0.1	0.6	0.0	0.0	
Transmission Lines Segment 1 - 4 and 6						
LST Foundation Installation	88.3	29.0	232.0	8.2	7.6	Note: It is assumed that only 20% of the emissions from the employee commutes, water trucks, dump trucks,
Soil Disturbance				49.8	10.5	concrete trucks, and helicopter would occur within the project area.
Single LST Foundation Installation	27.6	9.0	72.5	18.1	5.6	Note: The project schedule estimates that 3.2 LST foundations would be installed per day
Single LST Foundation Installation - After APMs	27.6	9.0	58.0	10.3	4.0	Note: APMs reduce the NOx exhaust emissions by 20% and the fugitive dust (PM10 and PM2.5) emissions by 50%
Transmission Lines Segment 5						
TSP Foundation Installation	87.7	27.6	227.0	8.2	7.6	Note: It is assumed that only 20% of the emissions from the employee commutes, water trucks, dump trucks,
Soil Disturbance				49.8	10.5	and concrete trucks would occur within the project area.
Single TSP Foundation Installation	35.1	11.0	90.8	23.2	7.2	Note: The project schedule estimates that 2.5 TSP foundations would be installed per day
Single LST Foundation Installation - After APMs	35.1	11.0	72.6	13.2	5.1	Note: APMs reduce the NOx exhaust emissions by 20% and the fugitive dust (PM10 and PM2.5) emissions by 50%
Shoo-Fly						
Installation of Conductor	194.5	56.5	419.3	21.5	20.0	Note: It is assumed that only 20% of the emissions from the employee commutes, dump trucks, fuel truck, and
Soil Disturbance				49.8	10.5	helicopter would occur within the project area.
Single TSP Foundation Installation	48.6	14.1	104.8	17.8	7.6	Note: Emissions were divided by 4 to estimate the emissions within 1/4 mile of the receptor
Single LST Foundation Installation - After APMs	48.6	14.1	83.9	11.6	6.3	Note: APMs reduce the NOx exhaust emissions by 20% and the fugitive dust (PM10 and PM2.5) emissions by 50%
Subtransmission Line						
Installation of Conductor	39.0	12.5	92.9	3.6	3.3	Note: It is assumed that only 20% of the emissions from the employee commutes, dump trucks, fuel truck, and
Soil Disturbance				49.8	10.5	helicopter would occur within the project area.
Single TSP Foundation Installation	9.7	3.1	23.2	13.3	3.4	Note: Emissions were divided by 4 to estimate the emissions within 1/4 mile of the receptor
Single LST Foundation Installation - After APMs	9.7	3.1	18.6	7.1	2.1	Note: APMs reduce the NOx exhaust emissions by 20% and the fugitive dust (PM10 and PM2.5) emissions by 50%
Telecommunications System						
Telecommunications Work	51.6	17.3	140.9	4.9	4.5	
Soil Disturbance				5.0	1.0	
Total	51.6	17.3	140.9	9.9	5.6	
Telecommunications System - After APMs	51.6	17.3	112.7	7.4	5.1	Note: APMs reduce the NOx exhaust emissions by 20% and the fugitive dust (PM10 and PM2.5) emissions by 50%
Alternative Project						
LST Foundation Installation	116.2	35.3	285.2	10.0	9.2	Note: It is assumed that only 20% of the emissions from the employee commutes, water trucks, dump trucks,
Soil Disturbance				49.8	10.5	and concrete trucks would occur within the project area.
Single LST Foundation Installation	36.3	11.0	89.1	18.7	6.2	Note: The project schedule estimates that 3.2 LST foundations would be installed per day
Single LST Foundation Installation - After APMs	36.3	11.0	71.3	10.9	4.5	Note: APMs reduce the NOx exhaust emissions by 20% and the fugitive dust (PM10 and PM2.5) emissions by 50%

Morongo Reservation Lands

Source	CO	ROG	NOX	PM10 Exhaust	PM10 Dust	Total PM10	PM2.5 Exhaust	PM2.5 Dust	Total PM2.5
Transmission Lines - Segment 4	1.3	0.4	2.9	0.1	0.3	0.4	0.1	0.1	0.2
Transmission Lines - Segment 5	7.2	1.9	14.7	0.6	2.0	2.6	0.5	0.4	0.9
Shoo-fly Line	2.3	0.7	4.9	0.2	1.1	1.4	0.2	0.2	0.4
Total Amortized over 3 years	**3.6**	**1.0**	**7.5**			**1.4**			**0.5**
Total Amortized over 3 years w/APMs	**3.6**	**1.0**	**6.0**			**0.9**			**0.4**

BLM Lands

Source	CO	ROG	NOX	PM10 Exhaust	PM10 Dust	Total PM10	PM2.5 Exhaust	PM2.5 Dust	Total PM2.5
Transmission Lines - Segment 6	3.2	0.9	7.0	0.3	0.7	0.9	0.2	0.1	0.4
Shoo-fly Line	0.3	0.1	0.7	0.0	0.2	0.2	0.0	0.0	0.1
Total Amortized over 3 years	**1.2**	**0.3**	**2.6**			**0.4**			**0.1**
Total Amortized over 3 years w/APMs	**1.2**	**0.3**	**2.1**			**0.2**			**0.1**

Morongo Reservation Lands - Alternative Project

Source	CO	ROG	NOX	PM10 Exhaust	PM10 Dust	Total PM10	PM2.5 Exhaust	PM2.5 Dust	Total PM2.5
Transmission Lines - Segment 4	1.3	0.4	2.9	0.1	0.3	0.4	0.1	0.1	0.2
Transmission Lines - Segment 5	7.7	1.9	14.4	0.6	1.9	2.5	0.5	0.4	0.9
Shoo-fly Line	2.3	0.7	4.9	0.2	1.1	1.4	0.2	0.2	0.4
Total Amortized over 3 years	**3.8**	**1.0**	**7.4**			**1.4**			**0.5**
Total Amortized over 3 years w/APMs	**3.8**	**1.0**	**5.9**			**0.8**			**0.4**

Note: APMs reduce the NOx exhaust emissions by 20% and the fugitive dust (PM10 and PM2.5) emissions by 50%

EMFAC2011 Emission Rates
Region Type: Air Basin
Region: South Coast
Calendar Year: 2013
Season: Annual
Vehicle Classification: EMFAC2007 Categories

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	VMT (miles/day)	ROG RUNEX (gms/mile)	TOG RUNEX (gms/mile)	CO RUNEX (gms/mile)	NOX RUNEX (gms/mile)	CO2 RUNEX (gms/mile)	CO2 RUNEX (Pavley I+LCFS) (gms/mile)	PM10 RUNEX (gms/mile)	PM2.5 RUNEX (gms/mile)
South Coas	2013	Annual	LDA	DSL	Aggregated	5	1518.492972	0.1697602	0.1932607	1.091999	0.8803133	452.3122	399.0904211	0.1283494	0.1180815
South Coas	2013	Annual	LDA	DSL	Aggregated	10	5411.987045	0.1559539	0.1775431	0.9303993	0.8120416	420.69323	372.4021387	0.1182497	0.1087897
South Coas	2013	Annual	LDA	DSL	Aggregated	15	13087.90922	0.1234157	0.1405005	0.6653846	0.6954316	373.9738	333.3155158	0.0936049	0.0861165
South Coas	2013	Annual	LDA	DSL	Aggregated	20	39067.79093	0.0998977	0.1137269	0.4980111	0.6143708	342.49907	306.9566482	0.0757739	0.069712
South Coas	2013	Annual	LDA	DSL	Aggregated	25	91065.39384	0.0816564	0.0929604	0.3867842	0.5588561	321.82335	289.6046549	0.0618886	0.0569375
South Coas	2013	Annual	LDA	DSL	Aggregated	30	114370.9368	0.0684273	0.0778999	0.3144342	0.5263978	309.61282	279.3759793	0.0518082	0.0476635
South Coas	2013	Annual	LDA	DSL	Aggregated	35	76324.67244	0.0583287	0.0664033	0.2659683	0.5118887	304.40897	275.0435246	0.0440817	0.0405552
South Coas	2013	Annual	LDA	DSL	Aggregated	40	55496.12363	0.0516609	0.0588125	0.2364098	0.5149601	306.00224	276.4332046	0.0389918	0.0358724
South Coas	2013	Annual	LDA	DSL	Aggregated	45	46523.6128	0.0471228	0.0536461	0.2192949	0.534084	314.36341	283.4443034	0.0355266	0.0326845
South Coas	2013	Annual	LDA	DSL	Aggregated	50	40623.01658	0.0439774	0.0500653	0.2118144	0.5735567	330.45416	297.0239487	0.0330885	0.0304415
South Coas	2013	Annual	LDA	DSL	Aggregated	55	37610.6065	0.0421092	0.0479385	0.2130675	0.6372574	356.15526	318.678803	0.0316006	0.0290726
South Coas	2013	Annual	LDA	DSL	Aggregated	60	52665.80945	0.0415387	0.047289	0.223494	0.7306358	394.83108	351.1314873	0.0310754	0.0285894
South Coas	2013	Annual	LDA	DSL	Aggregated	65	29660.50747	0.0414656	0.0472058	0.242403	0.8666122	451.84874	399.2516176	0.0308255	0.0283594
South Coas	2013	Annual	LDA	DSL	Aggregated	70	1239.906154	0.0370184	0.042143	0.2590339	1.100272	532.04708	470.8458869	0.0266936	0.0245581
South Coas	2013	Annual	LDT1	DSL	Aggregated	5	71.67619688	0.2979423	0.3391874	1.7725209	1.2236927	431.79222	385.8110745	0.2514896	0.2313705
South Coas	2013	Annual	LDT1	DSL	Aggregated	10	251.4184534	0.2718301	0.3094605	1.5162089	1.1443936	408.25958	368.3087086	0.2296229	0.2112531
South Coas	2013	Annual	LDT1	DSL	Aggregated	15	611.1580826	0.2152307	0.2450258	1.0751153	0.972741	376.67917	342.7812363	0.1818787	0.1673284
South Coas	2013	Annual	LDT1	DSL	Aggregated	20	1814.841444	0.1745875	0.1987563	0.7993705	0.8563229	355.35865	325.6137705	0.1475561	0.1357516
South Coas	2013	Annual	LDT1	DSL	Aggregated	25	4272.191843	0.1427515	0.1625131	0.6136475	0.7711881	340.88203	313.3134358	0.1206153	0.1109661
South Coas	2013	Annual	LDT1	DSL	Aggregated	30	5466.988565	0.1194336	0.1359672	0.4930275	0.7188783	331.86327	305.4337231	0.1008685	0.092799
South Coas	2013	Annual	LDT1	DSL	Aggregated	35	3743.342196	0.1017474	0.1158327	0.4123673	0.6904922	327.35057	301.0005169	0.0858681	0.0789986
South Coas	2013	Annual	LDT1	DSL	Aggregated	40	2742.588159	0.0900239	0.1024863	0.3650959	0.6929763	328.30991	301.618758	0.0759125	0.0698395
South Coas	2013	Annual	LDT1	DSL	Aggregated	45	2292.760495	0.0818519	0.093183	0.3386926	0.7210775	334.33771	306.4948044	0.0689381	0.0634231
South Coas	2013	Annual	LDT1	DSL	Aggregated	50	1999.907158	0.0762191	0.0867704	0.3280921	0.776697	345.90822	315.8586667	0.0640913	0.058964
South Coas	2013	Annual	LDT1	DSL	Aggregated	55	1881.422092	0.0723744	0.0823934	0.3305053	0.8626349	364.30401	330.4913441	0.0607077	0.0558511
South Coas	2013	Annual	LDT1	DSL	Aggregated	60	2613.558458	0.0707599	0.0805555	0.3491668	0.9966703	392.12857	352.9307775	0.0591484	0.0544165
South Coas	2013	Annual	LDT1	DSL	Aggregated	65	1513.992631	0.069868	0.0795401	0.3792379	1.1732443	434.39495	386.1750365	0.0580727	0.0534269
South Coas	2013	Annual	LDT1	DSL	Aggregated	70	74.34596319	0.0672997	0.0766162	0.4055674	1.3551497	507.15749	441.3622781	0.0553792	0.0509489
South Coas	2013	Annual	LDT2	DSL	Aggregated	5	73.54935817	0.2253354	0.2565294	1.4251797	1.1960246	432.84985	391.6300667	0.1843569	0.1696083
South Coas	2013	Annual	LDT2	DSL	Aggregated	10	254.9872435	0.206803	0.2354315	1.2224876	1.1175327	407.46585	371.3349828	0.1696351	0.1560643
South Coas	2013	Annual	LDT2	DSL	Aggregated	15	619.9818569	0.1636537	0.1863088	0.8687659	0.9507535	372.72213	342.0828678	0.1343027	0.1235585
South Coas	2013	Annual	LDT2	DSL	Aggregated	20	1841.888319	0.1326959	0.1510655	0.6473556	0.8373384	349.26662	322.3690747	0.1089125	0.1001995
South Coas	2013	Annual	LDT2	DSL	Aggregated	25	4353.833692	0.1082431	0.1232275	0.4980101	0.7552186	333.49941	308.6891977	0.0887626	0.0816616
South Coas	2013	Annual	LDT2	DSL	Aggregated	30	5591.101865	0.0904095	0.1029252	0.4009501	0.7049456	323.81763	300.1434707	0.0740602	0.0681354
South Coas	2013	Annual	LDT2	DSL	Aggregated	35	3847.680159	0.076863	0.0875034	0.3358746	0.6780187	319.15823	295.6864652	0.0628571	0.0578285

South Coas	2013	Annual	LDT2	DSL	Aggregated	40	2822.969967	0.0680284	0.0774458	0.2975764	0.6803295	320.2319	296.4705085	0.05556	0.0511152
South Coas	2013	Annual	LDT2	DSL	Aggregated	45	2360.01901	0.0619359	0.0705099	0.2760813	0.7076038	326.76108	301.9691522	0.050503	0.0464628
South Coas	2013	Annual	LDT2	DSL	Aggregated	50	2060.266468	0.0577719	0.0657695	0.2671141	0.7611963	339.28468	312.4920528	0.0470005	0.0432404
South Coas	2013	Annual	LDT2	DSL	Aggregated	55	1939.128602	0.0549988	0.0626125	0.2687173	0.8450601	359.28763	329.1810842	0.0445951	0.0410275
South Coas	2013	Annual	LDT2	DSL	Aggregated	60	2694.428014	0.0539708	0.0614422	0.2832866	0.9753311	389.49022	354.5726944	0.0435618	0.0400769
South Coas	2013	Annual	LDT2	DSL	Aggregated	65	1568.585597	0.0534853	0.0608895	0.3068746	1.1483146	435.14051	392.3888346	0.0428233	0.0393974
South Coas	2013	Annual	LDT2	DSL	Aggregated	70	79.96357158	0.0515154	0.0586468	0.3248728	1.320465	512.97619	454.9884141	0.0404562	0.0372197
South Coas	2013	Annual	LHD1	DSL	Aggregated	5	4819.804193	0.4794608	0.5458343	3.2087756	6.4283234	523.24475	518.0123029	0.1122396	0.1032604
South Coas	2013	Annual	LHD1	DSL	Aggregated	10	15410.11794	0.4532929	0.5160438	2.8316206	5.8602756	523.87485	518.6360978	0.1048628	0.0964737
South Coas	2013	Annual	LHD1	DSL	Aggregated	15	35811.66705	0.358979	0.4086738	1.9931501	4.9517691	523.86861	518.6299204	0.0831393	0.0764881
South Coas	2013	Annual	LHD1	DSL	Aggregated	20	103455.998	0.2906372	0.3308711	1.4676283	4.3415235	523.90106	518.6620471	0.0674437	0.0620482
South Coas	2013	Annual	LHD1	DSL	Aggregated	25	218260.4423	0.2390395	0.2721306	1.1256281	3.9278359	523.77012	518.532415	0.0555115	0.0510706
South Coas	2013	Annual	LHD1	DSL	Aggregated	30	315969.0803	0.2014473	0.2293344	0.9046828	3.6855026	523.63941	518.403018	0.046694	0.0429585
South Coas	2013	Annual	LHD1	DSL	Aggregated	35	284789.2017	0.1727244	0.1966352	0.7580419	3.5778078	523.45153	518.2170176	0.0400126	0.0368116
South Coas	2013	Annual	LHD1	DSL	Aggregated	40	264300.8595	0.1522096	0.1732805	0.6676339	3.604492	523.38827	518.1543912	0.0352681	0.0324467
South Coas	2013	Annual	LHD1	DSL	Aggregated	45	268205.1288	0.1373759	0.1563933	0.6165333	3.7600907	523.33848	518.1050964	0.0318222	0.0292764
South Coas	2013	Annual	LHD1	DSL	Aggregated	50	269655.6249	0.1265689	0.1440903	0.5946699	4.0784596	523.35514	518.1215855	0.0293905	0.0270393
South Coas	2013	Annual	LHD1	DSL	Aggregated	55	322251.4596	0.1195431	0.1360918	0.6021496	4.5789025	523.31959	518.086397	0.0277359	0.025517
South Coas	2013	Annual	LHD1	DSL	Aggregated	60	796168.6492	0.1161307	0.1322071	0.6429356	5.3444022	523.34765	518.1141734	0.0269517	0.0247955
South Coas	2013	Annual	LHD1	DSL	Aggregated	65	696482.1653	0.113636	0.129367	0.7055368	6.4468092	523.24619	518.0137276	0.0263331	0.0242265
South Coas	2013	Annual	LHD1	DSL	Aggregated	70	57675.10274	0.0997605	0.1135707	0.7083411	8.0221746	522.19945	516.9774563	0.0236429	0.0217515
South Coas	2013	Annual	LHD2	DSL	Aggregated	5	1627.869076	0.4603984	0.524133	3.1077493	6.1545301	524.68654	519.4396715	0.112056	0.1030915
South Coas	2013	Annual	LHD2	DSL	Aggregated	10	5409.120989	0.4330484	0.4929968	2.7248594	5.6039461	525.49516	520.2402061	0.1045929	0.0962255
South Coas	2013	Annual	LHD2	DSL	Aggregated	15	12581.90887	0.3432505	0.3907679	1.918982	4.7364089	525.51955	520.2643502	0.0829985	0.0763586
South Coas	2013	Annual	LHD2	DSL	Aggregated	20	36577.83109	0.2781116	0.3166116	1.4137408	4.1524986	525.56294	520.3073086	0.0673587	0.0619701
South Coas	2013	Annual	LHD2	DSL	Aggregated	25	76254.73668	0.2291358	0.2608559	1.0856429	3.7602283	525.48153	520.2267109	0.0555459	0.0511022
South Coas	2013	Annual	LHD2	DSL	Aggregated	30	108853.8897	0.1928021	0.2194924	0.8723949	3.5269455	525.23109	519.9787774	0.0466202	0.0428906
South Coas	2013	Annual	LHD2	DSL	Aggregated	35	96282.4243	0.1652991	0.188182	0.7313421	3.4251051	524.99547	519.745516	0.0399315	0.036737
South Coas	2013	Annual	LHD2	DSL	Aggregated	40	88906.02008	0.1455984	0.1657541	0.6441938	3.4496212	524.87489	519.626138	0.0351612	0.0323483
South Coas	2013	Annual	LHD2	DSL	Aggregated	45	89804.91012	0.13131	0.1494877	0.5948104	3.5976831	524.76629	519.5186257	0.0316873	0.0291523
South Coas	2013	Annual	LHD2	DSL	Aggregated	50	90865.97399	0.1210574	0.1378158	0.5741335	3.9020928	524.76158	519.5139628	0.0292657	0.0269245
South Coas	2013	Annual	LHD2	DSL	Aggregated	55	108193.8042	0.1141726	0.129978	0.5810908	4.3789281	524.63563	519.3892779	0.0275613	0.0253564
South Coas	2013	Annual	LHD2	DSL	Aggregated	60	267592.2141	0.1111293	0.1265133	0.6207104	5.1154644	524.8086	519.560511	0.026866	0.0247167
South Coas	2013	Annual	LHD2	DSL	Aggregated	65	232485.9718	0.108139	0.1231091	0.6801883	6.1539238	524.31786	519.074682	0.0260232	0.0239414
South Coas	2013	Annual	LHD2	DSL	Aggregated	70	18231.89816	0.0932118	0.1061154	0.6801069	7.6175984	521.9367	516.7173355	0.0225737	0.0207678
South Coas	2013	Annual	MDV	DSL	Aggregated	5	131.9255025	0.1403963	0.1598319	0.9205663	0.7132675	466.32897	437.9671151	0.1160688	0.1067833
South Coas	2013	Annual	MDV	DSL	Aggregated	10	456.5567194	0.1251825	0.1425119	0.7769251	0.660143	430.52167	405.464268	0.1035511	0.095267
South Coas	2013	Annual	MDV	DSL	Aggregated	15	1109.000642	0.0989423	0.1126392	0.5593616	0.5685647	377.48073	356.2791443	0.0819125	0.0753595
South Coas	2013	Annual	MDV	DSL	Aggregated	20	3297.890697	0.0801664	0.0912642	0.4222039	0.5055626	341.73392	323.1674999	0.0663966	0.0610849
South Coas	2013	Annual	MDV	DSL	Aggregated	25	7806.027188	0.0662148	0.0753812	0.3318175	0.4622038	318.41733	301.3936642	0.054833	0.0504464
South Coas	2013	Annual	MDV	DSL	Aggregated	30	10013.76565	0.0560015	0.063754	0.2721611	0.4356067	304.66675	288.4838367	0.0463436	0.0426361
South Coas	2013	Annual	MDV	DSL	Aggregated	35	6876.079277	0.0484291	0.0551333	0.2321729	0.4224088	298.87707	282.8826254	0.0400284	0.0368261
South Coas	2013	Annual	MDV	DSL	Aggregated	40	5035.726624	0.0431329	0.0491039	0.2069296	0.4232381	300.65785	284.4562355	0.0355902	0.032743
South Coa	**2013**	**Annual**	**MDV**	**DSL**	**Aggregated**	**45**	**4211.787818**	**0.0394849**	**0.0449509**	**0.1920666**	**0.4377292**	**310.1606**	**293.2464595**	**0.0325001**	**0.0299001**

South Coas	2013	Annual	MDV	DSL	Aggregated	50	3671.065021	0.037077	0.0422097	0.18507	0.4665562	328.4047	310.0761323	0.0304152	0.027982
South Coas	2013	Annual	MDV	DSL	Aggregated	55	3444.456812	0.0357625	0.0407133	0.1852363	0.5128219	357.62609	336.9796391	0.0291923	0.026857
South Coas	2013	Annual	MDV	DSL	Aggregated	60	4792.936145	0.0356358	0.0405689	0.1934499	0.5843272	401.62193	377.6453851	0.0288989	0.026587
South Coas	2013	Annual	MDV	DSL	Aggregated	65	2779.265625	0.0364891	0.0415404	0.2091882	0.6828463	466.82207	437.4503409	0.0293164	0.0269711
South Coas	2013	Annual	MDV	DSL	Aggregated	70	135.2814598	0.0374383	0.042621	0.2261793	0.7897405	567.16537	526.4361426	0.0297102	0.0273334
South Coas	2013	Annual	T6	DSL	Aggregated	5	6907.24378	3.291416	3.7470266	4.7653311	18.396331	2601.3912	2575.377249	0.7253155	0.6672903
South Coas	2013	Annual	T6	DSL	Aggregated	10	23119.56219	1.9420558	2.2108827	3.3109076	12.969167	2148.9524	2127.462871	0.5140993	0.4729714
South Coas	2013	Annual	T6	DSL	Aggregated	15	56464.97784	0.9986856	1.1369276	2.2299654	9.2138405	1764.4762	1746.831435	0.3522475	0.3240677
South Coas	2013	Annual	T6	DSL	Aggregated	20	158523.526	0.4083521	0.4648778	1.4372445	6.9377973	1391.9962	1378.076246	0.2281783	0.2099241
South Coas	2013	Annual	T6	DSL	Aggregated	25	351977.9154	0.337418	0.3841247	1.2484319	6.5014162	1298.7636	1285.775938	0.1947249	0.1791469
South Coas	2013	Annual	T6	DSL	Aggregated	30	484360.5629	0.2787125	0.317293	1.090285	6.1397593	1219.086	1206.895144	0.1705134	0.1568723
South Coas	2013	Annual	T6	DSL	Aggregated	35	419840.751	0.2322357	0.2643827	0.9628036	5.8518616	1152.9635	1141.433865	0.1555439	0.1431004
South Coas	2013	Annual	T6	DSL	Aggregated	40	410919.1632	0.1979876	0.2253938	0.8659878	5.6369473	1100.3961	1089.3921	0.1498164	0.1378311
South Coa	**2013**	**Annual**	**T6**	**DSL**	**Aggregated**	**45**	**460596.797**	**0.1759682**	**0.2003264**	**0.7998377**	**5.4960223**	**1061.3837**	**1050.76985**	**0.1533308**	**0.1410644**
South Coas	2013	Annual	T6	DSL	Aggregated	50	437674.5179	0.1661774	0.1891803	0.7643531	5.4288295	1035.9264	1025.567114	0.1660873	0.1528003
South Coas	2013	Annual	T6	DSL	Aggregated	55	451065.88	0.1686153	0.1919557	0.7595341	5.4368952	1024.0241	1013.783893	0.1880857	0.1730388
South Coas	2013	Annual	T6	DSL	Aggregated	60	666118.1536	0.1832819	0.2086525	0.7853808	5.5170722	1025.677	1015.420186	0.2193261	0.20178
South Coas	2013	Annual	T6	DSL	Aggregated	65	487709.1469	0.2101772	0.2392707	0.841893	5.6716903	1040.8848	1030.475994	0.2598084	0.2390237
South Coas	2013	Annual	T6	DSL	Aggregated	70	21709.75755	0.2493011	0.2838104	0.9290709	5.9095739	1069.6478	1058.951317	0.3095328	0.2847701
South Coas	2013	Annual	T7	DSL	Aggregated	5	12212.72951	5.446876	6.2008537	9.9467792	29.339712	4034.4139	3994.069716	0.7239813	0.6660628
South Coas	2013	Annual	T7	DSL	Aggregated	10	39282.26207	3.199317	3.6421788	6.6524024	21.112065	3332.7411	3299.413719	0.5356646	0.4928114
South Coas	2013	Annual	T7	DSL	Aggregated	15	104546.4982	1.6402302	1.8672772	4.2766859	15.296606	2736.4694	2709.104672	0.3895528	0.3583886
South Coas	2013	Annual	T7	DSL	Aggregated	20	476312.9321	0.7012526	0.7983227	2.9482914	12.197026	2155.2114	2133.659296	0.3295227	0.3031608
South Coas	2013	Annual	T7	DSL	Aggregated	25	627320.1777	0.5790185	0.6591685	2.3530887	10.669377	2014.2106	1994.068534	0.2427481	0.2233283
South Coas	2013	Annual	T7	DSL	Aggregated	30	912897.4205	0.4897051	0.5574919	2.1183615	9.9331184	1890.6413	1871.734849	0.2210965	0.2034088
South Coas	2013	Annual	T7	DSL	Aggregated	35	818355.6953	0.4165295	0.4741872	1.9355599	9.337087	1788.094	1770.213057	0.2099583	0.1931616
South Coas	2013	Annual	T7	DSL	Aggregated	40	763704.9114	0.3594919	0.4092542	1.804684	8.8806141	1706.5688	1689.503158	0.2093335	0.1925868
South Coa	**2013**	**Annual**	**T7**	**DSL**	**Aggregated**	**45**	**790979.0843**	**0.3185922**	**0.3626929**	**1.7257337**	**8.56462**	**1646.0658**	**1629.605153**	**0.2192221**	**0.2016843**
South Coas	2013	Annual	T7	DSL	Aggregated	50	785233.4918	0.2938303	0.3345034	1.6987091	8.389043	1606.5849	1590.519041	0.2396242	0.2204542
South Coas	2013	Annual	T7	DSL	Aggregated	55	902918.7955	0.2852063	0.3246857	1.7236102	8.3556082	1588.1261	1572.244822	0.2705396	0.2488965
South Coas	2013	Annual	T7	DSL	Aggregated	60	1778646.811	0.2927203	0.3332397	1.8004369	8.4598614	1590.6894	1574.782497	0.3119685	0.287011
South Coas	2013	Annual	T7	DSL	Aggregated	65	1497106.513	0.3163721	0.3601655	1.9291892	8.7084436	1614.2748	1598.132066	0.3639108	0.334798
South Coas	2013	Annual	T7	DSL	Aggregated	70	108552.705	0.3561618	0.4054631	2.1098673	9.1075931	1658.8824	1642.293527	0.4263666	0.3922572
South Coas	2013	Annual	LDA	GAS	Aggregated	5	474344.6735	0.2370761	0.3338577	3.1375627	0.2207398	1101.8686	1013.041646	0.0124945	0.0114272
South Coas	2013	Annual	LDA	GAS	Aggregated	10	1679758.494	0.1635983	0.2258623	2.7006236	0.1964378	816.83026	751.792868	0.0082601	0.0075425
South Coas	2013	Annual	LDA	GAS	Aggregated	15	4077729.82	0.1143789	0.156471	2.3289528	0.1757257	628.35836	578.3026283	0.0056067	0.0051135
South Coas	2013	Annual	LDA	GAS	Aggregated	20	12119221.57	0.0835597	0.1137109	2.0478364	0.1594632	502.27173	462.2537241	0.0040063	0.0036499
South Coas	2013	Annual	LDA	GAS	Aggregated	25	28428586.73	0.0634995	0.086181	1.8250221	0.146768	416.77327	383.4132083	0.0029842	0.0027162
South Coas	2013	Annual	LDA	GAS	Aggregated	30	36179865.92	0.0509122	0.06894	1.6559209	0.1380951	358.80102	329.9494244	0.0023419	0.0021295
South Coas	2013	Annual	LDA	GAS	Aggregated	35	24573313.57	0.0427055	0.0577256	1.519836	0.1317799	320.61174	294.6620325	0.0019251	0.0017489
South Coas	2013	Annual	LDA	GAS	Aggregated	40	17950949.8	0.0379581	0.0510772	1.4183241	0.1276679	297.67626	273.5380355	0.001681	0.0015258
South Coa	**2013**	**Annual**	**LDA**	**GAS**	**Aggregated**	**45**	**15015283.92**	**0.035398**	**0.0475158**	**1.3455787**	**0.1253336**	**287.25927**	**263.966023**	**0.0015481**	**0.0014039**
South Coas	2013	Annual	LDA	GAS	Aggregated	50	13080242.5	0.0346328	0.0463696	1.2915347	0.1254546	287.01342	263.7212013	0.0014977	0.0013572
South Coas	2013	Annual	LDA	GAS	Aggregated	55	12255985.43	0.035777	0.0478167	1.2721108	0.1282056	297.597	273.4089099	0.0015239	0.0013798

South Coas	2013	Annual	LDA	GAS	Aggregated	60	17051979.79	0.0386367	0.051511	1.2658132	0.1350727	316.63898	290.9229454	0.0016307	0.0014758
South Coas	2013	Annual	LDA	GAS	Aggregated	65	9786407.043	0.0433644	0.0577462	1.3035514	0.1418261	351.40697	322.6939924	0.0018141	0.001641
South Coas	2013	Annual	LDA	GAS	Aggregated	70	445851.8154	0.0425064	0.0571847	1.2602148	0.1348997	379.01798	346.4722698	0.0017925	0.0016216
South Coas	2013	Annual	LDT1	GAS	Aggregated	5	54821.31364	0.5959232	0.7777695	8.3430114	0.6573258	1268.6393	1185.498091	0.0286309	0.0262246
South Coas	2013	Annual	LDT1	GAS	Aggregated	10	188532.1095	0.427897	0.5480998	7.2299381	0.5801783	939.71927	880.6906351	0.0197162	0.018037
South Coas	2013	Annual	LDT1	GAS	Aggregated	15	459390.126	0.3032953	0.3866795	6.1220904	0.5048843	722.93439	677.3521604	0.0136623	0.0124895
South Coas	2013	Annual	LDT1	GAS	Aggregated	20	1362356.226	0.2239906	0.2854105	5.3043517	0.4486723	577.89061	541.5249457	0.0099351	0.0090763
South Coas	2013	Annual	LDT1	GAS	Aggregated	25	3230507.964	0.1697518	0.2167418	4.6180983	0.4024849	479.60938	448.8542991	0.0074395	0.006793
South Coas	2013	Annual	LDT1	GAS	Aggregated	30	4176996.468	0.1352951	0.1732092	4.1127523	0.3716358	413.01445	385.9599077	0.0058532	0.0053415
South Coas	2013	Annual	LDT1	GAS	Aggregated	35	2903131.635	0.1122076	0.1440493	3.7094471	0.3489777	369.20306	344.345333	0.0047962	0.0043743
South Coas	2013	Annual	LDT1	GAS	Aggregated	40	2138171.493	0.0994227	0.127293	3.4508377	0.3377896	342.70672	319.480208	0.0041899	0.0038187
South Coas	2013	Annual	LDT1	GAS	Aggregated	45	1785833.092	0.0923394	0.1180403	3.2810604	0.3334992	330.59989	308.2208746	0.0038477	0.0035042
South Coas	2013	Annual	LDT1	GAS	Aggregated	50	1561482.295	0.0897939	0.1146532	3.1741186	0.3379949	330.33416	307.9664031	0.0037028	0.0033696
South Coas	2013	Annual	LDT1	GAS	Aggregated	55	1478743.009	0.0915741	0.1169352	3.1491764	0.3504405	342.6403	319.2261457	0.0037266	0.0033884
South Coas	2013	Annual	LDT1	GAS	Aggregated	60	2049173.807	0.0973816	0.1245589	3.1803884	0.3777975	365.10892	340.259513	0.0039323	0.0035728
South Coas	2013	Annual	LDT1	GAS	Aggregated	65	1206566.469	0.1067568	0.1365945	3.2817926	0.4052176	405.05907	376.8497666	0.0042783	0.0038849
South Coas	2013	Annual	LDT1	GAS	Aggregated	70	66674.33024	0.10435	0.1349515	3.1359463	0.387218	436.34834	402.3893226	0.0042534	0.0038631
South Coas	2013	Annual	LDT2	GAS	Aggregated	5	165153.3186	0.2939683	0.4268491	4.1323926	0.4504217	1503.9998	1420.341119	0.0132257	0.0121375
South Coas	2013	Annual	LDT2	GAS	Aggregated	10	572770.3009	0.2050076	0.2913344	3.6790484	0.4005657	1114.7795	1054.375508	0.0088582	0.0081177
South Coas	2013	Annual	LDT2	GAS	Aggregated	15	1391115.647	0.1424668	0.2008314	3.2180478	0.3519469	857.60723	811.0417352	0.0060046	0.0054974
South Coas	2013	Annual	LDT2	GAS	Aggregated	20	4136506.971	0.1033978	0.1452294	2.8566388	0.3140828	685.51412	648.3268156	0.0042806	0.0039157
South Coas	2013	Annual	LDT2	GAS	Aggregated	25	9787379.411	0.0773988	0.1087029	2.544816	0.2826631	568.83221	537.6243638	0.0031612	0.00289
South Coas	2013	Annual	LDT2	GAS	Aggregated	30	12549006.13	0.0612118	0.0859658	2.3022411	0.2608894	489.74116	462.5297403	0.0024647	0.0022516
South Coas	2013	Annual	LDT2	GAS	Aggregated	35	8608171.452	0.0505898	0.0710785	2.0985243	0.2443991	437.65925	412.9252134	0.0020112	0.0018362
South Coas	2013	Annual	LDT2	GAS	Aggregated	40	6300360.488	0.044702	0.0625484	1.9511879	0.2346078	406.30198	383.2407887	0.0017525	0.0015987
South Coas	2013	Annual	LDT2	GAS	Aggregated	45	5269559.01	0.0414325	0.0578702	1.8399987	0.229047	392.02339	369.7889098	0.0016096	0.0014674
South Coas	2013	Annual	LDT2	GAS	Aggregated	50	4589680.654	0.0403603	0.0562544	1.7508437	0.2290344	391.72371	369.4940916	0.0015558	0.0014172
South Coas	2013	Annual	LDT2	GAS	Aggregated	55	4304636.978	0.0413956	0.0576373	1.6972407	0.2342614	406.21949	383.0338467	0.0015812	0.0014392
South Coas	2013	Annual	LDT2	GAS	Aggregated	60	5989996.943	0.0439965	0.0613209	1.6469449	0.2481573	432.44273	407.8199032	0.001686	0.001534
South Coas	2013	Annual	LDT2	GAS	Aggregated	65	3468345.252	0.0487597	0.0679578	1.6383528	0.2616464	479.98493	452.2312189	0.0018659	0.001697
South Coas	2013	Annual	LDT2	GAS	Aggregated	70	165606.7764	0.0504641	0.070074	1.6091918	0.2487427	517.57906	484.7049145	0.0018781	0.0017039
South Coas	2013	Annual	LHD1	GAS	Aggregated	5	25146.29326	0.7623605	0.8969546	9.3076167	0.4504193	2513.4971	2488.362121	0.0103627	0.0095548
South Coas	2013	Annual	LHD1	GAS	Aggregated	10	95251.46251	0.690684	0.8032221	8.2267281	0.4949721	2036.1281	2015.766818	0.0086746	0.0079954
South Coas	2013	Annual	LHD1	GAS	Aggregated	15	221117.6576	0.4590214	0.5343699	5.6017417	0.5194885	1392.4297	1378.505391	0.0057951	0.0053414
South Coas	2013	Annual	LHD1	GAS	Aggregated	20	577524.1179	0.320435	0.3740266	4.0620316	0.5445089	1006.0685	996.0078041	0.0040498	0.0037326
South Coas	2013	Annual	LHD1	GAS	Aggregated	25	1165428.714	0.2268886	0.2658822	3.040524	0.561423	768.01213	760.3320062	0.0029151	0.0026871
South Coas	2013	Annual	LHD1	GAS	Aggregated	30	1453293.352	0.1677107	0.1976062	2.410158	0.5810379	619.43363	613.2392893	0.0021891	0.0020181
South Coas	2013	Annual	LHD1	GAS	Aggregated	35	1172046.67	0.1283808	0.1520336	2.007454	0.5970791	527.84655	522.5680865	0.0017098	0.0015764
South Coas	2013	Annual	LHD1	GAS	Aggregated	40	1086047.245	0.1057508	0.1253903	1.8102074	0.6184967	475.23321	470.4808773	0.0014085	0.0012986
South Coas	2013	Annual	LHD1	GAS	Aggregated	45	1126001.3	0.0891531	0.1061244	1.700041	0.6328804	452.05587	447.5353098	0.0012001	0.0011065
South Coas	2013	Annual	LHD1	GAS	Aggregated	50	1059043.132	0.0781173	0.0933113	1.6859783	0.6501936	454.32181	449.7785963	0.0010679	0.0009847
South Coas	2013	Annual	LHD1	GAS	Aggregated	55	1066606.27	0.070976	0.0852951	1.7621124	0.6694278	482.41555	477.5913908	0.0009892	0.0009122
South Coas	2013	Annual	LHD1	GAS	Aggregated	60	1598343.17	0.0677877	0.0823752	1.9735084	0.7113952	541.20921	535.7971192	0.0009656	0.0008904
South Coas	2013	Annual	LHD1	GAS	Aggregated	65	1160686.933	0.070469	0.0855105	2.3919324	0.7504934	641.49793	635.0829459	0.0009905	0.0009132

South Coas	2013	Annual	LHD1	GAS	Aggregated	70	51421.06116	0.0441245	0.0568655	2.1331582	0.5882976	803.36245	795.328826	0.0009248	0.0008534
South Coas	2013	Annual	LHD2	GAS	Aggregated	5	2610.484209	0.6966656	0.8258387	9.3633078	0.4456118	2513.4971	2488.362154	0.0103826	0.0094621
South Coas	2013	Annual	LHD2	GAS	Aggregated	10	10374.34573	0.6149443	0.721957	8.1397769	0.4825069	2036.1281	2015.766852	0.0086244	0.0078578
South Coas	2013	Annual	LHD2	GAS	Aggregated	15	24050.7507	0.4099213	0.4817095	5.5574096	0.5073533	1392.4295	1378.505212	0.0057709	0.0052583
South Coas	2013	Annual	LHD2	GAS	Aggregated	20	62877.56713	0.286401	0.3375938	4.0332906	0.5325217	1006.0685	996.0078387	0.0040378	0.0036792
South Coas	2013	Annual	LHD2	GAS	Aggregated	25	125834.2469	0.203653	0.2410236	3.0296263	0.5509085	768.01207	760.3319515	0.0029124	0.0026541
South Coas	2013	Annual	LHD2	GAS	Aggregated	30	155554.1803	0.1502196	0.1787992	2.3986659	0.5682142	619.43363	613.2392949	0.0021781	0.0019846
South Coas	2013	Annual	LHD2	GAS	Aggregated	35	124064.9104	0.1150968	0.1376776	1.9993301	0.5834493	527.84655	522.5680812	0.0016976	0.0015468
South Coas	2013	Annual	LHD2	GAS	Aggregated	40	114846.9969	0.0948105	0.1135593	1.8016152	0.6042685	475.23322	470.480883	0.0013984	0.0012741
South Coas	2013	Annual	LHD2	GAS	Aggregated	45	118220.7679	0.0798121	0.0960103	1.6889472	0.6178495	452.05587	447.5353093	0.0011897	0.0010839
South Coas	2013	Annual	LHD2	GAS	Aggregated	50	110247.4989	0.0701971	0.0847241	1.6790779	0.6356093	454.3218	449.7785848	0.0010589	0.0009647
South Coas	2013	Annual	LHD2	GAS	Aggregated	55	109845.548	0.0636506	0.0772775	1.7519538	0.6512416	482.41552	477.5913682	0.0009751	0.0008882
South Coas	2013	Annual	LHD2	GAS	Aggregated	60	164891.431	0.0614712	0.0754623	1.9871642	0.6952654	541.20921	535.7971198	0.0009556	0.0008704
South Coas	2013	Annual	LHD2	GAS	Aggregated	65	120682.4052	0.0640062	0.0783795	2.4111799	0.7304835	641.49788	635.0828994	0.0009791	0.0008917
South Coas	2013	Annual	LHD2	GAS	Aggregated	70	4232.1386	0.0388257	0.0501025	2.0381471	0.5214642	803.36246	795.3288353	0.0008558	0.0007774
South Coas	2013	Annual	MCY	GAS	Aggregated	5	3879.59466	4.8430967	5.3241177	29.056636	1.1356866	252.35113	249.8276161	0.0014661	0.0011749
South Coas	2013	Annual	MCY	GAS	Aggregated	10	12418.04303	4.214717	4.6325525	26.338778	1.1226306	230.49437	228.1894222	0.0013114	0.0010486
South Coas	2013	Annual	MCY	GAS	Aggregated	15	30326.17322	3.3278889	3.6564801	22.596962	1.114364	196.19506	194.233113	0.0010461	0.000835
South Coas	2013	Annual	MCY	GAS	Aggregated	20	90141.08823	2.7543626	3.0247354	20.169793	1.1133429	171.27634	169.5635717	0.0008769	0.000699
South Coas	2013	Annual	MCY	GAS	Aggregated	25	219327.0878	2.3951823	2.6295998	18.812901	1.1227796	153.35387	151.8203284	0.0007643	0.0006087
South Coas	2013	Annual	MCY	GAS	Aggregated	30	290007.872	2.1898519	2.4029298	18.354513	1.1416318	140.84299	139.4345558	0.000697	0.0005547
South Coas	2013	Annual	MCY	GAS	Aggregated	35	207886.8762	2.1020053	2.304507	18.719178	1.1673937	132.7752	131.4474522	0.0006638	0.0005282
South Coas	2013	Annual	MCY	GAS	Aggregated	40	154454.4323	2.1089598	2.3116264	19.876532	1.1951301	128.58065	127.2948405	0.0006676	0.000531
South Coas	2013	Annual	MCY	GAS	Aggregated	45	128995.6219	2.2110075	2.4251823	22.051707	1.2245269	128.09032	126.8094216	0.0007066	0.0005617
South Coas	2013	Annual	MCY	GAS	Aggregated	50	113384.4304	2.4425704	2.678508	25.908544	1.2651637	131.48634	130.1714725	0.0007815	0.0006211
South Coas	2013	Annual	MCY	GAS	Aggregated	55	107802.5076	2.8353589	3.1071571	32.236735	1.3142546	139.34516	137.9517049	0.0009029	0.0007176
South Coas	2013	Annual	MCY	GAS	Aggregated	60	149517.2055	3.5145854	3.8356555	43.39767	1.3943207	152.81857	151.2903865	0.0010991	0.0008734
South Coas	2013	Annual	MCY	GAS	Aggregated	65	90568.07828	4.5380994	4.9392358	61.200623	1.4783602	173.88562	172.1467616	0.0013831	0.0010999
South Coas	2013	Annual	MCY	GAS	Aggregated	70	5975.309956	6.0850834	6.6089838	90.330466	1.5589161	206.01001	203.9499114	0.0017293	0.0013803
South Coas	2013	Annual	MDV	GAS	Aggregated	5	128047.6269	0.4278282	0.6169335	5.4632616	0.6469955	1908.7449	1831.909648	0.0137516	0.0126606
South Coas	2013	Annual	MDV	GAS	Aggregated	10	425957.8334	0.295818	0.416068	4.8390362	0.5688101	1413.4707	1358.785915	0.0091711	0.008433
South Coas	2013	Annual	MDV	GAS	Aggregated	15	1038383.375	0.2035748	0.2849294	4.2092336	0.4983852	1087.4068	1045.183918	0.006229	0.005724
South Coas	2013	Annual	MDV	GAS	Aggregated	20	3082394.052	0.146626	0.2053274	3.7284897	0.4441856	869.27191	835.5650258	0.0044512	0.0040879
South Coas	2013	Annual	MDV	GAS	Aggregated	25	7419943.952	0.1091186	0.1534901	3.3195531	0.4005972	721.49732	693.0895239	0.0033009	0.0030304
South Coas	2013	Annual	MDV	GAS	Aggregated	30	9706165.928	0.0854816	0.1209222	3.0010622	0.37019	621.37712	596.4694216	0.0025808	0.0023684
South Coas	2013	Annual	MDV	GAS	Aggregated	35	6841684.505	0.0699329	0.0995653	2.7351216	0.3474947	555.5394	532.7289003	0.002112	0.0019377
South Coas	2013	Annual	MDV	GAS	Aggregated	40	5046568.252	0.0613436	0.0871371	2.5412843	0.3338201	515.65452	494.3247889	0.0018401	0.0016874
South Coas	2013	Annual	MDV	GAS	Aggregated	45	4215092.477	0.0567312	0.0804785	2.4004864	0.3264181	497.46196	476.9068178	0.0016902	0.0015491
South Coas	2013	Annual	MDV	GAS	Aggregated	50	3678413.936	0.0548068	0.0778129	2.2865878	0.3265043	497.15645	476.5432718	0.0016308	0.0014941
South Coas	2013	Annual	MDV	GAS	Aggregated	55	3483151.179	0.0556373	0.0792402	2.2198226	0.3340743	515.74944	494.1769698	0.0016542	0.0015148
South Coas	2013	Annual	MDV	GAS	Aggregated	60	4830333.248	0.0584955	0.0840642	2.168468	0.3549863	549.38443	526.4724698	0.0017632	0.0016142
South Coas	2013	Annual	MDV	GAS	Aggregated	65	2873376.729	0.0638926	0.0923911	2.1564046	0.3768092	609.36855	583.4042015	0.0019515	0.0017865
South Coas	2013	Annual	MDV	GAS	Aggregated	70	162036.3309	0.0607677	0.0899506	1.9954556	0.3619461	657.03186	624.97555	0.0019618	0.0017979
South Coas	2013	Annual	MH	GAS	Aggregated	5	1360.764093	1.4497465	1.7008171	34.986337	0.7973618	2513.4971	2488.362085	0.0178036	0.0158303

South Coas	2013	Annual	MH	GAS	Aggregated	10	4292.547749	1.32707	1.532274	31.623122	0.8625355	2036.1282	2015.766928	0.0154227	0.0136628
South Coas	2013	Annual	MH	GAS	Aggregated	15	10354.45596	0.8852189	1.023143	21.576597	0.9071195	1392.4296	1378.505298	0.0102975	0.0091232
South Coas	2013	Annual	MH	GAS	Aggregated	20	26627.11248	0.6236102	0.7217904	15.809423	0.9503506	1006.0685	996.0078236	0.0072492	0.0064185
South Coas	2013	Annual	MH	GAS	Aggregated	25	57409.81917	0.4430648	0.5151044	11.835202	0.984891	768.01214	760.332016	0.0051979	0.0046052
South Coas	2013	Annual	MH	GAS	Aggregated	30	76852.72653	0.3255111	0.3807374	9.2892663	1.0198925	619.43359	613.239257	0.0038667	0.0034296
South Coas	2013	Annual	MH	GAS	Aggregated	35	66278.37146	0.2489343	0.2928155	7.6932368	1.0522759	527.84654	522.5680713	0.0029959	0.0026604
South Coas	2013	Annual	MH	GAS	Aggregated	40	63369.93074	0.2046311	0.2411141	6.9327344	1.0909322	475.23315	470.4808212	0.0024698	0.002193
South Coas	2013	Annual	MH	GAS	Aggregated	45	70095.78676	0.1726382	0.2042523	6.501721	1.1229858	452.05584	447.535285	0.0021006	0.0018661
South Coas	2013	Annual	MH	GAS	Aggregated	50	67024.3912	0.1505452	0.178744	6.3963173	1.1532911	454.32181	449.7785876	0.0018529	0.0016474
South Coas	2013	Annual	MH	GAS	Aggregated	55	69658.91063	0.1350555	0.1614295	6.5717516	1.1831181	482.41554	477.5913814	0.0016913	0.001506
South Coas	2013	Annual	MH	GAS	Aggregated	60	85833.32679	0.1286448	0.1550876	7.3149992	1.2320976	541.20922	535.7971303	0.0016319	0.0014536
South Coas	2013	Annual	MH	GAS	Aggregated	65	57240.85605	0.1348531	0.1621881	8.977539	1.2974154	641.49792	635.0829438	0.0016918	0.0015049
South Coas	2013	Annual	MH	GAS	Aggregated	70	3911.879059	0.0960012	0.1212518	8.0770911	1.1803567	803.36246	795.3288355	0.0014724	0.0013266
South Coas	2013	Annual	OBUS	GAS	Aggregated	5	602.9146723	0.916134	1.1296489	13.323951	0.9387177	2513.4972	2488.362234	0.0052767	0.0048326
South Coas	2013	Annual	OBUS	GAS	Aggregated	10	2281.695993	0.7317623	0.8903458	10.538008	0.9435638	2036.1282	2015.766939	0.0041745	0.0038289
South Coas	2013	Annual	OBUS	GAS	Aggregated	15	5475.157953	0.4887796	0.5956137	7.2081253	0.9934837	1392.4295	1378.505202	0.0027948	0.0025632
South Coas	2013	Annual	OBUS	GAS	Aggregated	20	14643.13561	0.3350393	0.4108	5.1456765	1.0283842	1006.0685	996.007813	0.0019343	0.0017742
South Coas	2013	Annual	OBUS	GAS	Aggregated	25	30464.68376	0.2437552	0.300451	3.9542276	1.0793218	768.01212	760.3319942	0.0014123	0.0012949
South Coas	2013	Annual	OBUS	GAS	Aggregated	30	38213.7785	0.1866976	0.2315717	3.2453327	1.1435974	619.43361	613.2392712	0.0010816	0.0009915
South Coas	2013	Annual	OBUS	GAS	Aggregated	35	30854.63771	0.1491818	0.1859089	2.8128005	1.2088927	527.84651	522.5680482	0.0008635	0.0007913
South Coas	2013	Annual	OBUS	GAS	Aggregated	40	29707.58902	0.1222698	0.1528634	2.5273701	1.2507967	475.23322	470.4808863	0.0007096	0.0006503
South Coas	2013	Annual	OBUS	GAS	Aggregated	45	31845.59561	0.1054576	0.1324831	2.4275002	1.3024193	452.05582	447.5352661	0.0006122	0.000561
South Coas	2013	Annual	OBUS	GAS	Aggregated	50	29291.30564	0.094545	0.119198	2.4547246	1.359089	454.32179	449.7785675	0.00055	0.0005039
South Coas	2013	Annual	OBUS	GAS	Aggregated	55	27967.28917	0.089738	0.1137778	2.6692095	1.4421268	482.41551	477.5913571	0.0005206	0.0004769
South Coas	2013	Annual	OBUS	GAS	Aggregated	60	34267.68603	0.0847501	0.109335	2.9612126	1.5098321	541.20922	535.7971253	0.0005041	0.0004618
South Coas	2013	Annual	OBUS	GAS	Aggregated	65	25000.58249	0.0834576	0.1078278	3.4117907	1.5339637	641.49789	635.0829112	0.0005021	0.0004603
South Coas	2013	Annual	OBUS	GAS	Aggregated	70	827.5977322	0.1002657	0.1336204	5.0478289	1.8849106	803.36238	795.3287513	0.0005958	0.0005446
South Coas	2013	Annual	SBUS	GAS	Aggregated	5	535.2558517	5.2144431	5.7165239	78.880497	1.6699603	2513.497	2488.361997	0.0320364	0.0276957
South Coas	2013	Annual	SBUS	GAS	Aggregated	10	1876.044316	4.1983146	4.6010741	63.774598	1.7055323	2036.1281	2015.766848	0.0257983	0.0223029
South Coas	2013	Annual	SBUS	GAS	Aggregated	15	3752.088619	2.8085916	3.07803	43.612991	1.7898509	1392.4296	1378.505298	0.0172586	0.0149202
South Coas	2013	Annual	SBUS	GAS	Aggregated	20	5092.850321	1.9584697	2.1462801	31.505099	1.8733888	1006.0685	996.0077858	0.0120349	0.0104042
South Coas	2013	Annual	SBUS	GAS	Aggregated	25	8039.406455	1.4236093	1.5602148	24.058427	1.9590037	768.01207	760.3319499	0.0087479	0.0075626
South Coas	2013	Annual	SBUS	GAS	Aggregated	30	9645.174097	1.0786653	1.1822301	19.410016	2.0446016	619.43358	613.2392484	0.006628	0.00573
South Coas	2013	Annual	SBUS	GAS	Aggregated	35	9899.557582	0.8520628	0.934162	16.571413	2.1371445	527.84652	522.5680546	0.0052347	0.0045254
South Coas	2013	Annual	SBUS	GAS	Aggregated	40	6682.724847	0.7015429	0.7693005	14.938651	2.2275758	475.23315	470.4808175	0.0043094	0.0037255
South Coas	2013	Annual	SBUS	GAS	Aggregated	45	3206.210511	0.6020517	0.6602697	14.219171	2.3154916	452.05582	447.535258	0.0036981	0.003197
South Coas	2013	Annual	SBUS	GAS	Aggregated	50	1605.767574	0.5384124	0.5902543	14.257875	2.3895053	454.32175	449.7785283	0.0033079	0.0028597
South Coas	2013	Annual	SBUS	GAS	Aggregated	55	2390.082389	0.5025271	0.551887	15.301916	2.5277794	482.41545	477.5912945	0.0030843	0.0026664
South Coas	2013	Annual	SBUS	GAS	Aggregated	60	1330.193077	0.4882922	0.5360367	17.124927	2.6015151	541.20914	535.7970449	0.0029976	0.0025914
South Coas	2013	Annual	T6	GAS	Aggregated	5	2142.591911	1.7573764	2.0498653	25.575137	1.2913729	2513.4971	2488.36212	0.010642	0.0095502
South Coas	2013	Annual	T6	GAS	Aggregated	10	7927.451027	1.4762128	1.7049375	21.339932	1.3554437	2036.128	2015.766766	0.0085431	0.0076513
South Coas	2013	Annual	T6	GAS	Aggregated	15	19072.69837	0.985416	1.1392944	14.583263	1.4256026	1392.4296	1378.505274	0.005718	0.005122
South Coas	2013	Annual	T6	GAS	Aggregated	20	50677.15108	0.6847404	0.7947997	10.530457	1.4919928	1006.0685	996.0078591	0.0039759	0.0035615
South Coas	2013	Annual	T6	GAS	Aggregated	25	106745.3793	0.4931005	0.5748952	7.9964505	1.5550482	768.0121	760.3319795	0.0028968	0.0025969

South Coas	2013	Annual	T6	GAS	Aggregated	30	134824.069	0.3708534	0.4346137	6.4408496	1.6181059	619.43363	613.2392925	0.002202	0.0019739
South Coas	2013	Annual	T6	GAS	Aggregated	35	109768.4225	0.2905327	0.3418468	5.4718455	1.6790795	527.84655	522.5680866	0.0017446	0.0015641
South Coas	2013	Annual	T6	GAS	Aggregated	40	105148.373	0.2389573	0.2817204	4.9277508	1.739563	475.23319	470.4808554	0.0014345	0.0012858
South Coas	2013	Annual	T6	GAS	Aggregated	45	113462.5844	0.2039425	0.2414264	4.6771324	1.7954073	452.05583	447.5352766	0.0012334	0.0011058
South Coas	2013	Annual	T6	GAS	Aggregated	50	104474.3478	0.1808668	0.2147273	4.6785805	1.8525253	454.32181	449.7785885	0.0011037	0.0009896
South Coas	2013	Annual	T6	GAS	Aggregated	55	99180.68544	0.1673315	0.1994641	4.9655951	1.9072854	482.41557	477.5914108	0.0010311	0.0009237
South Coas	2013	Annual	T6	GAS	Aggregated	60	119636.1582	0.159373	0.1922821	5.5520306	1.9950441	541.20923	535.7971357	0.000998	0.0008936
South Coas	2013	Annual	T6	GAS	Aggregated	65	85473.21186	0.1630654	0.1963091	6.6288728	2.0782809	641.49788	635.0829019	0.0010046	0.0008988
South Coas	2013	Annual	T6	GAS	Aggregated	70	2508.959214	0.1402071	0.1739	7.3435801	1.7458607	803.36239	795.3287708	0.0010485	0.0009306
South Coas	2013	Annual	T7	GAS	Aggregated	5	420.2583592	4.5135417	5.2187487	122.76085	3.5909998	2513.4973	2488.362368	0.0049088	0.0042161
South Coas	2013	Annual	T7	GAS	Aggregated	10	1743.661188	3.6706651	4.2160525	101.65667	3.7105815	2036.1284	2015.767091	0.0038434	0.0033002
South Coas	2013	Annual	T7	GAS	Aggregated	15	4170.170277	2.4530581	2.8208704	69.483886	3.906786	1392.4295	1378.505252	0.002575	0.002211
South Coas	2013	Annual	T7	GAS	Aggregated	20	10972.25125	1.6868871	1.9477803	50.038089	4.0593377	1006.0685	996.0078109	0.001783	0.0015302
South Coas	2013	Annual	T7	GAS	Aggregated	25	22406.87157	1.226002	1.4204357	38.151973	4.2446678	768.0121	760.3319787	0.0013067	0.0011213
South Coas	2013	Annual	T7	GAS	Aggregated	30	28548.75932	0.937491	1.0899016	30.8445	4.4612231	619.43363	613.239297	0.0009999	0.0008587
South Coas	2013	Annual	T7	GAS	Aggregated	35	23229.2744	0.7466669	0.8703011	26.309828	4.6746094	527.84655	522.5680846	0.0007982	0.0006858
South Coas	2013	Annual	T7	GAS	Aggregated	40	22385.76846	0.6119225	0.7148409	23.66484	4.8386151	475.23322	470.4808831	0.0006552	0.000563
South Coas	2013	Annual	T7	GAS	Aggregated	45	24002.39889	0.5269328	0.6175161	22.537158	5.0173977	452.05581	447.5352529	0.0005657	0.0004862
South Coas	2013	Annual	T7	GAS	Aggregated	50	21873.95553	0.4708252	0.552678	22.559658	5.2035799	454.32177	449.7785502	0.0005085	0.0004372
South Coas	2013	Annual	T7	GAS	Aggregated	55	21699.80046	0.4436393	0.5222206	23.973991	5.4389415	482.41559	477.5914368	0.0004777	0.0004112
South Coas	2013	Annual	T7	GAS	Aggregated	60	26190.64597	0.4211368	0.5007514	26.611986	5.6757598	541.2092	535.7971078	0.0004618	0.0003975
South Coas	2013	Annual	T7	GAS	Aggregated	65	19063.63933	0.41761	0.4976298	31.437101	5.8453839	641.49792	635.0829367	0.0004589	0.0003947
South Coas	2013	Annual	T7	GAS	Aggregated	70	618.2051525	0.438835	0.5286499	34.912267	5.985132	803.36245	795.3288266	0.0005232	0.0004545
South Coas	2013	Annual	UBUS	GAS	Aggregated	5	1893.884327	6.67992	7.2054543	58.051308	2.7589668	2513.4972	2488.362187	0.015483	0.013736
South Coas	2013	Annual	UBUS	GAS	Aggregated	10	6797.726039	5.3792201	5.8024233	47.026072	2.8288941	2036.1281	2015.766797	0.0124682	0.0110614
South Coas	2013	Annual	UBUS	GAS	Aggregated	15	13595.4516	3.5985948	3.8817096	32.159317	2.9687499	1392.4295	1378.50521	0.008341	0.0073998
South Coas	2013	Annual	UBUS	GAS	Aggregated	20	17941.25732	2.509399	2.7068228	23.235989	3.1086052	1006.0686	996.0078711	0.0058164	0.0051601
South Coas	2013	Annual	UBUS	GAS	Aggregated	25	27020.81877	1.824021	1.9675234	17.737878	3.2484606	768.01209	760.3319651	0.0042278	0.0037508
South Coas	2013	Annual	UBUS	GAS	Aggregated	30	33818.54106	1.3820162	1.4907446	14.306335	3.3883159	619.43362	613.2392837	0.0032033	0.0028419
South Coas	2013	Annual	UBUS	GAS	Aggregated	35	33142.01834	1.0914896	1.1773611	12.191055	3.5281716	527.84656	522.5680903	0.0025299	0.0022444
South Coas	2013	Annual	UBUS	GAS	Aggregated	40	23892.37246	0.8985646	0.969258	10.975905	3.6680271	475.23316	470.4808319	0.0020827	0.0018477
South Coas	2013	Annual	UBUS	GAS	Aggregated	45	10415.40782	0.771085	0.8317491	10.440606	3.8078821	452.05585	447.5352885	0.0017873	0.0015856
South Coas	2013	Annual	UBUS	GAS	Aggregated	50	5291.791929	0.6897289	0.7439924	10.492939	3.9477379	454.3218	449.7785816	0.0015987	0.0014183
South Coas	2013	Annual	UBUS	GAS	Aggregated	55	6560.75219	0.6430988	0.6936939	11.141787	4.0875933	482.41551	477.5913588	0.0014906	0.0013224
South Coas	2013	Annual	UBUS	GAS	Aggregated	60	10738.38215	0.6250293	0.6742026	12.499675	4.2274487	541.20918	535.7970913	0.0014487	0.0012853

SCAB Fleet Average Emission Factors (Diesel)

off-road

Air Basin	SC

		(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
Equipment	**MaxHP**	**ROG**	**CO**	**NOX**	**SOX**	**PM**	**CO2**	**CH4**
Aerial Lifts	15	0.0101	0.0528	0.0633	0.0001	0.0026	8.7	0.0009
	25	0.0160	0.0494	0.0919	0.0001	0.0048	11.0	0.0014
	50	0.0534	0.1694	0.1765	0.0003	0.0142	19.6	0.0048
	120	0.0509	0.2400	0.3531	0.0004	0.0272	38.1	0.0046
	500	0.1106	0.4444	1.3843	0.0021	0.0408	213	0.0100
	750	0.2063	0.8033	2.5864	0.0039	0.0751	385	0.0186
Aerial Lifts Composite		0.0483	0.1877	0.2867	0.0004	0.0184	34.7	0.0044
Air Compressors	15	0.0114	0.0474	0.0697	0.0001	0.0044	7.2	0.0010
	25	0.0247	0.0711	0.1275	0.0002	0.0075	14.4	0.0022
	50	0.0831	0.2446	0.2134	0.0003	0.0201	22.3	0.0075
	120	0.0758	0.3216	0.4682	0.0006	0.0416	47.0	0.0068
	175	0.0984	0.5035	0.7837	0.0010	0.0431	88.5	0.0089
	250	0.0948	0.2873	1.0299	0.0015	0.0316	131	0.0086
	500	0.1543	0.5129	1.5945	0.0023	0.0519	232	0.0139
	750	0.2412	0.7927	2.5509	0.0036	0.0819	358	0.0218
	1000	0.3865	1.2935	4.7637	0.0049	0.1363	486	0.0349
Air Compressors Composite		0.0842	0.3313	0.5635	0.0007	0.0396	63.6	0.0076
Bore/Drill Rigs	15	0.0120	0.0632	0.0754	0.0002	0.0029	10.3	0.0011
	25	0.0193	0.0658	0.1222	0.0002	0.0048	16.0	0.0017
	50	0.0255	0.2253	0.2394	0.0004	0.0095	31.0	0.0023
	120	0.0409	0.4684	0.4254	0.0009	0.0204	77.1	0.0037
	175	0.0671	0.7539	0.6527	0.0016	0.0246	141	0.0061
	250	0.0737	0.3426	0.6140	0.0021	0.0179	188	0.0066
	500	0.1206	0.5512	0.9516	0.0031	0.0294	311	0.0109
	750	0.2388	1.0890	1.8972	0.0062	0.0582	615	0.0215
	1000	0.3889	1.6591	5.4092	0.0093	0.1411	928	0.0351
Bore/Drill Rigs Composite		0.0729	0.5030	0.7136	0.0017	0.0248	165	0.0066
Cement and Mortar	15	0.0074	0.0386	0.0466	0.0001	0.0020	6.3	0.0007
	25	0.0259	0.0794	0.1481	0.0002	0.0078	17.6	0.0023
Cement and Mortar Mixers Compo		0.0089	0.0420	0.0550	0.0001	0.0025	7.2	0.0008
Concrete/Industrial	25	0.0199	0.0678	0.1256	0.0002	0.0048	16.5	0.0018
	50	0.0864	0.2825	0.2750	0.0004	0.0226	30.2	0.0078
	120	0.0978	0.4796	0.6733	0.0009	0.0538	74.1	0.0088
	175	0.1457	0.8685	1.2772	0.0018	0.0645	160	0.0131
Concrete/Industrial Saws Compos		0.0917	0.4031	0.5267	0.0007	0.0413	58.5	0.0083
Cranes	50	0.0932	0.2808	0.2313	0.0003	0.0221	23.2	0.0084
	120	0.0859	0.3587	0.5189	0.0006	0.0453	50.1	0.0078
	175	0.0977	0.4806	0.7306	0.0009	0.0412	80.3	0.0088

	250	0.0979	0.2817	0.9088	0.0013	0.0317	112	0.0088
	500	0.1468	0.4948	1.2979	0.0018	0.0470	180	0.0132
	750	0.2485	0.8312	2.2480	0.0030	0.0803	303	0.0224
	9999	0.9122	3.0993	9.8090	0.0098	0.3001	971	0.0823
Cranes Composite		0.1276	0.4553	1.1066	0.0014	0.0466	129	0.0115
Crawler Tractors	50	0.1094	0.3164	0.2544	0.0003	0.0251	24.9	0.0099
	120	0.1217	0.4814	0.7280	0.0008	0.0627	65.8	0.0110
	175	0.1594	0.7413	1.1857	0.0014	0.0663	121	0.0144
	250	0.1672	0.4797	1.4702	0.0019	0.0562	166	0.0151
	500	0.2420	0.8885	2.0637	0.0025	0.0798	259	0.0218
	750	0.4355	1.5882	3.7861	0.0047	0.1446	465	0.0393
	1000	0.6595	2.5182	7.0047	0.0066	0.2228	658	0.0595
Crawler Tractors Composite		0.1499	0.5767	1.0853	0.0013	0.0644	114	0.0135
Crushing/Proc. Equ	50	0.1559	0.4812	0.4182	0.0006	0.0383	44.0	0.0141
	120	0.1284	0.5703	0.8000	0.0010	0.0704	83.1	0.0116
	175	0.1801	0.9583	1.4195	0.0019	0.0782	167	0.0163
	250	0.1744	0.5287	1.8241	0.0028	0.0562	245	0.0157
	500	0.2480	0.8092	2.4341	0.0037	0.0801	374	0.0224
	750	0.3929	1.2625	3.9931	0.0059	0.1283	589	0.0354
	9999	1.0512	3.3574	12.4161	0.0131	0.3572	1,308	0.0948
Crushing/Proc. Equipment Compo		0.1597	0.6651	1.0867	0.0015	0.0677	132	0.0144
Dumpers/Tenders	25	0.0095	0.0317	0.0595	0.0001	0.0027	7.6	0.0009
Dumpers/Tenders Composite		0.0095	0.0317	0.0595	0.0001	0.0027	7.6	0.0009
Excavators	25	0.0198	0.0677	0.1253	0.0002	0.0047	16.4	0.0018
	50	0.0728	0.2757	0.2354	0.0003	0.0189	25.0	0.0066
	120	0.0998	0.5137	0.6331	0.0009	0.0519	73.6	0.0090
	175	0.1134	0.6660	0.8323	0.0013	0.0457	112	0.0102
	250	0.1180	0.3480	1.0099	0.0018	0.0333	159	0.0106
	500	0.1657	0.5102	1.3127	0.0023	0.0463	234	0.0149
	750	0.2764	0.8452	2.2503	0.0039	0.0782	387	0.0249
Excavators Composite		0.1143	0.5289	0.8299	0.0013	0.0428	120	0.0103
Forklifts	50	0.0381	0.1569	0.1376	0.0002	0.0106	14.7	0.0034
	120	0.0390	0.2158	0.2571	0.0004	0.0206	31.2	0.0035
	175	0.0524	0.3311	0.3883	0.0006	0.0214	56.1	0.0047
	250	0.0542	0.1595	0.4606	0.0009	0.0149	77.1	0.0049
	500	0.0752	0.2182	0.5845	0.0011	0.0206	111	0.0068
Forklifts Composite		0.0497	0.2215	0.3551	0.0006	0.0178	54.4	0.0045
Generator Sets	15	0.0142	0.0670	0.0971	0.0002	0.0054	10.2	0.0013
	25	0.0256	0.0868	0.1557	0.0002	0.0085	17.6	0.0023
	50	0.0785	0.2545	0.2731	0.0004	0.0213	30.6	0.0071
	120	0.1008	0.4857	0.7130	0.0009	0.0537	77.9	0.0091
	175	0.1236	0.7367	1.1536	0.0016	0.0538	142	0.0112
	250	0.1181	0.4248	1.5252	0.0024	0.0422	213	0.0107
	500	0.1683	0.6904	2.1655	0.0033	0.0627	337	0.0152
	750	0.2811	1.1145	3.6123	0.0055	0.1032	544	0.0254
	9999	0.7280	2.5702	9.5914	0.0105	0.2595	1,049	0.0657

Generator Sets Composite		0.0702	0.2974	0.5083	0.0007	0.0296	61.0	0.0063
Graders	50	0.0985	0.3168	0.2668	0.0004	0.0239	27.5	0.0089
	120	0.1166	0.5268	0.7270	0.0009	0.0614	75.0	0.0105
	175	0.1386	0.7331	1.0511	0.0014	0.0577	124	0.0125
	250	0.1407	0.4177	1.2844	0.0019	0.0445	172	0.0127
	500	0.1759	0.5992	1.5242	0.0023	0.0550	229	0.0159
	750	0.3746	1.2665	3.3218	0.0049	0.1182	486	0.0338
Graders Composite		0.1362	0.5987	1.0796	0.0015	0.0539	133	0.0123
Off-Highway Tracto	120	0.2008	0.7118	1.1800	0.0011	0.1014	93.7	0.0181
	175	0.1960	0.8272	1.4624	0.0015	0.0820	130	0.0177
	250	0.1564	0.4499	1.3527	0.0015	0.0560	130	0.0141
	750	0.6254	2.6908	5.4422	0.0057	0.2197	568	0.0564
	1000	0.9416	4.2058	9.6214	0.0082	0.3259	814	0.0850
Off-Highway Tractors Composite		0.1986	0.7438	1.6111	0.0017	0.0767	151	0.0179
Off-Highway Trucks	175	0.1355	0.7569	0.9614	0.0014	0.0539	125	0.0122
	250	0.1326	0.3761	1.1048	0.0019	0.0368	167	0.0120
	500	0.2065	0.6134	1.5945	0.0027	0.0567	272	0.0186
	750	0.3371	0.9944	2.6748	0.0044	0.0937	442	0.0304
	1000	0.5191	1.5673	5.5862	0.0063	0.1665	625	0.0468
Off-Highway Trucks Composite		0.2034	0.6148	1.6679	0.0027	0.0579	260	0.0183
Other Construction	15	0.0118	0.0617	0.0737	0.0002	0.0029	10.1	0.0011
	25	0.0160	0.0544	0.1010	0.0002	0.0039	13.2	0.0014
	50	0.0670	0.2573	0.2471	0.0004	0.0183	28.0	0.0060
	120	0.0915	0.5237	0.6571	0.0009	0.0503	80.9	0.0083
	175	0.0868	0.5867	0.7476	0.0012	0.0374	107	0.0078
	500	0.1379	0.5080	1.3457	0.0025	0.0441	254	0.0124
Other Construction Equipment Co		0.0820	0.3697	0.7168	0.0013	0.0296	123	0.0074
Other General Indu	15	0.0066	0.0391	0.0466	0.0001	0.0018	6.4	0.0006
	25	0.0185	0.0632	0.1170	0.0002	0.0044	15.3	0.0017
	50	0.0878	0.2626	0.2155	0.0003	0.0211	21.7	0.0079
	120	0.1082	0.4435	0.6351	0.0007	0.0583	62.0	0.0098
	175	0.1174	0.5703	0.8698	0.0011	0.0498	95.9	0.0106
	250	0.1111	0.3089	1.0899	0.0015	0.0346	136	0.0100
	500	0.2032	0.6064	1.8639	0.0026	0.0630	265	0.0183
	750	0.3375	0.9995	3.1813	0.0044	0.1061	437	0.0305
	1000	0.4892	1.5297	5.6194	0.0056	0.1666	560	0.0441
Other General Industrial Equipme		0.1448	0.4985	1.2360	0.0016	0.0527	152	0.0131
Other Material Han	50	0.1219	0.3632	0.2997	0.0004	0.0293	30.3	0.0110
	120	0.1051	0.4319	0.6201	0.0007	0.0568	60.7	0.0095
	175	0.1481	0.7226	1.1054	0.0014	0.0631	122	0.0134
	250	0.1174	0.3291	1.1643	0.0016	0.0368	145	0.0106
	500	0.1448	0.4365	1.3440	0.0019	0.0453	192	0.0131
	9999	0.6617	2.0216	7.4315	0.0073	0.2197	741	0.0597
Other Material Handling Equipmer		0.1381	0.4814	1.2068	0.0015	0.0511	141	0.0125
Pavers	25	0.0239	0.0788	0.1472	0.0002	0.0070	18.7	0.0022
	50	0.1281	0.3506	0.2860	0.0004	0.0289	28.0	0.0116

	120	0.1311	0.5011	0.7948	0.0008	0.0682	69.2	0.0118
	175	0.1695	0.7742	1.3079	0.0014	0.0720	128	0.0153
	250	0.1962	0.5822	1.8076	0.0022	0.0696	194	0.0177
	500	0.2165	0.8647	1.9551	0.0023	0.0756	233	0.0195
Pavers Composite		0.1429	0.5277	0.8112	0.0009	0.0564	77.9	0.0129
Paving Equipment	25	0.0152	0.0520	0.0965	0.0002	0.0038	12.6	0.0014
	50	0.1094	0.2974	0.2439	0.0003	0.0247	23.9	0.0099
	120	0.1028	0.3923	0.6241	0.0006	0.0538	54.5	0.0093
	175	0.1323	0.6049	1.0274	0.0011	0.0565	101	0.0119
	250	0.1207	0.3595	1.1333	0.0014	0.0429	122	0.0109
Paving Equipment Composite		0.1082	0.4273	0.7312	0.0008	0.0502	68.9	0.0098
Plate Compactors	15	0.0050	0.0263	0.0314	0.0001	0.0012	4.3	0.0005
Plate Compactors Composite		0.0050	0.0263	0.0314	0.0001	0.0012	4.3	0.0005
Pressure Washers	15	0.0068	0.0321	0.0465	0.0001	0.0026	4.9	0.0006
	25	0.0104	0.0352	0.0631	0.0001	0.0035	7.1	0.0009
	50	0.0281	0.1001	0.1230	0.0002	0.0085	14.3	0.0025
	120	0.0274	0.1429	0.2101	0.0003	0.0143	24.1	0.0025
Pressure Washers Composite		0.0145	0.0603	0.0838	0.0001	0.0053	9.4	0.0013
Pumps	15	0.0117	0.0488	0.0716	0.0001	0.0045	7.4	0.0011
	25	0.0333	0.0959	0.1721	0.0002	0.0101	19.5	0.0030
	50	0.0949	0.3004	0.3098	0.0004	0.0251	34.3	0.0086
	120	0.1049	0.4934	0.7241	0.0009	0.0563	77.9	0.0095
	175	0.1275	0.7382	1.1562	0.0016	0.0556	140	0.0115
	250	0.1175	0.4096	1.4689	0.0023	0.0416	201	0.0106
	500	0.1815	0.7226	2.2468	0.0034	0.0667	345	0.0164
	750	0.3092	1.1947	3.8390	0.0057	0.1124	571	0.0279
	9999	0.9669	3.3910	12.5393	0.0136	0.3422	1,355	0.0872
Pumps Composite		0.0683	0.2873	0.4427	0.0006	0.0295	49.6	0.0062
Rollers	15	0.0074	0.0386	0.0461	0.0001	0.0018	6.3	0.0007
	25	0.0161	0.0549	0.1019	0.0002	0.0040	13.3	0.0015
	50	0.0947	0.2831	0.2492	0.0003	0.0226	26.0	0.0085
	120	0.0921	0.4030	0.5906	0.0007	0.0494	59.0	0.0083
	175	0.1178	0.6182	0.9537	0.0012	0.0510	108	0.0106
	250	0.1180	0.3717	1.2002	0.0017	0.0407	153	0.0106
	500	0.1555	0.5926	1.5340	0.0022	0.0537	219	0.0140
Rollers Composite		0.0912	0.4018	0.6164	0.0008	0.0419	67.1	0.0082
Rough Terrain Fork	50	0.1055	0.3654	0.3185	0.0004	0.0271	33.9	0.0095
	120	0.0877	0.4292	0.5612	0.0007	0.0474	62.4	0.0079
	175	0.1265	0.7246	0.9750	0.0014	0.0534	125	0.0114
	250	0.1230	0.3717	1.1633	0.0019	0.0376	171	0.0111
	500	0.1745	0.5501	1.5313	0.0025	0.0529	257	0.0157
Rough Terrain Forklifts Composite		0.0929	0.4608	0.6101	0.0008	0.0477	70.3	0.0084
Rubber Tired Dozer	175	0.2034	0.8392	1.4854	0.0015	0.0841	129	0.0183
	250	0.2322	0.6560	1.9517	0.0021	0.0821	183	0.0209
	500	0.3072	1.3307	2.5592	0.0026	0.1058	265	0.0277
	750	0.4633	1.9954	3.9201	0.0040	0.1603	399	0.0418

	1000	0.7196	3.2150	7.1336	0.0060	0.2458	592	0.0649
Rubber Tired Dozers Composite		0.2854	1.1058	2.3867	0.0025	0.0993	239	0.0257
Rubber Tired Loade	25	0.0204	0.0697	0.1291	0.0002	0.0049	16.9	0.0018
	50	0.1092	0.3535	0.3000	0.0004	0.0266	31.1	0.0099
	120	0.0902	0.4119	0.5654	0.0007	0.0477	58.9	0.0081
	175	0.1168	0.6261	0.8915	0.0012	0.0489	106	0.0105
	250	0.1186	0.3553	1.0966	0.0017	0.0375	149	0.0107
	500	0.1769	0.6085	1.5507	0.0023	0.0554	237	0.0160
	750	0.3648	1.2450	3.2733	0.0049	0.1153	486	0.0329
	1000	0.4927	1.7350	5.6204	0.0060	0.1686	594	0.0445
Rubber Tired Loaders Composite		0.1122	0.4683	0.8620	0.0012	0.0461	109	0.0101
Scrapers	120	0.1770	0.6882	1.0571	0.0011	0.0913	93.9	0.0160
	175	0.1973	0.9065	1.4751	0.0017	0.0824	148	0.0178
	250	0.2135	0.6146	1.8936	0.0024	0.0726	209	0.0193
	500	0.3033	1.1355	2.6139	0.0032	0.1012	321	0.0274
	750	0.5260	1.9562	4.6194	0.0056	0.1767	555	0.0475
Scrapers Composite		0.2648	0.9890	2.2371	0.0027	0.0928	262	0.0239
Signal Boards	15	0.0072	0.0377	0.0450	0.0001	0.0018	6.2	0.0006
	50	0.1035	0.3331	0.3273	0.0005	0.0269	36.2	0.0093
	120	0.1072	0.5163	0.7320	0.0009	0.0584	80.2	0.0097
	175	0.1415	0.8317	1.2462	0.0017	0.0621	155	0.0128
	250	0.1520	0.5213	1.8056	0.0029	0.0525	255	0.0137
Signal Boards Composite		0.0181	0.0929	0.1332	0.0002	0.0071	16.7	0.0016
Skid Steer Loaders	25	0.0195	0.0610	0.1145	0.0002	0.0059	13.8	0.0018
	50	0.0443	0.2196	0.2161	0.0003	0.0134	25.5	0.0040
	120	0.0380	0.2727	0.3020	0.0005	0.0205	42.8	0.0034
Skid Steer Loaders Composite		0.0406	0.2262	0.2369	0.0004	0.0152	30.3	0.0037
Surfacing Equipme	50	0.0442	0.1367	0.1310	0.0002	0.0110	14.1	0.0040
	120	0.0904	0.4182	0.6174	0.0007	0.0477	63.8	0.0082
	175	0.0842	0.4716	0.7317	0.0010	0.0363	85.8	0.0076
	250	0.0955	0.3237	1.0228	0.0015	0.0341	135	0.0086
	500	0.1433	0.6069	1.5156	0.0022	0.0516	221	0.0129
	750	0.2284	0.9503	2.4407	0.0035	0.0820	347	0.0206
Surfacing Equipment Composite		0.1194	0.4930	1.1688	0.0017	0.0427	166	0.0108
Sweepers/Scrubbe	15	0.0124	0.0729	0.0870	0.0002	0.0034	11.9	0.0011
	25	0.0237	0.0808	0.1495	0.0002	0.0057	19.6	0.0021
	50	0.0911	0.3300	0.2939	0.0004	0.0241	31.6	0.0082
	120	0.0991	0.5098	0.6481	0.0009	0.0543	75.0	0.0089
	175	0.1317	0.7996	1.0280	0.0016	0.0561	139	0.0119
	250	0.1086	0.3327	1.0406	0.0018	0.0325	162	0.0098
Sweepers/Scrubbers Composite		0.1029	0.5086	0.6353	0.0009	0.0447	78.5	0.0093
Tractors/Loaders/B	25	0.0193	0.0654	0.1228	0.0002	0.0052	15.9	0.0017
	50	0.0792	0.3103	0.2765	0.0004	0.0211	30.3	0.0071
	120	0.0634	0.3503	0.4252	0.0006	0.0337	51.7	0.0057
	175	0.0924	0.5857	0.7161	0.0011	0.0380	101	0.0083
	250	0.1142	0.3608	1.0294	0.0019	0.0330	172	0.0103

	500	0.2186	0.7245	1.8255	0.0039	0.0627	345	0.0197
	750	0.3304	1.0864	2.8317	0.0058	0.0958	517	0.0298
Tractors/Loaders/Backhoes Comp		0.0728	0.3747	0.4977	0.0008	0.0341	66.8	0.0066
Trenchers	15	0.0099	0.0517	0.0617	0.0001	0.0024	8.5	0.0009
	25	0.0397	0.1355	0.2509	0.0004	0.0095	32.9	0.0036
	50	0.1477	0.3990	0.3332	0.0004	0.0333	32.9	0.0133
	120	0.1212	0.4640	0.7489	0.0008	0.0629	64.9	0.0109
	175	0.1864	0.8579	1.4773	0.0016	0.0798	144	0.0168
	250	0.2226	0.6786	2.0933	0.0025	0.0813	223	0.0201
	500	0.2835	1.2125	2.6464	0.0031	0.1024	311	0.0256
	750	0.5377	2.2784	5.0912	0.0059	0.1947	587	0.0485
Trenchers Composite		0.1350	0.4606	0.6384	0.0007	0.0517	58.7	0.0122
Welders	15	0.0098	0.0408	0.0599	0.0001	0.0038	6.2	0.0009
	25	0.0193	0.0555	0.0996	0.0001	0.0058	11.3	0.0017
	50	0.0886	0.2652	0.2435	0.0003	0.0219	26.0	0.0080
	120	0.0601	0.2632	0.3850	0.0005	0.0328	39.5	0.0054
	175	0.1021	0.5438	0.8502	0.0011	0.0448	98.2	0.0092
	250	0.0801	0.2545	0.9129	0.0013	0.0274	119	0.0072
	500	0.1028	0.3644	1.1332	0.0016	0.0359	168	0.0093
Welders Composite		0.0589	0.2041	0.2436	0.0003	0.0206	25.6	0.0053

Karman K-max

Powerplant shaft horsepower =	1500
Mean operation power =	80%
Operating shaft horsepower =	1200
Fuel Flow (kilograms per second) =	0.078851783
Fuel Flow (kilograms per hour) =	283.8664194
Fuel Flow (gallons/hour) =	91.49296904

Emission Factors (g/kg)

NOx =	11.82907
ROG =	1.803541
CO =	2.162346
PM =	0.320448

Emission Factors (lb/hour)

NOx =	7.402726
ROG =	1.12867
CO =	1.353213
PM =	0.200539

CO2 Emissions

9.57	kg/gallon
lb/hour	1930.321

http://www.eia.gov/oiaf/1605/coefficients.html

Hughes 500 E Helicopter

Powerplant shaft horsepower =	420
Mean operation power =	80%
Operating shaft horsepower =	336
Fuel Flow (kilograms per second) =	0.031188
Fuel Flow (kilograms per hour) =	112.2766
Fuel Flow (gallons/hour) =	36.18788

Emission Factors (g/kg)

NOx =	5.742517
ROG =	7.132645
CO =	8.883413
PM =	0.179692

Emission Factors (lb/hour)

NOx =	1.421408
ROG =	1.765497
CO =	2.198853
PM =	0.044478

CO2 Emissions

9.57	kg/gallon
lb/hour	763.4927

Bell 212

Powerplant shaft horsepower =	1800
Mean operation power =	80%
Operating shaft horsepower =	1440
Fuel Flow (kilograms per second) =	0.089816
Fuel Flow (kilograms per hour) =	323.3384
Fuel Flow (gallons/hour) =	104.2152

Emission Factors (g/kg)

NOx =	13.11903
ROG =	1.481161
CO =	1.766176
PM =	0.346829

Emission Factors (lb/hour)

NOx =	9.351604
ROG =	1.055812
CO =	1.258978
PM =	0.247229

CO2 Emissions

9.57	kg/gallon
lb/hour	2198.734

Operational SF6

GHG emissions associated with SF6 leakage:

E = L/100 x MSF6 x 23,200 x 4.536 x 10-4

where:

E = GHG emissions from SF6 leakage (metric tons CO2 equivalent per year)
L = SF6 leakage rate (%/yr) = 0.5
MSF6 = Total "weight" of SF6 in new circuit breaker (lb.) = 155
SF6 global warming potential = 23,900
Conversion factor for metric tons per pound = 0.000454
Number of Circuit Breakers = 3

E= 25.20542

Fugitive Dust per acre

Fugitive Dust Clearing Parameters

Silt Content[a]	Moisture Content[a]	Hours/day
6.9	7.9	8

Equation:

Clearing[b]: PM10 Emissions (lb/day) = 0.75 x (silt content$^{1.5}$)/(moisture content$^{1.4}$) x hours operated (hr/day) x (1 - control efficiency)

PM10	PM2.5
lb/day	lb/day
6.02	1.3

Fugitive Dust Stockpiling Parameters

Silt Content[a]	Precipitation Days[c]	Mean Wind Speed Percent[d]	TSP Fraction	Area[e] (acres)
6.9	10	100	0.5	0.1

Equation:

Storage Piles[f]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

PM10	PM2.5
lb/day	lb/day
3.94	0.8

Total Fugitive Dust

PM10	PM2.5
lb/day	lb/day
9.96	2.09

a) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Correction Factors Applicable to the Predictive Emission Factor Equations

b) USEPA, AP-42, July 1998, Table 11.9-1, Equation for bulldozer, overburden, ≤ 10 µm

c) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993

d) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph

e) Assumed storage piles are 0.1 acres in size

f) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggregate Handling and Storage Piles, Equation 1