

Energy Use Summary

Construction Phase (gallons/construction period)	Gasoline	Diesel		
Construction Vehicles	14,948	17,180		
Worker Trips	106,613	425		
Vendor Trips	1,292	18		
Haul Trucks	6	4,566		
Total	122,858	22,189		

Operations Phase (gallons/year)	Gasoline	Diesel	Natural Gas (kBTU/yr)	Electricity (kWh/yr)
Residential	220,701	19,972	3,759,630	1,307,870
Strip Mall	0	0	13,000	74,360
Parking	0	0	0	362,780
	0	0	0	0
	0	0	0	0
	0	0	0	0
All Land Uses	220,701	19,972	3,772,630	1,745,010

Operations Onroad Energy Use

Vehicle Types	MPG by Fuel Type			Population by Fuel Type			
	GAS	DSL	ELEC	GAS	DSL	ELEC	Total
	LDA	31.7	50.0		6,635,002	62,493	150,700
LDT1	27.2	22.9		758,468	361	7,123	758,828
LDT2	25.5	36.7		2,285,150	15,595	28,810	2,300,745
LHDT1	10.7	21.9		174,910	125,545		300,455
LHDT2	9.3	19.8		30,133	50,003		80,136
MCY	36.4			305,045			305,045
MDV	20.7	28.1		1,589,863	36,128	16,377	1,625,991
MH	5.2	10.7		34,680	13,123		47,802
MHDT	5.1	11.2		25,624	122,124		147,749
HHDT	4.3	7.1		75	109,819		109,894
OBUS	5.1	8.7		5,955	4,287		10,242
SBUS	9.2	7.7		2,784	6,672		9,455
UBUS	5.1	5.9		958	13	16	971

Trips/Dav	Trips/day	Trips/day	Trips/day	Total	VMT/day	VMT/day	VMT/day	Trip Length
Land Use	Weekday	Saturday	Sunday	Weekly	Weekday	Saturday	Sunday	
Residential and Strip Mall	2,035.00	1,953.00	1,689.00	13817	18,142	17,411	15,057	8.91

Total 2,035 1,953 1,689

Fleet Mix	LDA	LDT1	LDT2	MDV	LHDT1	LHDT2	MHDT	HHDT	OBUS	UBUS	MCY	SBUS	MH	Total
Land Use	0.672006	0.045726	0.165417	0.062031	0.018096	0.005993	0.010339	0.010339	0.001692	0.001688	0.004994	0.000603	0.001076	100.0%
Residential and Strip Mall														0.0%
														0.0%
														0.0%
														0.0%

Vehicle Trips

Weekday Trips	LDA	LDT1	LDT2	MDV	LHDT1	LHDT2	MHDT	HHDT	Obus	Ubus	MCY	Sbus	MH	Total	Daily VMT
Residential and Strip Mall	1368	93	337	126	37	12	21	21	3	3	10	1	2	2,035	18,141.87
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Total	1368	93	337	126	37	12	21	21	3	3	10	1	2	2,035	

Saturday Trips	LDA	LDT1	LDT2	MDV	LHDT1	LHDT2	MHDT	HHDT	Obus	Ubus	MCY	Sbus	MH	Total	Daily VMT
Residential and Strip Mall	1312	89	323	121	35	12	20	20	3	3	10	1	2	1,953	17,410.85
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Total	1312	89	323	121	35	12	20	20	3	3	10	1	2	1,953	

Sunday Trips	LDA	LDT1	LDT2	MDV	LHDT1	LHDT2	MHDT	HHDT	Obus	Ubus	MCY	Sbus	MH	Total	Daily VMT
Residential and Strip Mall	1135	77	279	105	31	10	17	17	3	3	8	1	2	1,689	15,057.31
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Total	1135	77	279	105	31	10	17	17	3	3	8	1	2	1,689	

Gallons of Fuel

Gasoline	LDA	LDT1	LDT2	MDV	LHDT1	LHDT2	MHDT	HHDT	Obus	Ubus	MCY	Sbus	MH	Total
Residential and Strip Mall	134,505	10,777	41,204	18,795	6,332	1,556	2,234	11	1,233	2,094	879	124	958	220,701
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	134,505	10,777	41,204	18,795	6,332	1,556	2,234	11	1,233	2,094	879	124	958	220,701

Diesel	LDA	LDT1	LDT2	MDV	OBUS	LHDT2	MHDT	HHDT	Obus	Ubus	MCY	Sbus	MH	Total
Residential and Strip Mall	803	6	196	314	2,213	1,212	4,885	9,269	519	24	0	355	177	19,972
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	803	6	196	314	2,213	1,212	4,885	9,269	519	24	0	355	177	19,972

Total Gallons of Diesel and Gasoline 240,674

Average MPG 27

Utilities

	Natural Gas Use	Electricity Use
Land Use	kBTU/yr	kWh/yr
Residential	3,759,630	1,307,870
Strip Mall	13000	74,360
Parking		362,780
	0	
	0	
	0	
Total	3,772,630	1,745,010

Offroad Construction Equipment Energy Use

PhaseName	OffRoadEquipmentType	OffRoadEquipmentUnitA	UsageHours	HorsePower	Load Factor	Horsepower Category	Num Days	Year	Fuel Consumption Rate		Total Fuel Consumption (gal/construction period)
		mount							(gal/hour)	Fuel Type	
Demolition	Concrete/Industrial Saws	2	8	81	0.73	100	88	2021	4.7	Gasoline	4,845
Demolition	Excavators	2	8	158	0.38	175	88	2021	2.9	Diesel	1,544
Demolition	Generator Sets	2	8	84	0.74	100	88	2021	5.2	Gasoline	5,421
Demolition	Rubber Tired Dozers	0	0	247	0.4	300	88	2021	4.5	Diesel	0
Demolition	Tractors/Loaders/Backhoes	2	8	97	0.37	100	88	2021	1.6	Diesel	828
Grading-Excavation	Excavators	2	8	158	0.38	175	102	2021	2.9	Diesel	1,790
Grading-Excavation	Graders	0	8	187	0.41	175	102	2021	3.1	Diesel	0
Grading-Excavation	Plate Compactors	1	8	8	0.43	25	102	2021	0.3	Gasoline	110
Grading-Excavation	Rubber Tired Dozers	1	8	247	0.4	300	102	2021	4.5	Diesel	1,458
Grading-Excavation	Scrapers	0	8	367	0.48	300	102	2021	5.6	Diesel	0
Grading-Excavation	Tractors/Loaders/Backhoes	2	8	97	0.37	100	102	2021	1.6	Diesel	959
Building Construction	Cranes	0	7	231	0.29	300	469	2021	3.3	Diesel	0
Building Construction	Forklifts	2	8	89	0.2	100	469	2021	2.0	Diesel	3,005
Building Construction	Generator Sets	0	8	84	0.74	100	469	2021	5.2	Gasoline	0
Building Construction	Plate Compactors	1	8	8	0.43	25	469	2021	0.3	Gasoline	505
Building Construction	Tractors/Loaders/Backhoes	1	8	97	0.37	100	469	2021	1.6	Diesel	2,206
Building Construction	Welders	1	8	46	0.45	50	469	2021	2.4	Gasoline	4,067
Architectural Coating	Air Compressors	1	6	78	0.48	100	313	2021	1.3	Diesel	1,194
Paving	Excavators	1	8	158	0.38	175	129	2021	2.9	Diesel	1,132
Paving	Pavers	0	8	130	0.42	100	129	2021	1.7	Diesel	0
Paving	Paving Equipment	2	8	132	0.36	100	129	2021	1.6	Diesel	1,222
Paving	Rollers	0	8	80	0.38	100	129	2021	1.7	Diesel	0
Paving	Rubber Tired Dozers	1	8	247	0.4	300	129	2021	4.5	Diesel	1,843
									Total	Gasoline	14,948
									Total	Diesel	17,180

Onroad Construction Energy Use

Year 2021

Vehicle Types	MPG by Fuel Type			Population by Fuel Type			Total
	GAS	DSL	ELEC	GAS	DSL	ELEC	
LDA	30.0	47.5		6,444,755	55,086	107,407	6,499,841
LDT1	25.8	22.3		715,053	416	3,766	715,469
LDT2	23.8	34.7		2,207,489	12,809	17,083	2,220,298
LHDT1	10.4	21.2		176,982	113,082		290,064
LHDT2	9.1	19.2		29,883	44,616		74,500
MCY	36.4			286,161			286,161
MDV	19.4	26.6		1,569,538	30,444	7,447	1,599,981
MH	5.1	10.5		35,587	12,386		47,973
MHDT	5.0	10.4		25,313	122,609		147,922
HHDT	4.0	6.6		82	106,417		106,499
OBUS	5.0	8.2		5,971	4,250		10,222
SBUS	9.1	7.5		2,479	6,589		9,067
UBUS	4.8	6.0		944	14	17	958

Input

Phase Name	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length
Demolition	20	0	500	14.7	6.9	20
Grading-Excavation	15	0	1000	14.7	6.9	20
Building Construction	318	6	0	14.7	6.9	20
Architectural Coating	64	2	0	14.7	6.9	20
Paving	10	2	0	14.7	6.9	20

Adjusted

Demolition	1760	0	500	14.7	6.9	20
Grading-Excavation	1530	0	1000	14.7	6.9	20
Building Construction	149142	2814	0	14.7	6.9	20
Architectural Coating	20032	626	0	14.7	6.9	20
Paving	1290	258	0	14.7	6.9	20

Total

Gasoline Consumption			Diesel Consumption		
Worker	Vendor	Haul	Worker	Vendor	Haul
1,080	0	2	4	0	1,522
939	0	4	4	0	3,044
91,511	983	0	365	14	0
12,291	219	0	49	3	0
792	90	0	3	1	0
106,613	1,292	6	425	18	4,566