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SUBJECT: MURANAKA WAREHOUSE ENERGY TABLES

The following Energy Tables were prepared for the proposed Muranaka Warehouse development (Project) which located on a 15.2-acre currently vacant site on the east side of Decker Street and south of Harley Knox Boulevard in the Mead Valley area of unincorporated County of Riverside.

PROJECT CONSTRUCTION POWER COST

Land Use	Power Cost (per 1,000 SF of building per month of construction)	Total Size (1,000 SF)	Construction Duration (months)	Project Construction Power Cost
Fulfillment Center	\$2.37	239.308	18	\$10,208.88
Parking Lot	\$2.37	41.610	18	\$1,775.08
Landscape	\$2.37	78.380	18	\$3,343.69
Other Asphalt Surfaces	\$2.37	302.815	18	\$12,918.10
TOTAL PROJECT CONSTRUCTION COST				\$28,245.75

PROJECT CONSTRUCTION ELECTRICITY USAGE

Land Use	Cost per kWh	Project Construction Electricity Usage (kWh)
Fulfillment Center	\$0.11	91,477
Parking Lot	\$0.11	15,906
Landscape	\$0.11	29,961
Other Asphalt Surfaces	\$0.11	115,754
TOTAL PROJECT CONSTRUCTION ELECTRICITY USAGE (kWh)		253,098

CONSTRUCTION EQUIPMENT FUEL CONSUMPTION ESTIMATES

Construction Activity	Duration	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption (gal. diesel fuel)
Site Preparation	10	Crawler Tractors	212	4	8	0.43	2,917	1,577
		Rubber Tired Dozers	247	3	8	0.40	2,371	1,282
Grading	30	Crawler Tractors	212	2	8	0.43	1,459	2,365
		Excavators	158	2	8	0.38	961	1,558
		Graders	187	1	8	0.41	613	995
		Rubber Tired Dozers	247	1	8	0.40	790	1,282
		Scrapers	367	2	8	0.48	2,819	4,571
Building Construction	300	Cranes	231	1	8	0.29	536	8,691
		Forklifts	89	3	8	0.20	427	6,928
		Generator Sets	84	1	8	0.74	497	8,064
		Tractors/Loaders/Backhoes	97	3	8	0.37	861	13,968
		Welders	46	1	8	0.45	166	2,685
Paving	20	Pavers	130	2	8	0.42	874	944
		Paving Equipment	132	2	8	0.36	760	822
		Rollers	80	2	8	0.38	486	526
Architectural Coating	40	Air Compressors	78	1	8	0.48	300	648
TOTAL CONSTRUCTION FUEL DEMAND (GALLONS DIESEL FUEL)								56,904

CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES (LDA)¹

Construction Activity	Duration (Days)	Worker Trips / Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2022						
Site Preparation	10	9	14.7	1,323	32.77	40
Grading (including Blasting)	30	10	14.7	4,410	32.77	135
Building Construction	195	139	14.7	398,444	32.77	12,159
2023						
Building Construction	105	139	14.7	214,547	33.79	6,350
Paving	20	8	14.7	2,352	33.79	70
Architectural Coating	40	28	14.7	16,464	33.79	487
PROJECT CONSTRUCTION WORKER (LDA) FUEL CONSUMPTION						19,241

CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES (LDT1)²

Construction Activity	Duration (Days)	Worker Trips / Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2022						
Site Preparation	10	5	14.7	735	27.55	27
Grading (including Blasting)	30	5	14.7	2,205	27.55	80
Building Construction	195	70	14.7	200,655	27.55	7,283
2023						
Building Construction	105	70	14.7	108,045	28.38	3,807
Paving	20	4	14.7	1,176	28.38	41
Architectural Coating	40	14	14.7	8,232	28.38	290
PROJECT CONSTRUCTION WORKER (LDT1) FUEL CONSUMPTION						11,528

¹ Based on CalEEMod methodology, it is assumed that 50% of all vendor trips are from light-duty-auto vehicles (LDA), 25% are from light-duty-trucks (LDT1), and 25% are from light-duty-trucks (LDT2)

² Based on CalEEMod methodology, it is assumed that 50% of all vendor trips are from light-duty-auto vehicles (LDA), 25% are from light-duty-trucks (LDT1), and 25% are from light-duty-trucks (LDT2)

CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES (LDT2)³

Construction Activity	Duration (Days)	Worker Trips / Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2022						
Site Preparation	10	5	14.7	735	26.03	28
Grading (including Blasting)	30	5	14.7	2,205	26.03	85
Building Construction	195	70	14.7	200,655	26.03	7,708
2023						
Building Construction	105	70	14.7	108,045	27.02	3,999
Paving	20	4	14.7	1,176	27.02	44
Architectural Coating	40	14	14.7	8,232	27.02	305
PROJECT CONSTRUCTION WORKER (LDT2) FUEL CONSUMPTION						12,168

CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES (MHDT)

Construction Activity	Duration (Days)	Vendor Trips / Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2022						
Site Preparation	10	2	6.9	138	10.34	13
Grading (including Blasting)	30	4	6.9	828	10.34	80
Building Construction	195	41	6.9	55,166	10.34	5,336
2023						
Building Construction	105	41	6.9	29,705	10.74	2,766
Paving	20	3	6.9	414	10.74	39
Architectural Coating	40	6	6.9	1,656	10.74	154
TOTAL CONSTRUCTION VENDOR (MHDT) FUEL CONSUMPTION						8,388

³ Based on CalEEMod methodology, it is assumed that 50% of all vendor trips are from light-duty-auto vehicles (LDA), 25% are from light-duty-trucks (LDT1), and 25% are from light-duty-trucks (LDT2)

CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES (HHDT)

Construction Activity	Duration (Days)	Vendor/Hauling Trips / Day	Trip Length (miles)	VMT	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Vendor						
2022						
Site Preparation	10	2	6.9	138	7.06	20
Grading (including Blasting)	30	4	6.9	828	7.06	117
Building Construction	195	41	6.9	55,166	7.06	7,812
2023						
Building Construction	105	41	6.9	29,705	7.44	3,995
Paving	20	3	6.9	414	7.44	56
Architectural Coating	40	6	6.9	1,656	7.44	223
Hauling						
2022						
Grading (including Blasting)	30	18	20	10,800	7.06	1,529
TOTAL CONSTRUCTION VENDOR/HAULING (HHDT) FUEL CONSUMPTION						13,751

PROJECT TRAFFIC ANNUAL FUEL CONSUMPTION

Vehicle Type	Annual VMT	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
LDA	1,034,343	33.79	30,614
LDT1	108,283	28.38	3,815
LDT2	333,827	27.02	12,354
MDV	272,772	21.45	12,714
MCY	46,510	37.90	1,227
LHDT1	148,410	14.58	10,180
LHDT2	40,813	15.26	2,675
MHDT	189,355	10.74	17,633
HHDT	946,511	7.44	127,294
TOTAL (ALL VEHICLES)	3,120,823		218,507

PROJECT ANNUAL ENERGY DEMAND SUMMARY

Land Use	Natural Gas Demand (kBTU/year)
Fulfillment Center	481,009
Parking Lot	0
Landscape	0
Other Asphalt Surfaces	0
<i>TOTAL PROJECT NATURAL GAS DEMAND</i>	<i>481,009</i>
Land Use	Electricity Demand (kWh/year)
Fulfillment Center	555,195
Parking Lot	14,564
Landscape	0
Other Asphalt Surfaces	0
<i>TOTAL PROJECT ELECTRICITY DEMAND</i>	<i>569,759</i>