



February 6, 2019

Ms. Tracy Zinn
T&B Planning, Inc.
17542 17th Street, Suite 100
Tustin, CA 92780

SUBJECT: 8978 HAVEN AVENUE WAREHOUSE ENERGY TABLES

The following Energy Tables were prepared for the proposed 8978 Haven Avenue Warehouse development (referred to as “Project”) located west of Haven Avenue at 8th Street in the City of Rancho Cucamonga. It is our understanding that the Project is proposed to include the development of 120,628 square feet of general warehouse use which will be developed in a single phase with an Opening Year of 2020.

PROJECT CONSTRUCTION POWER COST

Power Cost (per 1,000 SF of building per month of construction)	Total Building Size (1,000 SF)	Construction Duration (months)	Total Project Construction Power Cost
\$2.32	120.628	7	\$1,959.00

PROJECT CONSTRUCTION ELECTRICITY USAGE

Cost per kWh	Total Project Construction Electricity Usage (kWh)
\$0.07	27,986

CONSTRUCTION EQUIPMENT FUEL CONSUMPTION ESTIMATES

Activity/Duration	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption (gal. diesel fuel)
Demolition (20 days)	Concrete/Industrial Saws	81	1	8	0.73	473	511
	Excavators	158	3	8	0.38	1,441	1,558
	Rubber Tired Dozers	247	2	8	0.40	1,581	1,709
Site Preparation (5 days)	Crawler Tractors	212	4	8	0.43	2,917	788
	Rubber Tired Dozers	247	3	8	0.40	2,371	641
Grading (8 days)	Crawler Tractors	212	3	8	0.43	2,188	946
	Excavators	158	1	8	0.38	480	208
	Graders	187	1	8	0.41	613	265
	Rubber Tired Dozers	247	1	8	0.40	790	342
Building Construction (100 days)	Cranes	231	1	8	0.29	536	2,897
	Crawler Tractors	212	3	8	0.43	2,188	11,826
	Forklifts	89	3	8	0.20	427	2,309
	Generator Sets	84	1	8	0.74	497	2,688
	Welders	46	1	8	0.45	166	895
Architectural Coating (18 days)	Air Compressors	78	1	8	0.48	300	291
Paving (18 days)	Cement and Mortar Mixers	9	2	8	0.56	81	78
	Crawler Tractors	212	1	8	0.43	729	710
	Pavers	130	2	8	0.42	874	850
	Paving Equipment	132	2	8	0.36	760	740
	Rollers	80	2	8	0.38	486	473
CONSTRUCTION FUEL DEMAND (gallons diesel fuel)							30,726

CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES

Construction Activity	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Demolition (20 days)	15	14.7	4,410	28.57	154
Site Preparation (5 days)	18	14.7	1,323	28.57	46
Grading (8 days)	15	14.7	1,764	28.57	62
Building Construction (100 days)	67	14.7	98,490	28.57	3,447
Architectural Coating (18 days)	13	14.7	3,440	28.57	120
Paving (18 days)	20	14.7	5,292	28.57	185
TOTAL CONSTRUCTION WORKER FUEL CONSUMPTION					4,015

CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES (MHD TRUCKS)

Construction Activity	Vendor Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Vendor					
Building Construction (100 days)	13	6.9	8,970	8.50	1,055

CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES (HHD TRUCKS)

Construction Activity	Vendor Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Vendor					
Building Construction (100 days)	13	6.9	8,970	5.85	1,533
Hauling					
Demolition (20 days)	405	20	162,000	5.85	27,694
PROJECT MEDIUM-DUTY & HEAVY-DUTY TRUCK TOTAL					30,283

PROJECT-GENERATED PASSENGER CAR TRAFFIC ANNUAL FUEL CONSUMPTION

Annual Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
746,596	28.57	26,129

PROJECT-GENERATED LHD TRUCK TRAFFIC ANNUAL FUEL CONSUMPTION

Annual Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
112,148	14.08	7,964

PROJECT-GENERATED MHD TRUCK TRAFFIC ANNUAL FUEL CONSUMPTION

Annual Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
139,193	8.50	16,377

PROJECT-GENERATED HHD TRUCK TRAFFIC ANNUAL FUEL CONSUMPTION

Annual Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
421,413	5.85	72,041

PROJECT-GENERATED TRAFFIC ANNUAL FUEL CONSUMPTION (ALL VEHICLES)

Vehicle Type	Annual Miles Traveled	Estimated Annual Fuel Consumption (gallons)
Light Duty Autos	746,596	26,129
LHD Trucks	112,148	7,964
MHD Trucks	139,193	16,377
HHD Trucks	421,413	72,041
Total (All Vehicles)	1,419,350	122,511

PROJECT ANNUAL OPERATIONAL ENERGY DEMAND SUMMARY

Natural Gas Demand	kBTU/year
Parking Lot	0
Unrefrigerated Warehouse	244,875
Total Project Natural Gas Demand	244,875
Electricity Demand	kWh/year
Parking Lot	14,000
Unrefrigerated Warehouse	284,682
Total Project Electricity Demand	298,682