

HIGHLAND SITE

COMMERCIAL ELECTRIC SERVICE CALCULATION

Building Area Summary				sqft
Processing Building	12,000	(100'x60' 2-story)		
Nursery	22,000			
Mixed Light Canopy	84,560			
Total:				118,560 sqft
Processing Building				LOADS VA
<u>General Interior Lighting</u>				
12,000	sq. ft. at	1	VA per sq. ft.	12,000
<u>HVAC / Air Conditioning</u>				
12,000	sq. ft. at	4.5	VA per sq. ft.	54,000
<u>Receptacles</u>				
12,000	sq. ft. at	1	VA per sq. ft. (220.12.I)	12,000
Total Demand Receptacle Loads (220.44):				11,000
<u>Other:</u>				
Trimmers	5	at	500 VA ea.	2,500
Break Room Microwave	4	at	1,800 VA ea.	7,200
Break Room Ice Machine	1	at	600 VA ea.	600
Break Room Refrigerator	1	at	900 VA ea.	900
Break Room Freezer	1	at	1,200 VA ea.	1,200
Break Room Dishwasher	1	at	1,200 VA ea.	1,200
Site Lighting	1	at	3,000 VA ea.	3,000
EV Chargers	2	at	9,600 VA ea.	19,200
Tel/Data, Security, Fire Alarm	1	at	3,000 VA ea.	3,000
Total Demand VA:				115,800
Amps at 208V, 3PH:				321
Amps at 480V, 3PH:				139
Nursery				
<u>General Interior Lighting</u>				
22,000	sq. ft. at	0.75	VA per sq. ft.	16,500
<u>Grow Lighting</u>				
20,000	sq. ft. at	23	VA per sq. ft.	460,000
<u>HVAC / Air Conditioning</u>				
22,000	sq. ft. at	4.5	VA per sq. ft.	99,000
<u>Receptacles</u>				
22,000	sq. ft. at	1	VA per sq. ft. (220.12.I)	22,000
Total Demand Receptacle Loads (220.44):				16,000
<u>Other:</u>				
Site Lighting	1	at	500 VA ea.	500
Tel/Data, Security, Fire Alarm	1	at	1,000 VA ea.	1,000
Total Demand VA:				593,000
Amps at 208V, 3PH:				1,646
Amps at 480V, 3PH:				713
Mixed Light Canopy				
<u>General Interior Lighting</u>				
84,560	sq. ft. at	0.4	VA per sq. ft.	33,824
<u>Grow Lighting</u>				
80,000	sq. ft. at	23	VA per sq. ft.	1,840,000
<u>HVAC / Air Conditioning</u>				
84,560	sq. ft. at	4.5	VA per sq. ft.	380,520
<u>Receptacles</u>				
84,560	sq. ft. at	0.25	VA per sq. ft. (220.12.I)	21,140
Total Demand Receptacle Loads (220.44):				15,570
<u>Other:</u>				
Site Lighting	1	at	500 VA ea.	500
Tel/Data, Security, Fire Alarm	1	at	1,000 VA ea.	1,000
Total Demand VA:				2,271,414
Amps at 208V, 3PH:				6,305
Amps at 480V, 3PH:				2,732
Miscellaneous Loads				
Well Pump (10 HP)	1	at	11,000 VA ea.	11,000
Site Lighting	1	at	5,000 VA ea.	5,000
Misc. Irrigation Pumps (1 HP ea.)	4	at	1,700 VA ea.	6,800
Total Demand VA:				22,800
Amps at 208V, 3PH:				63
Amps at 480V, 3PH:				27

TOTAL DEMAND LOAD FOR THE SITE: 3,003 kVA

TOTAL DEMAND LOAD - AMPERES AT 208/120V, 3PH: 8,336 AMPS

TOTAL DEMAND LOAD - AMPERES AT 480/277V, 3PH: 3,612 AMPS