

Preliminary Electrical Load Analysis

SERVICE - 480/277V,3PH,4W - 2000A MDP

Project : 19001 - SCI Forest - B6

Date: 5/8/2019

	<i>Amps @480/3PH</i>	<i>kVA</i>
(1) Existing Electrical Service Capacity:	1600.00	1328.64

(2) Existing Connected loads:		
Lighting:	130.36	108.25
Elevator:	40.34	33.50
Receptacles:	37.58	31.21
Mechanical:	159.24	132.24
Miscellaneous:	112.69	93.58
TOTAL:	480.22	398.78

Available Electrical Capacity:	1119.78	929.87
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(3) New Electrical Load:						
<i>DESCRIPTION</i>	<i>QTY</i>	<i>FLA</i>	<i>Total FLA</i>	<i>V/PH</i>	<i>PH</i>	<i>kVA</i>
F - MCH13	4	6	24	120	1	2.88
E - MCHW18	6	6	36	120	1	4.32
J - TF1420 saw	1	3.5	3.5	480	3	2.91
L - 13' Hydraulic Shear	1	36	36	480	3	29.93
M - 13' Hydraulic Press Brake	1	45.5	45.5	480	3	37.83
K - Iron Worker	1	27	27	480	3	22.45
N - Drill Press	1	24	24	208	3	8.65
O - Milling Machine	1	5	5	480	3	4.16
S - Fume Extractor	3	20	60	120	1	7.20
Q - Plasma Cutter	1	30	30	208	3	10.81
U - Handheld Grinder 4.5"	6	15	90	120	1	10.80
P - Mig Welder (portable)	8	40	320	208	3	115.29
T - Wheel Refinishing Unit:	1	223.60	223.6	480	3	185.90
Phase 1 - Overhead Door	1	6.90	6.9	208	1	1.44
Phase 1 - OH Door Air Curtain	1	5.06	5.06	480	3	4.21
Phase 1 - Motorized Gate	1	4.80	4.8	208	3	1.73
R - Bender	1	21.00	21	480	3	17.46
TOTAL @480/3PH:			567.68			471.40

Remaining Electrical Capacity:	552.10	458.47
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	<i>Amps @480/3PH</i>	<i>kVA</i>
New Electrical loads:		
A - Sand Blast Booth:	140.00	116.26
B - Paint Booth:	98.68	81.94
C - Dry Booth Cure Chamber:	53.00	44.01
TOTAL:	291.68	242.21

Final Remaining Electrical Capacity:	260.42	216.26
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LIST OF MACHINERY / EQUIPMENT

- (A) SAND BLAST BOOTH
- (B) PAINT BOOTH
- (C) DRY BOOTH
- (D) AIR REPLACEMENT UNIT
- (E) HEAVY DUTY LIFT SYSTEM
- (F) JACK STANDS
- (G) FORK LIFTS
- (H) HEAVY DUTY FORK LIFT
- (I) OIL WATER SEPARATION SYSTEM
- (J) UPRIGHT BAND SAW
- (K) IRON WORKER
- (L) SHEAR
- (M) BRAKE PRESS
- (N) DRILL PRESS
- (O) MILL
- (P) PORTABLE GAS WELDERS
- (Q) PLASMA CUTTER
- (R) BENDER

NOTE:

(1) 80% of 2000A main circuit breaker used unless 100% rated breaker is installed. Owner to confirm.

(2) Values obtained from the existing drawings

(3) Load information provided by owner. kVA/W calculations were adjusted for standard voltage rating and # of phase. Where the phase values are not clear, 3ph is assumed. Exact load will be confirmed after basis of design equipment specifications are provided. These loads exclude Paint booth, Dry booth cure chamber and Sand blast booth.

Item E and F - confirm electrical requirement and identify which one is the column lift being changed to 220/3PH. Item F - identify location.

Item S - identify location.

Item U and P - clarify how many will be used at one time to determine the number of outlets. Currently showing 4 outlets for each item.