ELECTRICAL LOAD ANALYSIS

I. LIGHTING AND GENERAL POWER PER NEC 220:

	DESCRIPTION OF LOADS	SQ. FT.	V/A PER SQ. FT.	NO. ROOMS	TOTAL VA	DEMAND LOAD
A.	GUEST ROOMS					
	TOTAL GUESTROOMS	38,992	3		116,976	
				SUBTOTAL=	116,976	
B.	CORRIDORS	7,296	0.50		3,648	
C.	STORAGE	10,425	0.25		2,606	
D.	OUTSIDE LIGHTING Roof Patios, canopies, sidewalks	6229			4,500	
				SUBTOTAL=	10,754	
F.	LIGHTING LOAD CALCULATIONS: SUBTOTAL GENERAL LIGHTING AND POWER				127,730	
	1.) 1st 20,000 W @ 50%				10,000	
	2.) NEXT 80,000 W @40%				32,000	
	3.) REMAINDER OF WATTAGE @ 30%				8,319	
					TOTAL =	50,319
G.	COMMERCIAL AREA LIGHTING					
	1.) 2 W PER SQ.FT. 14,824 SQ. FT. @100%				29,648	
H.	COMM. AREA RECEPTACLES (1 W PER SQ. FT.)				14,824	
	1.) 1st 10,000 WATTS @ 100%				10,000	
	2.) REMAINDER OF WATTAGE @ 50%				2,412	
					TOTAL =	42,060

II. GUESTROOM HVAC

A.	WSHP-A	@mca	1,088 V-A	90 ROOMS	97,906
B.	WSHP-B	@mca	1,785 V-A	14 ROOMS	24,985
C.	WSHP-C	@mca	2,201 V-A	9 ROOMS	19,806

III. MISCELLANEOUS EQUIPMENT

A.	KITCHEN EQUIPMENT DEMAND LOAD PER PANEL SCHEDULES	connected load = 77,890	50,610
B.	ELEVATOR EQUIPMENT		88,200
C.	LAUNDRY EQUIPMENT	(estimated 9/30/13)	33,000
D.	JOCKEY /AIR COMPRESSOR		20,320
E.	SUMP PUMPS		9,400
F.	REMAINING PLUMBING EQUIPMENT		12,400
G.	COOLING TOWERS		66,560
H.	MAKE-UP AIR UNITS	(at full load amps)	76,650
I.	P-1, P-3(P-2 AND P-4 REDUNDANT AND CANNOT RUN SIMULTANEOUS TO 1 AND 3)		81,540
J.	HP-1	@fla	3,312
K.	HP-2	@fla	894
L.	HP-3	@fla	1,456
M.	HP-4	@fla	2,184
N.	HP-5	@fla	3,312
O.	HP-6	@fla	3,960
P.	HP-7	@fla	2,184
Q.	HP-8	@fla	3,960
R.	HP-9	@fla	3,312
S.	HP-10	@fla	3,960
T.	HP-11	@fla	3,960
U.	HP-12	@fla	1,789
V.	HP-13	@fla	2,184
W.	HP-14	@fla	2,184
X.	HP-15	@fla	2,184
Y.	HP-16	@fla	5,040
Z.	HP-17	@fla	3,960
AA.	HP-18	@fla	811
AB.	HP-19	@fla	7,560
AC.	HP-20	@fla	3,960
AD.	HP-21	@fla	1,789
AE.	HP-22	@fla	3,312
AF.	HP-23	@fla	3,960
AG.	HP-24A	@fla	13,464
AH.	HP-24B	@fla	6,048
AI.	TOWER FANS		1,000
AJ.	F-1		3,990
AK.	S-1		6,319
AL.	S-2		6,319
AM.	S-3		1,746
AN.	S-4		3,990
AO.	S-5		1,176
AP.	S-6		696
AQ.	S-7		1,176
AR.	25% LARGEST MOTOR		18,720
		DEMAND TOTAL=	809,627

TOTAL AMPERES @ 120/208V, 3 - PH, 4 - W = **2,249** AMPERES
60HP FIRE PUMP TAPPED AHEAD OF THE MAIN

PANEL SCHEDULE

CALLOUT	TOTAL CONNECTED AMPS	TOTAL CALCULATED AMPS	BUS AMPS	POLES	IG BUS	LOCATION	FEEDER SIZE	UPSTREAM CIRCUIT	UPSTREAM BREAKER AND POLES
1CK	140	102	200	42	NO	KITCHEN BY FREIGHT ELEVATOR	2-1/2"C, 3#250KCMIL AL, #250KCMIL AL N, #4 AL G	MSB-11	200/3
2B	157	157	200	42	NO	ROOM 007	2-1/2"C, 3#250KCMIL AL, #250KCMIL AL N, #4 AL G	MSB-25	200/3
2CK	109	85.3	200	42	NO	SUB-BASEMENT	2-1/2"C, 3#250KCMIL AL, #250KCMIL AL N, #4 AL G	MSB-12	200/3
2L	69	60.1	100	42	NO	ROOM 111	1-1/2"C, 3#1/0 AL, #1/0 AL N, #6 AL G	MSB-28	100/3
2SB	384	381	400	42	NO	ROOM 007	(2)2-1/2"C, 3#250KCMIL AL, #250KCMIL AL N, #1 AL G	MSB-24	400/3
3B	147	153	200	42	NO	ROOM 007	2-1/2"C, 3#250KCMIL AL, #250KCMIL AL N, #4 AL G	MSB-27	200/3
B	120	105	200	42	NO	ELEC 007	2"C, 3#3/0 AL, #3/0 AL N, #4 AL G	MSB-16	150/3
EM	84.3	103	100	42	NO	ROOM 008	1-1/2"C, 3#1/0 AL, #1/0 AL N, #6 AL G	ATS1-1	100/3
HM	135	132	200	42	YES	TELECOMM 006	2"C, 3#3/0 AL, #3/0 AL N, #4 AL G, #4 AL IG	MSB-17	150/3
L	86	96.3	200	42	NO	ROOM 111	2"C, 3#3/0 AL, #3/0 AL N, #4 AL G	MSB-18	200/3
LDY	251	202	400	42	NO	LAUNDRY 021	3-1/2"C, 3#500KCMIL AL, #500KCMIL AL N, #2 AL G	MSB-26	300/3
MR	264	287	400	42	NO	ROOM 700A	(2)2-1/2"C, 3#250KCMIL AL, #250KCMIL AL N, #1 AL G	MSB-19	400/3
R2	165	164	200	84	NO	ROOM 200C	2-1/2"C, 3#250KCMIL AL, #250KCMIL AL N, #4 AL G	MSB-1	200/3
R2A	40.1	40.5	100	20	NO	ROOM 200C	1-1/2"C, 3#1/0 AL, #1/0 AL N, #6 AL G	MSB-2	100/3
R3	174	172	200	84	NO	ROOM 300C	2-1/2"C, 3#250KCMIL AL, #250KCMIL AL N, #4 AL G	MSB-3	200/3
R3A	29.9	30.3	100	20	NO	ROOM 300C	1-1/2"C, 3#1/0 AL, #1/0 AL N, #6 AL G	MSB-4	100/3
R4	172	169	200	84	NO	ROOM 400C	2-1/2"C, 3#250KCMIL AL, #250KCMIL AL N, #4 AL G	MSB-5	200/3
R4A	25.4	25.9	100	20	NO	ROOM 400C	1-1/2"C, 3#1/0 AL, #1/0 AL N, #6 AL G	MSB-6	100/3
R5	197	194	200	84	NO	ROOM 500C	2-1/2"C, 3#250KCMIL AL, #250KCMIL AL N, #4 AL G	MSB-7	200/3
R5A	20.6	21	100	20	NO	ROOM 500C	1-1/2"C, 3#1/0 AL, #1/0 AL N, #6 AL G	MSB-8	100/3
R6	141	142	200	84	NO	ROOM 600C	2-1/2"C, 3#250KCMIL AL, #250KCMIL AL N, #4 AL G	MSB-9	200/3
R7	91.9	92.1	200	84	NO	ROOM 700A	2-1/2"C, 3#250KCMIL AL, #250KCMIL AL N, #4 AL G	MSB-10	200/3
SB	81.9	87.7	200	42	NO	SUBBASEMENT	2-1/2"C, 3#250KCMIL AL, #250KCMIL AL N, #4 AL G	MSB-15	200/3

ALL PANELBOARDS 120/208V 3PH 4W, 100% NEUTRAL, MAIN LUG ONLY

1 | PANELBOARD SCHEDULES
SCALE: NTS

CITY OF PORTLAND, MAINE RESURGAM
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 01/22/14

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Revisions:

1	13_10-14	Issue for Bid & Marriott Revw
2	13_10-21	Addendum #2
3	13_10-31	Addendum #3

Scale: As indicated

Date: 23 OCT 13

LOAD CALCULATION
PANELBOARD SCHEDULE

E6.02