PANELBOARD: RP-1A

SERVICE: 208/120V, 3PH, 4W + GND

BUS SIZE: 225A | LOAD:
MAIN DEVICE: 150A | CONN 20.0 kVA | DEM. 20.0 kVA | DEM. 55.7 Amps

NOTES: CIRCUIT BREAKER PANEL
1 - CONFIRM OCP SIZE WITH EQUIP. MANUFACTURER

CKT #	TRIP/ POLE		CIRCUIT DESCRIPTION	CONNECTED LOAD (VA) PHASE A		PHASE B		PHASE C		CIRCUIT DESCRIPTION		TRIP/ POLE	CKT #
1				672	540					REC-GENERAL		20/1	2
3	15/3		AC-1.3 (COMM. RM)			672	540			REC-GENERAL		20/1	4
5								672	540	REC-GENERAL		20/1	6
7	20/1		SPARE	0	360					REC-WASHRMS		20/1	8
9	20/1		REC-RAMP (GEN)			900	360			REC-WASHRMS		20/1	10
11	20/1		REC-TUNNEL (GEN)					540	720	REC-GENERAL		20/1	12
13	20/1		REC-EXTERIOR (GEN)	360	360					REC-OFFICE		20/1	14
15	20/1		SPARE			0	500			FUME HOOD		20/1	16
17	20/1		SPARE					0	1,500	WASHRM-ELEC DRYER	1	20/1	18
19	20/1		REC-ROVER	360	1,500					WASHRM-ELEC DRYER	1	20/1	20
21	20/1		REC-ROVER			540	360			REC-OFFICE		20/1	22
23	20/1		SPARE					0	1,000	REC-SIGNAGE		20/1	24
25	20/1		REC-GENERAL	720	0					SPARE		20/1	26
27	20/1		REC-OFFICE/WRKST.			900	540			REC-GENERAL		20/1	28
29	20/1		GARBAGE DISPOSAL					1,200	560	ELEV. PIT LTG/REC		20/1	30
31	20/1		REFRIGERATOR	1,200	0					SPARE		20/1	32
33	20/1		MICROWAVE			1,200	0			SPARE		20/1	34
35	20/1		REC-BREAK RM					180	0	SPARE		20/1	36
37	20/1		REC-BREAK RM	540	0					SPARE		20/1	38
39	20/1		SPARE			0	0			SPARE		20/1	40
41	20/1		SPARE					0	0	SPARE		20/1	42
TOTAL CONNECTED LOADS:				3,852	2,760	4,212	2,300	2,592	4,320				

PANELBOARD: RP-1B

SERVICE: 208/120V, 3PH, 4W + GND

BUS SIZE: 225A | LOAD:
MAIN DEVICE: 150A | CONN 22.1 kVA | DEM. 22.1 kVA | DEM. 61.3 Amps

NOTES: CIRCUIT BREAKER PANEL
1 - CONFIRM OCP SIZE WITH EQUIP. MANUFACTURER

CKT #	TRIP/ POLE		CIRCUIT DESCRIPTION	CONNECTED LOAD (VA) PHASE A		PHASE B		PHASE C		CIRCUIT DESCRIPTION		TRIP/ POLE	CKT #
1	20/1		SPARE	0	360					REC-TUNNEL (GEN)		20/1	2
3	20/1		SPARE			0	1,080			REC-GENERAL		20/1	4
5	20/1		SPARE					0	360	REC-BAG RM		20/1	6
7	20/1		SPARE	0	200					ELEC FCT/SP DISP, FLR 1		20/1	8
9	20/1		SPARE			0	0			SPARE		20/1	10
11	20/1		SPARE					0	0	SPARE		20/1	12
13	20/1		REC-ELEC RM	360	0					SPARE		20/1	14
15	20/1		REC-TELECOM			360	0			SPARE		20/1	16
17	20/1		REC-GENERAL					720	0	SPARE		20/1	18
19	20/1		REC-WASHRMS	540	720					REC-BHS MAINT.		20/1	20
21	20/1		REC-GENERAL			720	720			REC-BHS MAINT.		20/1	22
23	20/1		REC-GENERAL					720	720	REC-BHS MAINT.		20/1	24
25	20/1		GARBAGE DISPOSAL	1,200	528					"CUH-1.4"		15/1	26
27	20/1		REFRIGERATOR			1,200	528			"EF-1.3"		15/1	28
29	20/1		MICROWAVE					1,200	0	SPARE		15/1	30
31	20/1		REC-RAC 1	360	540					REC-ETD		20/1	32
33	20/1		REC-RAC 2			360	1,500			WASHRM-ELEC DRYER	1	20/1	34
35	20/1		REC-RAC 3					360	1,500	WASHRM-ELEC DRYER	1	20/1	36
37	20/1		REC-RAC 4	360	1,500					WASHRM-ELEC DRYER	1	20/1	38
39	20/1		REC-RAC 5			360	1,500			WASHRM-ELEC DRYER	1	20/1	40
41	20/1		SPARE					0	1,500	WASHRM-ELEC DRYER	1	20/1	42
TOTAL CONNECTED LOADS:				2,820	3,848	3,000	5,328	3,000	4,080				

PANELBOARD: RP-1C

SERVICE: 208/120V, 3PH, 4W + GND

BUS SIZE: 225A | LOAD:
MAIN DEVICE: 150A | CONN 15.5 kVA | DEM. 15.1 kVA | DEM. 42.0 Amps

NOTES: CIRCUIT BREAKER PANEL
1 - CONFIRM OCP SIZE WITH EQUIP. MANUFACTURER

CKT #	TRIP/ POLE		CIRCUIT DESCRIPTION	CONNECTED LOAD (VA) PHASE A		PHASE B		PHASE C		CIRCUIT DESCRIPTION		TRIP/ POLE	CKT #
1	20/1		REC-TUNNEL (GEN)	540	360					REC-CHECK IN CTR		20/1	2
3	20/1		REC-RAMP (GEN)			900	360			REC-CHECK IN CTR		20/1	4
5	20/1		REC-PUMP RM					360	360	REC-CHECK IN CTR		20/1	6
7	20/1		REC-LOADING DOCK	180	360					REC-CHECK IN CTR		20/1	8
9	20/1		REC-LOADING DOCK			180	180			REC-GENERAL		20/1	10
11	20/1		REC-LOADING DOCK					180	720	REC-OFFICE/OPS (AIR 3)		20/1	12
13	20/1		REC-GENERAL	900	0					SPARE		20/1	14
15	20/1		REC-WASHRMS			360	0			SPARE		20/1	16
17	20/1		REC-OFFICE					360	0	SPARE		20/1	18
19	20/1		REC-OFFICE	360	0					SPARE		20/1	20
21	20/1		REC-GENERAL			720	0			SPARE		20/1	22
23	20/1		REC-BAG RM					360	0	SPARE		20/1	24
25	20/1		REC-OFFICE/OPS (AIR 1)	720	1,500					WASHRM-ELEC DRYER	1	20/1	26
27	20/1		REC-OFFICE/OPS (AIR 2)			720	1,000			REC-SCALE		20/1	28
29	20/1		REC-OPS					900	750	REC-SCALE		20/1	30
31	20/1		ELEV. PIT LTG/REC.	280	360					REC-EXTERIOR (GEN)		20/1	32
33	20/1		REC-OFFICE			360	0			SPARE		20/1	34
35	20/1		SPARE					0	0	SPARE		20/1	36
37	20/1		SPARE	0	0					SPARE		20/1	38
39	15/2		ACN-3			291	291			ACN-4		15/2	40
41								291	291				42
TOTAL CONNECTED LOADS:				2,980	2,580	3,531	1,831	2,451	2,121				

PANELBOARD: RP-1D

SERVICE: 208/120V, 3PH, 4W + GND

BUS SIZE: 225A | LOAD:
MAIN DEVICE: 150A | CONN 30.2 kVA | DEM. 22.0 kVA | DEM. 61.1 Amps

NOTES: CIRCUIT BREAKER PANEL
1-PROVIDE EMON METER FOR CIRCUIT
2-VERIFY OCP SIZE PER MANUFACTURER'S REQUIREMENTS

CKT #	TRIP/ POLE		CIRCUIT DESCRIPTION	CONNECTED LOAD (VA) PHASE A		PHASE B		PHASE C		CIRCUIT DESCRIPTION		TRIP/ POLE	CKT #
1				2,000	2,000								2
3	30/3		REC-PSGR BRIDGE			2,000	2,000			REC-PSGR BRIDGE		30/3	4
5			GRD SERVICE EQUIP.					2,000	2,000	GRD SERVICE EQUIP.			6
7				2,000	2,000								8
9	30/3		REC-PSGR BRIDGE			2,000	2,000			REC-PSGR BRIDGE		30/3	10
11			GRD SERVICE EQUIP.					2,000	2,000	GRD SERVICE EQUIP.			12
13	20/1		REC-GENERAL	180	180					REC-GENERAL		20/1	14
15	20/1		REC-GENERAL			180	180			REC-GENERAL		20/1	16
17	20/1	1	REC-GENERAL					180	180	REC-GENERAL	1	20/1	18
19	20/1	1	REC-GENERAL	180	180					REC-GENERAL	1	20/1	20
21	15/2	2	SHUTTER-ETD RM			510	510			SHUTTER-ETD RM	2	15/2	22
23								510	510				24
25	15/2	2	SHUTTER-ETD RM	510	510					OH DOOR-LDING DOCK	2	15/2	26
27						510	510						28
29	20/1	1	REC-ELEC. CART					180	0	SPARE		20/1	30
31	20/1	1	REC-ELEC. CART	180	0					SPARE		20/1	32
33	20/1	1	REC-ELEC. CART			180	0			SPARE		20/1	34
35	20/1	1	REC-ELEC. CART					180		SPARE		20/1	36
37	20/1		SPARE							SPARE		20/1	38
39	20/1		SPARE							SPARE		20/1	40
41	20/1		SPARE							SPARE		20/1	42
TOTAL CONNECTED LOADS:				5,050	4,870	5,380	5,200	5,050	4,690				

PANELBOARD: RP-1E

SERVICE: 208/120V, 3PH, 4W + GND

BUS SIZE: 225A | LOAD:
MAIN DEVICE: 150A | CONN 23.9 kVA | DEM. 23.9 kVA | DEM. 66.4 Amps

NOTES: CIRCUIT BREAKER PANEL
1-VERIFY OCP SIZE PER MANUFACTURER'S REQUIREMENTS

CKT #	TRIP/ POLE		CIRCUIT DESCRIPTION	CONNECTED LOAD (VA) PHASE A		PHASE B		PHASE C		CIRCUIT DESCRIPTION		TRIP/ POLE	CKT #
1	20/1		LED ILLUM. SIGN	1,200	528					UH-1.4		15/1	2
3	20/1		LED ILLUM. SIGN			1,200	528			UH-1.5		15/1	4
5	20/1		RESERV. CENTER					1,200	528	UH-1.7		15/1	6
7	20/1		EDGELITE-1ST FLR	1,200	528					UH-1.8		15/1	8
9	20/1		EDGELITE-1ST FLR			1,200	528			UH-1.9		15/1	10
11	20/1		EDGELITE-1ST FLR					1,200	528	CUH-1.2		15/1	12
13	20/1		EDGELITE-1ST FLR	1,200	528					UH-1.6		15/1	14
15	20/1		EDGELITE-1ST FLR			1,200	528			EF-1.6		15/1	16
17	15/1		UH-1.1					528	528	EF-1.7		15/1	18
19	15/1		UH-1.2	528	1,920								20
21	15/1		CUH-1.5			528	1,920			PARTITION WALL	1	20/3	22
23	15/1		CUH-1.1					528	1,920				24
25	15/1		UH-1.3	528						SPARE		20/1	26
27	20/1		SPARE							SPARE		20/1	28
29	20/1		SPARE							SPARE		20/1	30
31	20/1		SPARE							SPARE		20/1	32
33	20/1		SPARE							SPARE		20/1	34
35	20/1		SPARE							SPARE		20/1	36
37	20/1		SPARE							SPARE		20/1	38
39	15/2		ACN-1.1			291	291			ACN-1.2		15/2	40
41								291	291				42
TOTAL CONNECTED LOADS:				4,656	3,504	4,419	3,795	3,747	3,795				

PANELBOARD: RP-2A

SERVICE: 208/120V, 3PH, 4W + GND

BUS SIZE: 225A | LOAD:
MAIN DEVICE: 150A | CONN 26.7 kVA | DEM. 26.7 kVA | DEM. 74.3 Amps

NOTES: CIRCUIT BREAKER PANEL
1 - CONFIRM OCP SIZE WITH EQUIP. MANUFACTURER

CKT #	TRIP/ POLE		CIRCUIT DESCRIPTION	CONNECTED LOAD (VA) PHASE A		PHASE B		PHASE C		CIRCUIT DESCRIPTION		TRIP/ POLE	CKT #
1	20/1		REC-GENERAL	540	0					SPARE		20/1	2
3	20/1	1	WASHRM-ELEC DRYER			1,500	500			REC-CONCRSE COUNTER		20/1	4
5	20/1	1	WASHRM-ELEC DRYER					1,500	0	SPARE		20/1	6
7	20/1	1	WASHRM-ELEC DRYER	1,500	540					REC-GENERAL		20/1	8
9	20/1	1	WASHRM-ELEC DRYER			1,500	360			REC-WASHRMS		20/1	10
11	20/1	1	WASHRM-ELEC DRYER					1,500	360	REC-OFFICE (GEN)		20/1	12
13	20/1	1	WASHRM-ELEC DRYER	1,500	1,080					REC-GENERAL		20/1	14
15	20/1	1	WASHRM-ELEC DRYER			1,500	360			REC-GENERAL		20/1	16
17	20/1	1	WASHRM-ELEC DRYER					1,500	0	SPARE		20/1	18
19	20/1		EDGELITE - 2ND FLR	1,200	900					REC-INTERNAT. (GEN)		20/1	20
21	20/1		REC-GENERAL			540	500			REC-PROC. BOOTH		20/1	22
23	20/1		REC-WASHRMS					360	500	REC-PROC. BOOTH		20/1	24
25	20/1		SPARE	0	1,200					VENDING MACH.		20/1	26
27	20/1		REC-CONCRSE (GEN)			720	1,200			VENDING MACH.		20/1	28
29	20/1		REC-CONCRSE (GEN)					360	1,200	VENDING MACH.		20/1	30
31	20/1		SPARE	0	0					SPARE		20/1	32
33	15/1		"CUH-2.1"			528	0			SPARE		20/1	34
35	20/1		REC-OFFICE					720	360	REC-WASHRMS		20/1	36
37	20/1		REC-ROVER	720	0					SPARE		20/1	38
39	20/1		SPARE			0	0			SPARE		20/1	40
41	20/1		SPARE					0	0	SPARE		20/1	42
TOTAL CONNECTED LOADS:				5,460	3,720	6,288	2,920	5,940	2,420				

PANELBOARD: RP-2B

SERVICE: 208/120V, 3PH, 4W + GND

BUS SIZE: 225A | LOAD:
MAIN DEVICE: 150A | CONN 26.1 kVA | DEM. 26.1 kVA | DEM. 72.5 Amps

NOTES: CIRCUIT BREAKER PANEL
1-VERIFY OCP DEVICE SIZE PER MANUFACTURER'S REQ.

CKT #	TRIP/ POLE		CIRCUIT DESCRIPTION	CONNECTED LOAD (VA) PHASE A		PHASE B		PHASE C		CIRCUIT DESCRIPTION		TRIP/ POLE	CKT #
1	20/1		REC-CHECK IN	360	720					REC-GENERAL		20/1	2
3	20/1		REC-GENERAL			540	360			REC-WASHRMS		20/1	4
5	20/1		REC-TSA (GEN)					720	0	SPARE		20/1	6
7	20/1		REC-GENERAL	540	0					SPARE		20/1	8
9	20/1		SPARE			0	720			REC-GENERAL		20/1	10
11	20/1		REC-TSA QUEUE					500	500	REC-CONCRSE COUNTER		20/1	12
13				672	500					REC-CONCRSE COUNTER		20/1	14
15	15/3		AC-2.1 (COMM. RM)			672	0			SPARE		20/1	16
17								672	510	GRILLE-TSA	1	15/2	18
19	20/1		SPARE	0	510								20
21	20/1		SPARE			0	831						22
23	20/1		REC-ELEC RM					360	831	GRILLE-TSA	1	15/3	24
25				1,920	831								26
27	20/3	1	PARTITION WALL			1,920	1,500			WASHRM-ELEC DRYER	1	20/1	28
29								1,920	1,500	WASHRM-ELEC DRYER	1	20/1	30
31	20/1		EDGELITE - 2ND FLR	1,200	1,500					WASHRM-ELEC DRYER	1	20/1	32
33	20/1		SPARE			0	1,500			WASHRM-ELEC DRYER	1	20/1	34
35	20/1		SPARE					0	720	REC-GENERAL		20/1	36
37	20/1		SPARE	0	1,080					REC-GENERAL		20/1	38
39	20/1		SPARE			0				SPARE		20/1	40
41	20/1		SPARE					0		SPARE		20/1	42
TOTAL CONNECTED LOADS:				4,692	5,141	3,132	4,911	4,172	4,061				

PANELBOARD: RP-2C

SERVICE: 208/120V, 3PH, 4W + GND

BUS SIZE: 225A | LOAD:
MAIN DEVICE: 150A | CONN 29.1 kVA | DEM. 29.1 kVA | DEM. 80.9 Amps

NOTES: CIRCUIT BREAKER PANEL
1 - CONFIRM OCP SIZE WITH EQUIP. MANUFACTURER
2 - CIRCUITS ASSOCIATED WITH ALTERNATE-PRICE SEPARATE

CKT #	TRIP/ POLE		CIRCUIT DESCRIPTION	CONNECTED LOAD (VA) PHASE A		PHASE B		PHASE C		CIRCUIT DESCRIPTION		TRIP/ POLE	CKT #
1	20/1		SPARE	0	540					REC-TSA GENERAL		20/1	2
3	20/1		REC-GENERAL			900	720			REC-OFFICES		20/1	4
5	20/1		REC-CHECK IN					360	1,500	WASHRM-ELEC DRYER	1	20/1	6
7	20/1		REC-CHECK IN	360	1,500					WASHRM-ELEC DRYER	1	20/1	8
9	20/1		REC-GENERAL			1,080	1,500			WASHRM-ELEC DRYER	1	20/1	10
11	20/1		REC-WASHRM					540	1,500	WASHRM-ELEC DRYER	1	20/1	12
13	20/1		REC-CONF RM	360	1,500					WASHRM-ELEC DRYER	1	20/1	14
15	20/1		REC-OFFICE			360	200			ELEC FCT/SP DISP, FLR 2		20/1	16
17	20/1		REC-GENERAL					360	1,657				18
19	20/1		VENDING MACH.	1,200	1,657					PARTITION WALL	1	20/3	20
21	20/1		VENDING MACH.			1,200	1,657						22
23	20/1		VENDING MACH.					1,200	540	MOTORIZED SHADES	2	20/1	24
25	20/1		EDGELITE - 2ND FLR	1,200	540					MOTORIZED SHADES	2	20/1	26
27	20/1		REC-GENERAL			360	540			MOTORIZED SHADES	2	20/1	28
29								672	540	MOTORIZED SHADES	2	20/1	30
31	15/3		AC-2.2 (LAN RM)	672	540					MOTORIZED SHADES	2	20/1	32
33						672	500			SHADE BUS SUPPLY	2	20/1	34
35	20/1		SPARE						500	SHADE BUS SUPPLY	2	20/1	36
37	20/1		SPARE							SPARE		20/1	38
39	20/1		SPARE							SPARE		20/1	40
41	20/1		SPARE							SPARE		20/1	42
TOTAL CONNECTED LOADS:				3,792	6,277	4,572	5,117	3,132	6,237				

PANELBOARD: RPC-1A - PNL W/TVSS, 200% NEUTRAL & ISO GRD

SERVICE: 208/120V, 3PH, 4W + GND

BUS SIZE: 100A | LOAD:
MAIN DEVICE: 100A | CONN 6.6 kVA | DEM. 6.6 kVA | DEM. 18.4 Amps

NOTES: CIRCUIT BREAKER PANEL

CKT #	TRIP/ POLE	NOTES	CIRCUIT DESCRIPTION	CONNECTED LOAD (VA) PHASE A		PHASE B		PHASE C		CIRCUIT DESCRIPTION		TRIP/ POLE	CKT #
1	20/1		REC-FIDS CHECK IN	600	1,000					REC-TVS, FLR 2		20/1	2
3	20/1		REC-FIDS BAGTNL			440	1,000			REC-TVS, FLR 2		20/1	4
5	20/1		REC-FIDS FLR 2W					800	1,000	REC-TVS, FLR 2		20/1	6
7	20/1		REC-FIDS FLR 2E	800	1,000					REC-TVS, FLR 2		20/1	8
9	20/1		SPARE							SPARE		20/1	10
11	20/1		SPARE							SPARE		20/1	12
13	20/1		SPARE							SPARE		20/1	14
15	20/1		SPARE							SPARE		20/1	16
17	20/1		SPARE							SPARE		20/1	18
19	20/1		SPARE							SPARE		20/1	20
21	20/1		SPARE							SPARE		20/1	22
23	20/1		SPARE							SPARE		20/1	24
25	20/1		SPARE							SPARE		20/1	26
27	20/1		SPARE							SPARE		20/1	28
29	20/1		SPARE							SPARE		20/1	30
31	20/1		SPARE							SPARE		20/1	32
33	20/1		SPARE							SPARE		20/1	34
35	20/1		SPARE					0	0	SPARE		20/1	36
37	20/1		SPARE	0	0								38
39	20/1		SPARE			0	0			TVSS		60/3	40
41	20/1		SPARE					0	0				42
TOTAL CONNECTED LOADS:				1,400	2,000	440	1,000	800	1,000				

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Structural Engineers:
MBJ CONSULTING ENG.
501 Lake Avenue South, Suite 300, Duluth MN 55802
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M/E/P/FP Engineers:
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Baggage Handling Systems Consultants:
BNP ASSOCIATES INC.
101 East Ridge Office Park, Suite 103, Danbury CT 06810
TEL: (203) 792-3000 / FAX: (203) 792-4900

Landscaping Consultants:
APPOLD DESIGN
2432 East First Street, Duluth MN 55812
TEL: (218) 591-5079

ENGINEER CERTIFICATION
I hereby certify that the engineering plans, specifications or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Douglas C. Mass

Signature:

Date: 08/16/10 Reg. No.: 21067

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 1	6.11.10
	CONFORMANCE SET	7.12.10
3	PERMIT REVISIONS	7.23.10
	BUILDING PERMIT	8.16.10
	100% REVIEW	12.17.10
	BID PACKAGE 2A	1.24.11
2	BP2A ADDENDUM 2	2.25.11

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DESIGNED BY: JK

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SHEET TITLE
PANEL SCHEDULES

SHEET NUMBER
E406

BID PACKAGE 2A
ADDENDUM 2