



SECTION 16470

PANELBOARDS AND LOAD CENTERS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Residential Load Centers.
- B. Panelboards.

1.2 RELATED SECTIONS

- A. Section 16195 – Electrical Identification.

1.3 REFERENCES

- A. NECA (National Electrical Contractors Association) "Standard of Installation."
- B. NEMA AB 1 - Molded Case Circuit Breakers.
- C. NEMA PB 1 - Panelboards.
- D. NEMA PB 1.1 - Instructions for Safe Installation, Operation and Maintenance of Panelboards rated 600 Volts or Less.
- E. NEMA PB 1.2 - Application Guide for Ground-fault Protective Devices for Equipment.
- F. NFPA 70 - National Electrical Code.

1.4 SUBMITTALS

- A. Include outline and support point dimensions, voltage, main bus ampacity, integrated short circuit ampere rating, circuit breaker arrangement and sizes.

1.5 SPARE PARTS

- A. Keys: Furnish three sets to Owner.

PART 2 - PRODUCTS

2.1 LOAD CENTERS

- A. Manufacturers:



1. *Square D.*
2. *General Electric.*
3. *Siemens.*
4. Substitutions: Or Approved Equal.

B. Load Centers: NEMA PB 1; circuit breaker type.

C. Enclosure: Recessed, NEMA PB 1; Type 1.

D. Cabinet Size: 3¾ inches deep; 14¾ inches wide.

E. Provide cabinet front with concealed trim clamps, concealed hinge and flush lock all keyed alike. Finish in manufacturer's standard gray enamel.

F. Provide panelboards with copper bus, ratings as scheduled on Drawings. Provide copper ground bus in all panelboards.

G. Minimum Integrated Short Circuit Rating: 10,000 amperes RMS symmetrical for 240-volt single phase load centers.

H. Molded Case Circuit Breakers: NEMA AB 1; plug-on type thermal magnetic trip circuit breakers, with common trip handle for all poles.

I. Arc-Fault Circuit Breakers: Provide arc-fault circuit breakers for all load center branch circuits supplying outlets in dining rooms, living rooms, bedrooms, hallways, and other similar rooms. Also provide arc-fault breakers for all spare circuit breakers to be included in each load center.

2.2 PANELBOARDS

A. Acceptable Manufacturers.

1. *Square D.*
2. *Cutler-Hammer.*
3. *General Electric*
4. *Siemens.*
5. Substitutions: None Permitted.

B. Circuit Breaker Panelboards

1. Panelboards: NEMA PB1; circuit breaker type.
2. Enclosure: NEMA PB 1; Type 1.
3. Branch Circuit Panelboard Cabinet Size: 5 ¾ inches deep; 20 inches wide.
4. Distribution Panelboard Cabinet Size: 8¾ inches deep; 32 inches wide.
5. Provide cabinet front with concealed trim clamps, concealed hinge and flush lock all keyed alike. Finish in manufacturer's standard gray enamel
6. Provide panelboards with copper bus, ratings as scheduled on Drawings. Provide copper ground bus in all panelboards.
7. Minimum Integrated Short Circuit Rating:
 - a) 65,000 AIC for Main Service Distribution Panel.



- b) 42,000 AIC for all other panels.
- 8. Molded Case Circuit Breakers: NEMA AB 1; bolt-on type thermal magnetic trip circuit breakers, with common trip handle for all poles.
- 9. Provide circuit breaker accessory trip units and auxiliary contacts as indicated.
- 10. Main Circuit Breaker: Molded case thermal magnetic type with solid state tripping elements with instantaneous, long time delay, long time pickup, and short time delay settings.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install load centers and panelboards plumb and flush with wall finishes, in conformance with NEMA PB 1.1. Install recessed, flush with wall finishes.
- B. Height: 4 feet to top circuit breaker in load centers in residential units; 6 feet to top of panelboards.
- C. Provide filler plates for unused spaces in load centers and panelboards per Specification Section 16195.
- D. Provide typed circuit directory for each branch circuit panelboard and load center per Specification Section 16195.

3.2 FIELD QUALITY CONTROL

- A. Measure state load currents at each new panelboard feeder. Should the difference at any panelboard between phases exceed 20 percent, rearrange circuits in the panelboard to balance the phase loads within 20 percent. Take care to maintain proper phasing for multi-wire branch circuits.
- B. Visual and Mechanical Inspection: Inspect for physical damage, proper alignment, anchorage, and grounding. Check proper installation and tightness of connections for circuit breakers, fusible switches, and fuses.

END OF SECTION



Date: 05/16/14

LC-1

VOLTS:	<u>120/240</u>	AMPS	<u>200</u>
MOUNT:	<u>RECESSED</u>	PHASE:	<u>1</u>

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MAIN:  MLO
            
WIRES:     3    

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PANEL: UNITS 201/301/401
LOCATION: UNIT MUD ROOM

BREAKER		DESCRIPTION	CKT VA	TYPE	CKT NO.	LOAD			CKT NO.	TYPE	CKT VA	DESCRIPTION	BREAKER	
A	P					A		B					P	A
20	1	LIGHTS/DETECTORS	614	L	1	2114			2	R	1500	WASHER/DRYER	1	20
20	1	FIREPLACE	1500	O	3			3000	4	H	1500	WATER HEATER	1	20
20	1	DOOR INTERCOM STATION	500	O	5	1700			6	R	1200	MUDRM/HALL/LNDRY RECEPTS	1	20
20	1	WINE COOLER	1000	O	7			1400	8	R	400	BATHROOM RECEPT	1	20
20	1	GAS RANGE/RANGE HOOD	1000	O	9	1400			10	R	400	BATHROOM RECEPT	1	20
20	1	DISPOSAL	1176	M	11			1576	12	R	400	BATHROOM RECEPT	1	20
20	1	DISHWASHER	1500	O	13	2000			14	H	500	TOWEL WARMER	1	20
20	1	REFRIGERATOR	1500	R	15			2086	16	H	586	EB-1	1	20
20	1	CONVECTION OVEN		O	17	1200			18	R	1200	STUDY RECEPTS	1	20
20	1	ELECTRIC OVEN		O	19			1400	20	R	1400	BEDROOM RECEPTS	1	20
20	1	KITCHEN RECEPTACLES	800	R	21	2000			22	R	1200	BEDROOM RECEPTS	1	20
20	1	KITCHEN RECEPTACLES	600	R	23			1600	24	R	1000	LIVING RM RECEPTS	1	20
15	2	AIR HANDLING UNIT	284	M	25	1284			26	R	1000	LIVING RM/DECK RECEPTS	1	20
15	2	AIR HANDLING UNIT	284	M	27			1484	28	R	1200	DINING RM RECEPTS	1	20
15	2	AIR HANDLING UNIT	151	M	29	1551			30	R	1400	BEDROOM RECEPTS	1	20
15	2	AIR HANDLING UNIT	151	M	31			591	32	H	440	EB-2 (401 ONLY)	1	20
20	1	SPARE	500	S	33	600			34	M	100	WATER HEATER PUMPS	1	20
20	1	SPARE	500	S	35			1000	36	S	500	SPARE	1	20
20	1	SPARE	500	S	37	1000			38	S	500	SPARE	1	20
20	1	SPARE	500	S	39			1000	40	S	500	SPARE	1	20
PHASE TOTALS						14849		15137	DEMAND					

CONNECTED VOLT-AMPERES=	<u>29986</u>
CONNECTED AMPERES=	<u>125</u>
DEMAND VOLT-AMPERES=	<u>17886</u>
DEMAND AMPERES=	<u>75</u>

CIRCUIT TYPE CODES		FACTOR
L	LIGHTS	1.0
M	MOTORS	1.0
R	RECEPTACLES	0.5
H	HEAT	1.0
O	OTHER	0.5
S	SPARE	0.5

PROJECT: **118 On Munjoy Hill**
 PROJ. NO: 13-0048
 DATE: 02/26/14
 STATUS: 100% Construction Docs

Bartlett Design
LIGHTING & ELECTRICAL ENGINEERING
 942 WASHINGTON STREET BATH, MAINE 04530
 TEL (207) 443-5447 FAX (207) 443-5560



Reviewed for Code Compliance
Inspectors Division
Approved with Conditions

Date: 05/16/14

LC-2

VOLTS: 120/240 AMPS 200
MOUNT: RECESSED PHASE: 1

MAIN: MLO
WIRES: 3

PANEL: UNITS 202/302/402
LOCATION: MUD ROOM

BREAKER		DESCRIPTION	CKT VA	TYPE	CKT NO.	LOAD			CKT NO.	TYPE	CKT VA	DESCRIPTION	BREAKER	
A	P					A		B					P	A
20	1	LIGHTS/DETECTORS	604	L	1	2104			2	R	1500	WASHER/DRYER	1	20
20	1	FIREPLACE	1500	O	3			3000	4	H	1500	WATER HEATER	1	20
20	1	DOOR INTERCOM STATION	500	O	5	1700			6	R	1200	MUDRM/HALL/LNDRY RECEPTS	1	20
20	1	WINE COOLER	1000	O	7			1400	8	R	400	BATHROOM RECEPT	1	20
20	1	GAS RANGE/RANGE HOOD	1000	O	9	1400			10	R	400	BATHROOM RECEPT	1	20
20	1	DISPOSAL	1176	M	11			1576	12	R	400	BATHROOM RECEPT	1	20
20	1	DISHWASHER	1500	O	13	2000			14	H	500	TOWEL WARMER	1	20
20	1	REFRIGERATOR	1500	R	15			2900	16	R	1400	BEDROOM RECEPTS	1	20
20	1	CONVECTION OVEN		O	17	1000			18	R	1000	DINING RM RECEPTS	1	20
20	1	ELECTRIC OVEN		O	19			1000	20	R	1000	LIVING RM RECEPTS	1	20
20	1	KITCHEN RECEPTACLES	600	R	21	1800			22	R	1200	LIVING RM/DECK RECEPTS	1	20
20	1	KITCHEN RECEPTACLES	800	R	23			2000	24	R	1200	BEDROOM RECEPTS	1	20
15	2	AIR HANDLING UNIT	163	M	25	1563			26	R	1400	BEDROOM RECEPTS	1	20
15	2	AIR HANDLING UNIT	163	M	27			749	28	H	586	EB-1	1	20
15	2	AIR HANDLING UNIT	151	M	29	591			30	H	440	EB-2 (402 ONLY)	1	20
15	2	AIR HANDLING UNIT	151	M	31			251	32	M	100	WATER HEATER PUMPS	1	20
20	1	SPARE	500	S	33	1000			34	S	500	SPARE	1	20
20	1	SPARE	500	S	35			1000	36	S	500	SPARE	1	20
20	1	SPARE	500	S	37	1000			38	S	500	SPARE	1	20
20	1	SPARE	500	S	39			1000	40	S	500	SPARE	1	20
													1	20
PHASE TOTALS						14158		14876						

CONNECTED VOLT-AMPERES= 29034
CONNECTED AMPERES= 121
DEMAND VOLT-AMPERES= 17284
DEMAND AMPERES= 72

CIRCUIT TYPE CODES		DEMAND FACTOR
L	LIGHTS	1.0
M	MOTORS	1.0
R	RECEPTACLES	0.5
H	HEAT	1.0
O	OTHER	0.5
S	SPARE	0.5

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Date: 05/16/14

LC-3

VOLTS:	<u>120/240</u>	AMPS	<u>200</u>
MOUNT:	<u>RECESSED</u>	PHASE:	<u>1</u>

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MAIN:  MLO
            
WIRES:     3    

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PANEL: UNITS 203/303/403
LOCATION: UNIT MUD ROOM

[illegible]

	PHASE TOTALS	15337	16311		DEMAND
				CIRCUIT TYPE CODES	FACTOR
CONNECTED VOLT-AMPERES=	<u>31648</u>			L LIGHTS	1.0
CONNECTED AMPERES=	<u>132</u>			M MOTORS	1.0
DEMAND VOLT-AMPERES=	<u>18448</u>			R RECEPTACLES	0.5
DEMAND AMPERES=	<u>77</u>			H HEAT	1.0
				O OTHER	0.5
				S SPARE	0.5



Reviewed for Code Compliance
Inspectors Division
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Date: 05/16/14

LC-4

VOLTS: 120/240 AMPS 200
MOUNT: RECESSED PHASE: 1

MAIN: MLO
WIRES: 3

PANEL: UNITS 204/304/404
LOCATION: MUD ROOM

BREAKER		DESCRIPTION	CKT VA	TYPE	CKT NO.	LOAD			CKT NO.	TYPE	CKT VA	DESCRIPTION	BREAKER	
A	P					A		B					P	A
20	1	LIGHTS/DETECTORS	489	L	1	1989			2	R	1500	WASHER/DRYER	1	20
20	1	FIREPLACE	1500	O	3			3000	4	H	1500	WATER HEATER	1	20
20	1	DOOR INTERCOM STATION	500	O	5	1500			6	R	1000	MUDRM/HALL/LNDRY RECEPTS	1	20
20	1	WINE COOLER	1000	O	7			1400	8	R	400	BATHROOM RECEPT	1	20
20	1	GAS RANGE/OVEN / HOOD	1000	O	9	1400			10	R	400	BATHROOM RECEPT	1	20
20	1	DISPOSAL	1176	M	11			1576	12	R	400	BATHROOM RECEPT	1	20
20	1	DISHWASHER	1500	O	13	2000			14	H	500	TOWEL WARMER	1	20
20	1	REFRIGERATOR	1500	R	15			2700	16	R	1200	STUDY RECEPTS	1	20
20	1	MICROWAVE	1500	O	17	2900			18	R	1400	BEDROOM RECEPTS	1	20
20	1	KITCHEN RECEPTACLES	600	R	19			1800	20	R	1200	LIVING RM RECEPTS	1	20
20	1	KITCHEN RECEPTACLES	600	R	21	1600			22	R	1000	LIVING RM/DECK RECEPTS	1	20
15	2	AIR HANDLING UNIT	151	M	23			1351	24	R	1200	DINING RM RECEPTS	1	20
15	2	AIR HANDLING UNIT	151	M	25	1551			26	R	1400	BEDROOM RECEPTS	1	20
15	2	AIR HANDLING UNIT	151	M	27			251	28	M	100	WATER HEATER PUMPS	1	20
15	2	AIR HANDLING UNIT	151	M	29	651			30	S	500	SPARE	1	20
20	1	SPARE	500	S	31			1000	32	S	500	SPARE	1	20
20	1	SPARE	500	S	33	1000			34	S	500	SPARE	1	20
20	1	SPARE	500	S	35			1000	36	S	500	SPARE	1	20
20	1	SPARE	500	S	37	1000			38	S	500	SPARE	1	20
20	1	SPARE	500	S	39			1000	40	S	500	SPARE	1	20
													1	20

PHASE TOTALS

15591

15078

DEMAND

CONNECTED VOLT-AMPERES= 30669
CONNECTED AMPERES= 128
DEMAND VOLT-AMPERES= 17519
DEMAND AMPERES= 73

CIRCUIT TYPE CODES

L	LIGHTS	1.0
M	MOTORS	1.0
R	RECEPTACLES	0.5
H	HEAT	1.0
O	OTHER	0.5
S	SPARE	0.5

FACTOR

PROJECT: 118 On Munjoy Hill
PROJ. NO: 13-0048
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Inspection Division
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Date: 05/16/14

VOLTS: 120/208 AMPS 225
MOUNT: SURFACE PHASE: 3

MAIN: 200A/3P
WIRES: 4

PANEL: RA1
LOCATION: RETAIL A 104

BREAKER		DESCRIPTION	CKT VA	TYPE	CKT NO.	LOAD			CKT NO.	TYPE	CKT VA	DESCRIPTION	BREAKER	
A	P					A	B	C					P	A
20	1	LIGHTS	60	L	1	560			2	O	500	TELEPHONE EQUIP	1	20
20	2	AHU-25	347	M	3		5097		4	H	4750	WH-3	2	60
20	2	AHU-25	347	M	5			5097	6	H	4750	WH-3	2	60
1	20	RECEPTACLES	800	R	7	1600			8	R	800	RECEPTACLES	1	20
1	20	SPARE	500	S	9		1000		10	S	500	SPARE	1	20
1	20	SPARE	500	S	11			1000	12	S	500	SPARE	1	20
		BLANK			13	0			14			BLANK		
		BLANK			15		0		16			BLANK		
		BLANK			17			0	18			BLANK		
		BLANK			19	0			20			BLANK		
		BLANK			21		0		22			BLANK		
		BLANK			23			0	24			BLANK		
		BLANK			25	0			26			BLANK		
		BLANK			27		0		28			BLANK		
		BLANK			29			0	30			BLANK		
					31	0			32					
					33		0		34					
					35			0	36					
					37	0			38					
					39		0		40					
					41			0	42					

PHASE TOTALS

2160 6097 6097

DEMAND

CONNECTED VOLT-AMPERES= 14354
CONNECTED AMPERES= 40
DEMAND VOLT-AMPERES= 11957
DEMAND AMPERES= 33

CIRCUIT TYPE CODES

L	LIGHTS	1.0
M	MOTORS	0.5
R	RECEPTACLES	0.5
H	HEAT	1.0
O	OTHER	0.5
S	SPARE	0.5

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Date: 05/16/14

VOLTS: 120/208 AMPS 225 MAIN: 200A/3P PANEL: RB1
MOUNT: SURFACE PHASE: 3 WIRES: 4 LOCATION: RETAIL B 105

BREAKER		DESCRIPTION	CKT VA	TYPE	CKT NO.	LOAD			CKT NO.	TYPE	CKT VA	DESCRIPTION	BREAKER	
A	P					A	B	C					P	A
20	1	LIGHTS	60	L	1	560			2	O	500	TELEPHONE EQUIP	1	20
20	2	AHU-26	364	M	3		5114		4	H	4750	WH-3	2	60
20	2	AHU-26	364	M	5			5114	6	H	4750	WH-3	2	60
1	20	RECEPTACLES	800	R	7	1600			8	R	800	RECEPTACLES	1	20
1	20	SPARE	500	S	9		1000		10	S	500	SPARE	1	20
1	20	SPARE	500	S	11			1000	12	S	500	SPARE	1	20
		BLANK			13	0			14			BLANK		
		BLANK			15		0		16			BLANK		
		BLANK			17			0	18			BLANK		
		BLANK			19	0			20			BLANK		
		BLANK			21		0		22			BLANK		
		BLANK			23			0	24			BLANK		
		BLANK			25	0			26			BLANK		
		BLANK			27		0		28			BLANK		
		BLANK			29			0	30			BLANK		
					31	0			32					
					33		0		34					
					35			0	36					
					37	0			38					
					39		0		40					
					41			0	42					

PHASE TOTALS

2160 6114 6114

DEMAND

CONNECTED VOLT-AMPERES= 14388
CONNECTED AMPERES= 40
DEMAND VOLT-AMPERES= 11974
DEMAND AMPERES= 33

CIRCUIT TYPE CODES

L	LIGHTS	1.0
M	MOTORS	0.5
R	RECEPTACLES	0.5
H	HEAT	1.0
O	OTHER	0.5
S	SPARE	0.5

FACTOR

PROJECT: **118 On Munjoy Hill**
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Date: 05/16/14

VOLTS: 120/208 AMPS 225
MOUNT: SURFACE PHASE: 3

MAIN: MLO
WIRES: 4

PANEL: HP1 (Section 1)
LOCATION: ELECTRICAL 110

BREAKER		DESCRIPTION	CKT VA	TYPE	CKT NO.	LOAD			CKT NO.	TYPE	CKT VA	DESCRIPTION	BREAKER	
A	P					A	B	C					P	A
20	1	EXTERIOR LIGHTS	105	L	1	795			2	L	690	4TH FLOOR HALL LTS	1	20
20	1	EXTERIOR LIGHTS	36	L	3		726		4	L	690	3RD FLOOR HALL LTS	1	20
20	1	GROUND FLOOR LIGHTS	1044	L	5			1734	6	L	690	2ND FLOOR HALL LTS	1	20
20	1	GARAGE LIGHTS	312	L	7	1312			8	R	1000	4TH FLOOR RECEPES	1	20
20	1	STAIR A & B LIGHTING	731	L	9		1731		10	R	1000	3RD FLOOR RECEPES	1	20
20	1	(2) EXHAUST FANS	504	M	11			1504	12	R	1000	2ND FLOOR RECEPES	1	20
15	2	AH27, AH28, AH29 & AH30	268	M	13	768			14	O	500	FIRE ALARM PANEL	1	20
15	2	AH27, AH28, AH29 & AH30	268	M	15		768		16	O	500	FIRE ALARM BOOSTERS	1	20
20	1	BCCA, BCC2, BCC3 & BCC4	960	M	17			1460	18	O	500	TELECOM DEMARC EQUIP	1	20
20	1	(2) CEB1	1000	H	19	1500			20	O	500	LIGHTING CONTROL PNL	1	20
20	1	(2) CEB1	1000	H	21		1500		22	O	500	ZWAVE WIRELESS CNTRL	1	20
20	1	CEB2	1000	H	23			1500	24	O	500	DOOR INTERCOM STATION	1	20
100	3	PANEL HP1 (SECTION 2)			25	13242			26	R	500	ELEV PIT RECEP/LIGHT	1	20
100	3	PANEL HP1 (SECTION 2)			27		11792		28	O	1000	MOTORIZED O/H DOOR	1	20
100	3	PANEL HP1 (SECTION 2)			29			14008	30	M	1176	SP1	1	20

PHASE TOTALS 17617 16517 20206

CONNECTED VOLT-AMPERES= 54340
CONNECTED AMPERES= 151
DEMAND VOLT-AMPERES= 44033
DEMAND AMPERES= 122

CIRCUIT TYPE CODES
L LIGHTS 1.0
M MOTORS 1.0
R RECEPTACLES 0.5
H HEAT 1.0
O OTHER 0.5
S SPARE 0.5

PROJECT: 118 On Munjoy Hill
PROJ. NO: 13-0048
DATE: 02/26/14
STATUS: 100% Construction Docs

Bartlett Design
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Reviewed for Code Compliance
Inspection Division
Approved with Conditions

Date: 05/16/14

VOLTS: 120/208 AMPS 225
MOUNT: SURFACE PHASE: 3

MAIN: MLO
WIRES: 4

PANEL: HP1 (Section 2)
LOCATION: ELECTRICAL 110

BREAKER		DESCRIPTION	CKT VA	TYPE	CKT NO.	LOAD			CKT NO.	TYPE	CKT VA	DESCRIPTION	BREAKER	
A	P					A	B	C					P	A
15	2	EF1	510	M	31	5314			32	M	4804	PARKING LIFT POWER PACK	3	40
15	2	EF1	510	M	33		5314		34	M	4804	PARKING LIFT POWER PACK	3	40
15	3	SPRINKLER COMPRESSOR	940	M	35			5744	36	M	4804	PARKING LIFT POWER PACK	3	40
15	3	SPRINKLER COMPRESSOR	940	M	37	3978			38	O	3038	ELEVATOR CONTROLLER	3	50
15	3	SPRINKLER COMPRESSOR	940	M	39		3978		40	O	3038	ELEVATOR CONTROLLER	3	50
30	2	WH-2	2250	H	41			5288	42	O	3038	ELEVATOR CONTROLLER	3	50
30	2	WH-2	2250	H	43	3450			44	R	1200	RECEPTACLES	1	20
20	1	MOTOR OPER DAMPER	500	M	45		1500		46	R	1000	RECEPTACLES	1	20
20	1	RECEPTACLES	600	R	47			1800	48	R	1200	RECEPTACLES	1	20
20	1	BLANK			49	0			50			BLANK		
		BLANK			51		0		52			BLANK		
		BLANK			53			0	54			BLANK		
		BLANK			55	0			56			BLANK		
		BLANK			57		0		58			BLANK		
		BLANK			59			0	60			BLANK		

PHASE TOTALS 12742 10792 12832

CONNECTED VOLT-AMPERES= 36366
CONNECTED AMPERES= 101
DEMAND VOLT-AMPERES= 29809
DEMAND AMPERES= 83

CIRCUIT TYPE CODES		DEMAND FACTOR
L	LIGHTS	1.0
M	MOTORS	1.0
R	RECEPTACLES	0.5
H	HEAT	1.0
O	OTHER	0.5
S	SPARE	0.5

PROJECT: 118 On Munjoy Hill
PROJ. NO: 13-0048
DATE: 02/26/14
STATUS: 100% Construction Docs

Bartlett Design
LIGHTING & ELECTRICAL ENGINEERING
942 WASHINGTON STREET BATH, MAINE 04530
TEL (207) 443-5447 FAX (207) 443-5560



Reviewed for Code Compliance
Inspection Division
Approved with Conditions

Date: 05/16/14

VOLTS: 120/208 AMPS 400
MOUNT: SURFACE PHASE: 3

MAIN: MLO
WIRES: 4

PANEL: HP2
LOCATION: ELECTRICAL 110

BREAKER		DESCRIPTION	CKT VA	TYPE	CKT NO.	LOAD			CKT NO.	TYPE	CKT VA	DESCRIPTION	BREAKER	
A	P					A	B	C					P	A
60	3	OU-1	6365	M	1	12730			2	M	6365	OU-3	3	60
60	3	OU-1	6365	M	3		12730		4	M	6365	OU-3	3	60
60	3	OU-1	6365	M	5			12730	6	M	6365	OU-3	3	60
60	3	OU-2	6365	M	7	10448			8	M	4083	OU-4	3	40
60	3	OU-2	6365	M	9		10448		10	M	4083	OU-4	3	40
60	3	OU-2	6365	M	11			10448	12	M	4083	OU-4	3	40
15	3	ERV SUPPLY	829	M	13	1658			14	M	829	ERV RETURN	3	15
15	3	ERV SUPPLY	829	M	15		1658		16	M	829	ERV RETURN	3	15
15	3	ERV SUPPLY	829	M	17			1658	18	M	829	ERV RETURN	3	15
20	1	DE-1	696	M	19	1392			20	M	696	KHE-1	1	20
20	1	DE-2	696	M	21		846		22	M	150	MOTOR OPER DAMPER	1	20
20	1	ROOFTOP RECEPTACLES	1200	R	23			1700	24	S	500	SPARE	1	20
20	1	SPARE	500	S	25	1000			26	S	500	SPARE	1	20
20	1	SPARE	500	S	27		1000		28	S	500	SPARE	1	20
20	1	SPARE	500	S	29			1000	30	S	500	SPARE	1	20

PHASE TOTALS 27228 26682 27536

CONNECTED VOLT-AMPERES= 81446
CONNECTED AMPERES= 226
DEMAND VOLT-AMPERES= 79096
DEMAND AMPERES= 220

CIRCUIT TYPE CODES		DEMAND FACTOR
L	LIGHTS	1.0
M	MOTORS	1.0
R	RECEPTACLES	0.5
H	HEAT	1.0
O	OTHER	0.5
S	SPARE	0.5

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