



COMcheck Software Version 3.9.3

Interior Lighting Compliance Certificate

2009 IECC

Section 1: Project Information

Project Type: **New Construction**

Project Title : 118 Congress

Construction Site:
Portland, ME 04101

Owner/Agent:
118 on Munjoy Hill, LLC
Portland, ME 04101

Designer/Contractor:
Lawrence Bartlett
Bartlett Design, Inc
942 Washington Street
Bath, ME 04530
207 443-5447
bartlettdesigninc@comcast.net

Section 2: Interior Lighting and Power Calculation

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B x C)
Multifamily	32500	0.7	22750
Total Allowed Watts =			22750

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Multifamily (32500 sq.ft.)				
LED 1: B1: LED Other Fixture Unit 13W:	1	163	11	1793
LED 2: B2: LED Other Fixture Unit 16W:	1	14	18	252
LED 3: B3: LED Other Fixture Unit 28W:	1	4	30.5	122
Compact Fluorescent 1: C1: Other: Electronic:	2	15	51	765
Compact Fluorescent 2: C2: Other: Electronic:	1	11	27	297
Compact Fluorescent 3: C3: Other: Electronic:	2	15	54	810
Compact Fluorescent 4: C4: Other: Electronic:	1	3	27	81
LED 4: C5: Other:	1	9	12	108
LED 5: G1: LED Other Fixture Unit 25W:	1	9	26	234
LED 6: G1A: Other:	1	3	26	78
Linear Fluorescent 1: J1: 48" T8 32W: Electronic:	1	18	30	540
Linear Fluorescent 2: J2: 48" T8 32W: Electronic:	1	8	30	240
LED 7: K1: LED Other Fixture Unit 80W:	1	9	84	756
Compact Fluorescent 5: L1: Quad 4-pin 13W: Electronic:	1	1	16	16
Compact Fluorescent 6: R1: Quad 4-pin 18W: Electronic:	4	5	76	380
Track lighting 1: T1: Wattage based on 458 feet of track	0	0	13740	13740
LED 8: T2: LED Other Fixture Unit 13W:	1	6	14	84
LED 9: U1: LED Undercabinet Unit 8W:	1	36	8.6	309.6
LED 10: U2: LED Linear 33W:	1	6	32.4	194.4
LED 11: U4: LED Linear 22W:	1	6	21.6	129.6
LED 12: U5: LED Linear 33W:	1	3	28.8	86.4
LED 13: U6: LED Linear 11W:	1	3	10.9	32.7
Compact Fluorescent 7: W1: Quad 4-pin 18W: Electronic:	2	30	38	1140
LED 14: W2: LED Other Fixture Unit 6.5W:	1	53	4	212

Section 4: Requirements Checklist

Interior Lighting PASSES: Design 0.3% better than code.

Lighting Wattage:

1. Total proposed watts must be less than or equal to total allowed watts.

Allowed Watts	Proposed Watts	Complies
22750	22687	YES

Controls, Switching, and Wiring:

2. Daylight zones under skylights more than 15 feet from the perimeter have lighting controls separate from daylight zones adjacent to vertical fenestration. **NO SKYLIGHTS**
3. Daylight zones have individual lighting controls independent from that of the general area lighting.

Exceptions:

- Contiguous daylight zones spanning no more than two orientations are allowed to be controlled by a single controlling device.
- Daylight spaces enclosed by walls or ceiling height partitions and containing two or fewer light fixtures are not required to have a separate switch for general area lighting.
4. Independent controls for each space (switch/occupancy sensor).

Exceptions:

- Areas designated as security or emergency areas that must be continuously illuminated.
- Lighting in stairways or corridors that are elements of the means of egress.
5. Master switch at entry to hotel/motel guest room. **RESIDENTIAL**
6. Individual dwelling units separately metered.
7. Medical task lighting or art/history display lighting claimed to be exempt from compliance has a control device independent of the control of the nonexempt lighting. **N/A**
8. Each space required to have a manual control also allows for reducing the connected lighting load by at least 50 percent by either controlling all luminaires, dual switching of alternate rows of luminaires, alternate luminaires, or alternate lamps, switching the middle lamp luminaires independently of other lamps, or switching each luminaire or each lamp.

Exceptions:

- Only one luminaire in space.
- An occupant-sensing device controls the area.
- The area is a corridor, storeroom, restroom, public lobby or sleeping unit.
- Areas that use less than 0.6 Watts/sq.ft.
9. Automatic lighting shutoff control in buildings larger than 5,000 sq.ft.

Exceptions:

- Sleeping units, patient care areas; and spaces where automatic shutoff would endanger safety or security.
10. Photocell/astronomical time switch on exterior lights.

Exceptions:

- Lighting intended for 24 hour use.
11. Tandem wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).

Exceptions:

- Electronic high-frequency ballasts; Luminaires on emergency circuits or with no available pair.

Section 5: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2009 IECC requirements in COMcheck Version 3.9.3 and to comply with the mandatory requirements in the Requirements Checklist.

Lawrence Bartlett, President		05-12-14
Name - Title	Bartlett Design, Inc	Signature
		Date



Exterior Lighting Compliance Certificate

2009 IECC

Section 1: Project Information

Project Type: **New Construction**

Project Title : 118 Congress

Exterior Lighting Zone: **2 (Residential mixed use area)**

Construction Site:
Portland, ME 04101

Owner/Agent:
118 on Munjoy Hill, LLC
Portland, ME 04101

Designer/Contractor:
Lawrence Bartlett
Bartlett Design, Inc
942 Washington Street
Bath, ME 04530
207 443-5447
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Section 2: Exterior Lighting Area/Surface Power Calculation

A Exterior Area/Surface	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B x C)	F Proposed Watts
Main Entrance (Main entry)	3 ft of door width	20	Yes	60	19
Bike Storage (Entry canopy)	36 ft2	0.25	Yes	9	13
Retail B Entrance (Entry canopy)	96 ft2	0.25	Yes	24	19
Retail A Entrance (Entry canopy)	44 ft2	0.25	Yes	11	6
Garage O/H Door (Other door (not main entry))	19 ft of door width	20	Yes	380	24
Garage Entrance (Entry canopy)	28 ft2	0.25	Yes	7	6
South Walk (Walkway < 10 feet wide)	54 ft of walkway length	0.7	Yes	38	36
Decks (Plaza area)	975 ft2	0.14	Yes	137	216
Total Tradable Watts* =				665	341
Total Allowed Watts =				665	
Total Allowed Supplemental Watts** =				600	

* Wattage tradeoffs are only allowed between tradable areas/surfaces.

** A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Section 3: Exterior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Main Entrance (Main entry 3 ft of door width): Tradable Wattage				
LED 1: S1: LED Other Fixture Unit 6.5W:	1	3	6.5	19.5
Bike Storage (Entry canopy 36 ft2): Tradable Wattage				
LED 2: S1: LED Other Fixture Unit 6.5W:	1	2	6.5	13
Retail B Entrance (Entry canopy 96 ft2): Tradable Wattage				
LED 3: S1: LED Other Fixture Unit 6.5W:	1	3	6.5	19.5
Retail A Entrance (Entry canopy 44 ft2): Tradable Wattage				
LED 4: S1: LED Other Fixture Unit 6.5W:	1	1	6.5	6.5
Garage O/H Door (Other door (not main entry) 19 ft of door width): Tradable Wattage				
LED 5: S2: LED Other Fixture Unit 13W:	1	2	12	24
Garage Entrance (Entry canopy 28 ft2): Tradable Wattage				
LED 6: S2: LED Other Fixture Unit 6.5W:	1	1	6.5	6.5

South Walk (Walkway < 10 feet wide 54 ft of walkway length): Tradable Wattage				
LED 7: S2: LED Other Fixture Unit 13W:	1	3	12	36
Decks (Plaza area 975 ft2): Tradable Wattage				
LED 8: S4: LED Other Fixture Unit 25W:	1	12	18	216
Total Tradable Proposed Watts =				341

Section 4: Requirements Checklist

Lighting Wattage:

1. Within each non-tradable area/surface, total proposed watts must be less than or equal to total allowed watts. Across all tradable areas/surfaces, total proposed watts must be less than or equal to total allowed watts.

Compliance: Passes.

Controls, Switching, and Wiring:

2. All exemption claims are associated with fixtures that have a control device independent of the control of the nonexempt lighting. *N/A*
3. Lighting not designated for dusk-to-dawn operation is controlled by either a a photosensor (with time switch), or an astronomical time switch.
4. Lighting designated for dusk-to-dawn operation is controlled by an astronomical time switch or photosensor.
5. All time switches are capable of retaining programming and the time setting during loss of power for a period of at least 10 hours.

Exterior Lighting Efficacy:

6. All exterior building grounds luminaires that operate at greater than 100W have minimum efficacy of 60 lumen/watt. *N/A*

Exceptions:

- Lighting that has been claimed as exempt and is identified as such in Section 3 table above.
- Lighting that is specifically designated as required by a health or life safety statute, ordinance, or regulation.
- Emergency lighting that is automatically off during normal building operation.
- Lighting that is controlled by motion sensor.

Section 5: Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2009 IECC requirements in COMcheck Version 3.9.3 and to comply with the mandatory requirements in the Requirements Checklist.

Lawrence Bartlett, President

Lawrence E. Bartlett

05-12-14

Name - Title Bartlett Design, Inc

Signature

Date