

Interior Lighting Compliance Certificate

Project Information

Energy Code:

90.1 (2007) Standard

Project Title:

Taco Bell

Project Type:

New Construction

Construction Site:

1363 Washington Ave. Portland, ME Owner/Agent:

Designer/Contractor:

DeVita & Associates, Inc. 1150 E. Washington St. Greenville, SC 29601 864-232-6642

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Common Space Types:Dining Area - Family Restaurant	2156	2 .10	4528
		Total Allowed Watts =	4528

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	(C X D)
1-Common Space Types:Dining Area - Family Restaurant				
LED L1: L1: Downlight Grid Celing: LED PAR 11W:	1	28	10	294
LED R11: R: Opal Glass Pendant: LED A Lamp 11W:	1	12	10	126
LED E: E: 2x4 T-Grid Led Troffer: Other:	1	8	30	240
LED EM1: EM1: 2x4 Led w/Bat. backup: Other:	1	4	30	120
LED EM2: EM2: 1x4 Led w/Bat. Backup: Other:	1	2	15	30
		Total Propos	ed Watts =	810

Interior Lighting PASSES: Design 82% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 90.1 (2007) Standard requirements in COMcheck Version 4.0.2.8 and to comply with the mandatory requirements listed in the Inspection Checklist.

ERIC A MENCKEN PE.

Signature

7/8/2016

Project Title:

Taco Bell

Report date: 07/08/16

Data filename: G:\PROJECTS\2016\Commercial\16002-Taco Bell (GLMV)\30-Portland, ME\7Elec\needs maybe X: Page

--TB - Portland, ME Com Check.cck

1 of 13



Exterior Lighting Compliance Certificate

Project Information

Energy Code:

90.1 (2007) Standard

Project Title:

Project Type:

New Construction

Taco Bell

Construction Site:

1363 Washington Ave.

Portland, ME

Owner/Agent:

Designer/Contractor:

DeVita & Associates, Inc. 1150 E. Washington St. Greenville, SC 29601 864-232-6642

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Other entry/exit	3 ft of door	20	Yes	60
Illuminated length of wall or surface	227 ft	5	No	1135
Drive-up window	1 window(s)	400	No	400
Parking area(s)	12258 ft2	0.15	Yes	1839
		Total Tradat	ole Watts (a) =	2139
		Total Al	owed Watts =	3674
	Total All	owed Supplemen	tal Watts (b) =	184

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.

(b) A supplemental allowance equal to 184 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	(C X D)
Other entry/exit (3 ft of door width): Tradable Wattage LED 1: TB: Other:	2	1	36	36
Illuminated length of wall or surface (227 ft): Non-tradable Wattage LED 2: TB: Other: LED 3: X1: LINEAR LED 3.3W/LF: Other:	2	6 126	36 3	216 416
<u>Drive-up window (1 window(s)): Non-tradable Wattage</u> Compact Fluorescent: Canopy Lights: Spiral 20W: Electronic:	1	2	20	40
Main entry/exit (6 ft of door width): Tradable Wattage Other entry/exit (3 ft of door width): Tradable Wattage				
Parking area(s) (12258 ft2): Tradable Wattage LED A 400W: A: 1 Lamp: Other:	1	6	52	312
	Total Tra	dable Propos	sed Watts =	348

Project Title:

Taco Bell

Data filename: G:\PROJECTS\2016\Commercial\16002-Taco Bell (GLMV)\30-Portland, ME\7Elec\needs maybe X: Page

--TB - Portland, ME Com Check.cck

Report date: 07/08/16

Exterior Lighting PASSES: Design 85% better than code

Exterior Lighting 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 exterior lighting systems have been designed to meet the 90.1 (2007) Standard requirements in COMcheck Version 4.0.2.8 and to comply with the mandatory requirements listed in the Inspection Checklist.

ERIC A. MENCKEN P.E

Signature

7/8/2016



Mechanical Compliance Certificate

Project Information

Energy Code:

90.1 (2007) Standard

Project Title:

Taco Bell

Location:

Portland, Maine

Climate Zone:

Project Type:

New Construction

Construction Site:

1363 Washington Ave.

Portland, ME

Owner/Agent:

Designer/Contractor: DeVita & Associates, Inc. 1150 E. Washington St. Greenville, SC 29601 864-232-6642

Mechanical Systems List

Quantity System Type & Description

HVAC System 1 (Single Zone):

Heating: 1 each - Central Furnace, Gas, Capacity = 120 kBtu/h Proposed Efficiency = 90.00% Et, Required Efficiency = 80.00% Et

Cooling: 1 each - Single Package DX Unit, Capacity = 93 kBtu/h, Air-Cooled Condenser

Proposed Efficiency = 13.00 EER, Required Efficiency = 11.00 EER

Fan System: None

HVAC System 2 (Single Zone):

Heating: 1 each - Central Furnace, Gas, Capacity = 250 kBtu/h

Proposed Efficiency = 90.00% Ec, Required Efficiency = 80.00% Ec

Cooling: 1 each - Single Package DX Unit, Capacity = 176 kBtu/h, Air-Cooled Condenser, Air Economizer

Proposed Efficiency = 12.00 EER, Required Efficiency = 10.80 EER

Fan System: None

Water Heater 1:

Gas Storage Water Heater, Capacity: 100 gallons, Input Rating: 75 Btu/h w/ Circulation Pump Proposed Efficiency: 98.00 EF, Required Efficiency: 0.43 EF

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 90.1 (2007) Standard requirements in COMcheck Version 4.0.2.8 and to comply with the mandatory requirements listed in the Inspection Checklist.

ERIC Name - Title

7/5/2016 Date

Project Title:

Taco Bell

Report date: 07/08/16

Data filename: G:\PROJECTS\2016\Commercia\\16002-Taco Bell (GLMV)\30-Portland, ME\7Elec\needs maybe X: Page

-- TB - Portland, ME Com Check.cck



Inspection Checklist

Energy Code: 90.1 (2007) Standard

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
4.2.2, 6.4.2 [PR2] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	□Complies □Does Not □Not Observable □Not Applicable	
4.2.2, 7.4.1 [PR3] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and equipment and document where exceptions to the standard are claimed. Hot water system sized per manufacturer's sizing guide.	□Complies □Does Not □Not Observable □Not Applicable	
4.2.2 [PR4] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	□Complies □Does Not □Not Observable □Not Applicable	
6.7.2.4 [PR5] ¹	Detailed instructions for HVAC systems commissioning included on the plans or specifications for projects >=50,000 ft2.	□Complies □Does Not □Not Observable □Not Applicable	
8.4.1.1, 8.4.1.2 [PR6] ²	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Feeder connectors sized in accordance with approved plans and branch circuits sized for maximum drop of 3%.	□Complies □Does Not □Not Observable □Not Applicable	

Additional Comments/Assumptions:

	1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
--	---	----------------------	---	------------------------	---	---------------------

Project Title: Taco Bell Report date: 07/08/16

Data filename: G:\PROJECTS\2016\Commercial\16002-Taco Bell (GLMV)\30-Portland, ME\7Elec\needs maybe X: Page 5 of 13 --TB - Portland, ME Com Check.cck

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
6.4.3.8 [FO9] ³	Freeze protection and snow/ice melting system sensors for future	☐Complies ☐Does Not	
	connection to controls.	□Not Observable □Not Applicable	

1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3)

Project Title: Taco Bell

Report date: 07/08/16

Data filename: G:\PROJECTS\2016\Commercial\16002-Taco Bell (GLMV)\30-Portland, ME\7Elec\needs maybe X: Page 6 of 13
--TB - Portland, ME Com Check.cck

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
7.4.3 [PL1] ²	insulated. Where piping is installed in	□Complies □Does Not □Not Observable □Not Applicable	
7.4.4.1 [PL2] ³	Temperature controls installed on service water heating systems (<=120ºF to maximum temperature for intended use).	□Complies □Does Not □Not Observable □Not Applicable	
7.4.4.2 [PL3] ¹	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	□Complies □Does Not □Not Observable □Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Taco Bell Report date: 07/08/16

Data filename: G:\PROJECTS\2016\Commercial\16002-Taco Bell (GLMV)\30-Portland, ME\7Elec\needs maybe X: Page 7 of 13 --TB - Portland, ME Com Check.cck

Section # & Reg.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.1.4, 6.4.1.5 [ME1] ²	HVAC equipment efficiency verified. Non-NAECA HVAC equipment labeled as meeting 90.1.	Efficiency:	Efficiency:	□Complies □Does Not □Not Observable	See the Mechanical Systems list for values.
6.4.3.4.1 [ME3] ³	Stair and elevator shaft vents have motorized dampers that automatically close.			□ Not Applicable □ Complies □ Does Not □ Not Observable □ Not Applicable	
6.4.3.4.2, 6.4.3.4.3, 6.4.3.4.4 [ME4] ³	Outdoor air and exhaust systems have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Check gravity dampers where allowed.			□Complies □Does Not □Not Observable □Not Applicable	
6.4.3.4.5 [ME5] ³	Ventilation fans >0.75 hp have automatic controls to shut off fan when not required.			□Complies □Does Not □Not Observable □Not Applicable	
6.4.3.9 [ME6] ¹	Demand control ventilation provided for spaces >500 ft2 and >40 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.			□Complies □Does Not □Not Observable □Not Applicable	
6.4.4.1.1 [ME7] ³	Insulation exposed to weather protected from damage. Insulation outside of the conditioned space and associated with cooling systems is vapor retardant.			Complies Does Not Not Observable Not Applicable	
6.4.4.1.2 [ME8] ²	HVAC ducts and plenums insulated.	R	R	□Complies □Does Not □Not Observable □Not Applicable	
6.4.4.1.3 [ME9] ²	HVAC piping insulation thickness.	In,	in.	□Complies □Does Not □Not Observable □Not Applicable	
6.4.4.2.1 [ME10] ²	Ducts and plenums sealed based on static pressure and location.			□Complies □Does Not □Not Observable □Not Applicable	
6.4.4.2.2 [ME11] ³	Ductwork operating >3 in. water column requires air leakage testing.			□Complies □Does Not □Not Observable □Not Applicable	
6.4.4.2.2 [ME11] ³	Ductwork operating >3 in. water column requires air leakage testing.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Project Title: Taco Bell Report date: 07/08/16

Data filename: G:\PROJECTS\2016\Commercial\16002-Taco Bell (GLMV)\30-Portland, ME\7Elec\needs maybe X: Page --TB - Portland, ME Com Check.cck

8 of 13

Section #	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions		
& Req.ID				Complies			
6.5.1, 6.5.1.1.1,	Air economizers provided where required, meet the requirements			Does Not			
	for design capacity, control			□Not Observable			
	signal, ventilation controls, high-			☐Not Observable			
6.5.1.3	limit shut-off, integrated			□NOL Applicable			
[ME12] ¹	economizer control, and provide a means to relieve excess						
	outside air during operation.						
6.5.2.3	Dehumidification controls	IN BANGE OF		Complies			
[ME19] ³	provided to prevent reheating,			□Does Not			
	recooling, mixing of hot and cold airstreams or concurrent heating			□Not Observable			
	and cooling of the same			□Not Applicable			
	airstream.						
6.5.4.1	HVAC pumping systems >10 hp			Complies			
[ME25] ³	designed for variable fluid flow.			□Does Not			
				□ Not Observable	5 5		
				□ Not Applicable			
6.5.6.1 [ME30] ¹	Exhaust air energy recovery on systems >=5,000 cfm and 70%			☐Complies ☐Does Not			
[ME20].	of design supply air.			□Not Observable	8 8 1		
				□Not Observable	0 0 0		
6571	Kitchen hands a 5 000 ofm have			Complies	8 8 8		
6.5.7.1 [ME32] ²	Kitchen hoods >5,000 cfm have make up air >=50% of exhaust			Does Not			
	air volume.			Not Observable	# 8 8 8		
				□Not Applicable			
6.5.7.2	Fume hoods exhaust systems		THE RESERVE	Complies	1		
[ME33] ¹	>=15,000 cfm have VAV hood			□Does Not	8 8		
	exhaust and supply systems,			□Not Observable			
	direct make-up air or heat recovery.			□Not Applicable			
6.5.8.1	Unenclosed spaces that are			Complies			
[ME34] ³	heated use only radiant heat.			□Does Not			
				□Not Observable			
				□ Not Applicable			
6.5.9	Hot gas bypass limited to: <=240			Complies			
[ME35] ¹	kBtu/h - 50% >240 kBtu/h - 25%			□Does Not			
				Not Observable			
				□ Not Applicable			
6.5.9	Hot gas bypass limited to: <=240 kBtu/h - 50% >240 kBtu/h - 25%			☐Complies ☐Does Not			
[ME35] ¹	KDLU/II - 30% >240 KDLU/II - 23%			□Not Observable			
				Not Observable			
7.4.2	la de la compania del compania del compania de la compania del compania del compania de la compania del com			Complies			
7.4.2 [ME36] ²	Service water heating equipment meets efficiency requirements.			Does Not			
[l l l l l l l l l l l l l l l l l l l			□Not Observable			
				□Not Applicable			

			-	
1 High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Project Title: Taco Bell Report date: 07/08/16

Data filename: G:\PROJECTS\2016\Commercial\16002-Taco Bell (GLMV)\30-Portland, ME\7Elec\needs maybe X: Page 9 of 13 --TB - Portland, ME Com Check.cck

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
9.4.1.1 [EL1] ²	building lighting installed in buildings >5,000 ft2.	□Complies □Does Not □Not Observable □Not Applicable	
9.4.1.2 [EL2] ²	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	Dogs Not	
9.4.1.3 [EL3] ²		□Complies □Does Not □Not Observable □Not Applicable	
9.4.1.4 [EL4] ¹	specific uses installed per approved lighting plans.	□Complies □Does Not □Not Observable □Not Applicable	
9.4.2 [EL5] ³	with >30 W/lamp have two lamp tandem wired ballasts when >=2	□Complies □Does Not □Not Observable □Not Applicable	
9.4.3 [EL6] ¹	face.	□Complies □Does Not □Not Observable □Not Applicable	
9.4.4 [EL7] ¹	provides >60 lm/W unless on motion sensor or fixture is exempt from scope of code or from external LPD.	□Complies □Does Not □Not Observable □Not Applicable	
9.6.2 [EL8] ¹	allowed for special functions per the approved lighting plans and is automatically controlled and	□Complies □Does Not □Not Observable □Not Applicable	
10.4.1 [EL9] ²	where applicable.	□Complies □Does Not □Not Observable □Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2)	B Low Impact (Tier 3)
---	-----------------------

Report date: 07/08/16 Project Title: Taco Bell Data filename: G:\PROJECTS\2016\Commercial\16002-Taco Bell (GLMV)\30-Portland, ME\7Elec\needs maybe X: Page 10 of 13 --TB - Portland, ME Com Check.cck

Section # & Reg.ID	Final Inspection	Complies?	Comments/Assumptions
6.4.3.1.1 [FI2] ²	Heating and cooling to each zone is controlled by a thermostat control.	□Complies □Does Not □Not Observable □Not Applicable	
6.4.3.1.2, 6.4.3.2, 6.4.3.3, 6.4.3.3.1, 6.4.3.3.2 [FI3] ²	Thermostatic controls have a 5 °F deadband.	□Complies □Does Not □Not Observable □Not Applicable	
6.4.3.7 [FI6] ³	When humidification and dehumidification are provided to a zone, simultaneous operation is prohibited.	□Complies □Does Not □Not Observable □Not Applicable	
6.7.2.1 [FI7] ³	submitted within 90 days of system acceptance.	□Complies □Does Not □Not Observable □Not Applicable	
6.7.2.2 [FI8] ³	systems within 90 days of system acceptance.	□Complies □Does Not □Not Observable □Not Applicable	
6.7.2.3 [FI9] ¹	balancing report is provided for HVAC systems serving zones >5,000 ft2 of conditioned area.	□Complies □Does Not □Not Observable □Not Applicable	
6.7.2.4 [FI10] ¹	tested to ensure proper operation, calibration and adjustment of controls.	□Complies □Does Not □Not Observable □Not Applicable	
7.4.4.3 [FI11] ³	Public lavatory faucet water temperature <=110°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
7.4.4.4 [FI12] ³	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank.	□Complies □Does Not □Not Observable □Not Applicable	
8.7.1 [FI16] ³	electric power systems within 30 days of system acceptance.	□Complies □Does Not □Not Observable □Not Applicable	
8.7.2 [FI17] ³	systems and equipment to the building owner or designated representative	□Complies □Does Not □Not Observable □Not Applicable	
9.2.2.3 [FI18] ¹	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	□Complies □Does Not □Not Observable □Not Applicable	See the Interior Lighting fixture schedule for values.

1 High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)	
------------------------	---	------------------------	---	---------------------	--

Project Title: Taco Bell Report date: 07/08/16

Data filename: G:\PROJECTS\2016\Commercial\16002-Taco Bell (GLMV)\30-Portland, ME\7Elec\needs maybe X: Page 11 of 13 --TB - Portland, ME Com Check.cck

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
9.4.5 [FI19] ¹	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	□Complies □Does Not □Not Observable □Not Applicable	See the Exterior Lighting fixture schedule for values.
6.4.3.2 [FI20] ¹	Temperature controls have setpoint overlap restrictions.	□Complies □Does Not □Not Observable □Not Applicable	
6.4.3.3.1 [FI21] ¹	HVAC systems equipped with at least one automatic shutdown control.	□Complies □Does Not □Not Observable □Not Applicable	
6.4.3.3.2 [FI22] ¹	Setback controls allow automatic restart and temporary operation as required for maintenance.	□Complies □Does Not □Not Observable □Not Applicable	

1 High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
	-			-

Report date: 07/08/16 Project Title: Taco Bell Data filename: G:\PROJECTS\2016\Commercial\16002-Taco Bell (GLMV)\30-Portland, ME\7Elec\needs maybe X: Page 12 of 13 --TB - Portland, ME Com Check.cck

Report date: 07/08/16 Project Title: Taco Bell

Data filename: G:\PROJECTS\2016\Commercial\16002-Taco Bell (GLMV)\30-Portland, ME\7Elec\needs maybe X: Page 13 of 13 --TB - Portland, ME Com Check.cck