

Project Information

Energy Code: 2015 IECC

Project Title: Brighton Recovery Campus Bldg C

Location: Salt Lake City, Utah

Climate Zone: 5b
Project Type: Alteration
Vertical Glazing / Wall Area: 30%

Construction Site: Owner/Agent: Designer/Contractor:

Utah

Building Area Floor Area

1-Office : Nonresidential 4800

Envelope Assemblies

	R-V	alue	Prop	osed	Max. A	llowed
Post-Alteration Assembly	Cavity	Cont.	U-Factor	SHGC	U-Factor	SHGC
Roof: Attic Roof, Wood Joists, [Bldg. Use 1 - Office]	19.0	20.0	0.025		0.027	
Ext. Wall: Wood-Framed, 24in. o.c., [Bldg. Use 1 - Office]	13.0	7.5	0.050		0.064	
Window: Metal Frame with Thermal Break: Fixed, Clear, Fixed, Fixed, [Bldg. Use 1 - Office]			0.380	0.400	0.380	0.644
Door: , Entrance Door, Entrance Door, [Bldg. Use 1 - Office]			0.380	0.400	0.770	0.644
Floor: Unheated Slab-On-Grade, [Bldg. Use 1 - Office]					0.540	

⁽a) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.

Envelope PASSES

Envelope Compliance Statement

Compliance Statement: The proposed envelope alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2015 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

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⁽b) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.



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Mechanical Systems List

Quantity System Type & Description

4 RTUs (Single Zone):

Heating: 1 each - Other, Gas, Capacity = 96 kBtu/h No minimum efficiency requirement applies

Cooling: 1 each - Other, Capacity = 36 kBtu/h, Air-Cooled Condenser, Air Economizer

No minimum efficiency requirement applies

Fan System: FAN SYSTEM 1 | Level 1 -- Compliance (Motor nameplate HP method) : Passes

Fans

FAN 1 Supply, Constant Volume, 1200 CFM, 0.8 motor nameplate hp, 80.0 fan efficiency

1 HVAC System (Unknown w/ PerimeterSystem):

Heating: 2 each - Unit Heater, Electric, Capacity = 2 kBtu/h No minimum efficiency requirement applies

1 HVAC System (Unknown w/ PerimeterSystem):

Heating: 1 each - Unit Heater, Electric, Capacity = 3 kBtu/h No minimum efficiency requirement applies

1 Water Heater:

Gas Storage Water Heater, Capacity: 48 gallons, Input Rating: 60 Btu/h w/ Circulation Pump Proposed Efficiency: 95.00 EF, Required Efficiency: 0.53 EF

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project 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 2015 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

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COM*check* **Software Version COM***checkWeb*

Inspection Checklist

Energy Code: 2015 IECC

Requirements: 61.0% 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
C103.2 [PR1] ¹	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C103.2 [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	Requirement will be met.
C103.2 [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	Requirement will be met.
C402.4.1 [PR10] ¹	The vertical fenestration area <= 30 percent of the gross above-grade wall area.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C402.4.1 [PR11] ¹	The skylight area <= 3 percent of the gross roof area.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C402.4.2 [PR14] ¹	In enclosed spaces > 2,500 ft2 directly under a roof with ceiling heights > 15 ft. and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium/exercise center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the following requirements apply: (a) the daylight zone under skylights is >= half the floor area; (b) the skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40; or a minimum skylight effective aperture >= 1 percent.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.

2 Medium Impact (Tier 2)

3 Low Impact (Tier 3)

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1 High Impact (Tier 1)

Section #	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C303.2 [FO4] ²	Slab edge insulation installed per manufacturer's instructions.	\square Complies \square Does Not	Requirement will be met.
		□Not Observable □Not Applicable	
C303.2 [FO6] ¹	damage, sunlight, moisture, wind,	\square Complies \square Does Not	Requirement will be met.
	landscaping and equipment maintenance activities.	□Not Observable □Not Applicable	
C402.2 [FO3] ²	5 Slab edge insulation R-value.	\square Complies \square Does Not	See the Envelope Assemblies table for values.
		□Not Observable □Not Applicable	
C402.2 [FO12] ³	insulated to >=R-3.5 on face opposite	□Complies □Does Not	Exception: Requirement does not apply.
	space being heated.	□Not Observable □Not Applicable	See the Envelope Assemblies table for values.
C403.2	future connection to controls. Freeze	□Complies □Does Not	
C403.2 6 [FO9] ³	4. protection systems have automatic controls installed.	□Not Observable □Not Applicable	
		1	1

Report date: 04/12/17

Section # & Req.ID	Framing / Rough-In Inspection	Complies?	Comments/Assumptions
C303.1.3 [FR12] ²	Fenestration products rated in accordance with NFRC.	□Complies □Does Not	Exception: Default values are used.
		□Not Observable □Not Applicable	
C303.1.3 [FR13] ¹	Fenestration products are certified as to performance labels or certificates	\square Complies \square Does Not	Requirement will be met.
	provided.	□Not Observable □Not Applicable	
C402.4.3 [FR10] ¹	Vertical fenestration SHGC value.	□Complies □Does Not	See the Envelope Assemblies table for values.
		□Not Observable □Not Applicable	
C402.4.3, C402.4.3.	Vertical fenestration U-Factor.	□Complies □Does Not	See the Envelope Assemblies table for values.
4 [FR8] ¹		□Not Observable □Not Applicable	
C402.4.4 [FR14] ²	U-factor of opaque doors associated with the building thermal envelope	□Complies □Does Not	See the Envelope Assemblies table for values.
	meets requirements.	□Not Observable □Not Applicable	
C402.5.1 [FR16] ¹	The building envelope contains a continuous air barrier that is sealed in	□Complies □Does Not	Exception: Requirement does not apply.
	an approved manner and either constructed or tested in an approved manner. Air barrier penetrations are sealed in an approved manner.	□Not Observable □Not Applicable	
C402.5.2, C402.5.4	Factory-built fenestration and doors are labeled as meeting air leakage	□Complies □Does Not	Exception: Field fabricated fenestration assemblies.
[FR18] ³	requirements.	□Not Observable □Not Applicable	
C402.5.7 [FR17] ³	Vestibules are installed on all building entrances. Doors have self-closing	□Complies □Does Not	Exception: Requirement does not apply.
	devices.	□Not Observable □Not Applicable	

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

Report date: 04/12/17

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6] ³	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6] ³	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6] ³	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
C404.5, C404.5.1, C404.5.2 [PL6] ³	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	□Complies □Does Not □Not Observable □Not Applicable	
C404.6.1, C404.6.2 [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	
C404.6.3 [PL7] ³	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C404.6.3 [PL7] ³	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
C404.6.3 [PL7] ³	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
C404.6.3 [PL7] ³	heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating	□Complies □Does Not □Not Observable □Not Applicable	
C404.7 [PL8] ³	Water distribution system that pumps water from a heated-water supply pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

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

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.7 [PL8] ³	Water distribution system that pumps water from a heated-water supply pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C404.7 [PL8] ³	Water distribution system that pumps water from a heated-water supply pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C404.7 [PL8] ³	Water distribution system that pumps water from a heated-water supply pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to $104^{\circ}F$.	□Complies □Does Not □Not Observable □Not Applicable	

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Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41] ³	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	□Complies □Does Not □Not Observable □Not Applicable	
C402.5.5, C403.2.4. 3 [ME3] ³	Stair and elevator shaft vents have motorized dampers that automatically close.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
C402.5.5, C403.2.4. 3 [ME58] ³		□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
C403.2.12 .1 [ME65] ³	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met. See the Mechanical Systems list for values.
C403.2.12 .1 [ME65] ³	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met. See the Mechanical Systems list for values.
C403.2.12 .3 [ME117] ²	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Fans integral to equipment listed under Section C403.2.3.
C403.2.12 .3 [ME117] ²	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	□Complies □Does Not □Not Observable □Not Applicable	
C403.2.13 [ME71] ²	Unenclosed spaces that are heated use only radiant heat.	□Complies □Does Not □Not Observable □Not Applicable	
C403.2.3 [ME55] ²	HVAC equipment efficiency verified.	□Complies □Does Not □Not Observable □Not Applicable	See the Mechanical Systems list for values.
C403.2.6. 1 [ME59] ¹		□Complies □Does Not □Not Observable □Not Applicable	
C403.2.6. 2 [ME115] ³	and capacity to stage or modulate fans to 50% or less of design capacity.	□Complies □Does Not □Not Observable □Not Applicable	
C403.2.7 [ME57] ¹	Exhaust air energy recovery on systems meeting Table C403.2.7(1) and C403.2.7(2).	□Complies □Does Not □Not Observable □Not Applicable	

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.2.8 [ME116] ³	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	□Complies □Does Not □Not Observable □Not Applicable	
C403.2.9 [ME60] ²	HVAC ducts and plenums insulated. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation Inspection.	□Complies □Does Not □Not Observable □Not Applicable	
C403.2.9 [ME10] ²	Ducts and plenums sealed based on static pressure and location.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.2.9. 1.3 [ME11] ³	Ductwork operating >3 in. water column requires air leakage testing.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
C403.2.9. 1.3 [ME11] ³	Ductwork operating >3 in. water column requires air leakage testing.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
C403.2.9. 1.3 [ME11] ³	Ductwork operating >3 in. water column requires air leakage testing.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
C403.4.4. 6 [ME110] ³	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.
C403.4.4. 6 [ME110] ³	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.
C403.4.4. 6 [ME110] ³	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.
C404.2.1 [ME111] ²	Gas-fired water-heating equipment installed in new buildings: where a singular piece of water-heating equipment >= 1,000 kBtu/h serves the entire building, thermal efficiency >= 90 Et. Where multiple pieces of water-heating equipment serve the building with combined rating >= 1,000 kBtu/h, the combined input-capacity-weighted-average thermal efficiency >= 90 Et. Exclude input rating of equipment in individual dwelling units and equipment <= 100 kBtu/h.	□Complies □Does Not □Not Observable □Not Applicable	
C408.2.2. 1 [ME53] ³	Air outlets and zone terminal devices have means for air balancing.	□Complies □Does Not □Not Observable □Not Applicable	

2 Medium Impact (Tier 2)

1 High Impact (Tier 1)

3 Low Impact (Tier 3)

Section #	Insulation Inspection	Complies?	Comments/Assumptions
& Req.ID	msulation inspection	Compiles	Comments/Assumptions
C303.1 [IN3] ¹	manufacturer's instructions. Blown or poured loose-fill insulation is installed only where the roof slope is <=3 in	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C303.1 [IN10] ²	providing R-value and other relevant data.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C303.2 [IN7] ¹	per manufacturer's instructions.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
C303.2.1 [IN14] ²	damage with a protective material. Verification for exposed foundation insulation may need to occur during	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
C402.2.1 [IN17] ³		☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C402.2.3 [IN6] ¹	-	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
C402.2.5 [IN8] ²	Floor insulation R-value.	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
C402.2.6 [IN18] ³	components, designed for heat transfer from the panel surfaces to the occupants or indoor space are	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
C402.4.2. 2 [IN2] ¹	systems, verification may need to occur during Framing Inspection.	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
C402.5.1. 1 [IN1] ¹	building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

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

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions	
C303.3, C408.2.5. 3 [FI8] ³	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.	
C402.5.3 [FI51] ³	Where open combustion air ducts provide combustion air to open combustion fuel burning appliances, the appliances and combustion air opening are located outside the building thermal envelope or enclosed in a room, isolated from inside the thermal envelope. Such rooms are sealed and insulated.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement is not applicable.	
C402.5.6 [FI37] ¹	Weatherseals installed on all loading dock cargo doors.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.	
C402.5.8 [FI26] ³		□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.	
C403.2.2 [FI27] ³		□Complies □Does Not □Not Observable □Not Applicable		
C403.2.4. 1 [FI47] ³	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.	
C403.2.4. 1 [FI47] ³	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.	
1 [FI47] ³	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.	
C403.2.4. 1.2 [FI38] ³	Thermostatic controls have a 5 °F deadband.	□Complies □Does Not □Not Observable □Not Applicable		
C403.2.4. 1.3 [FI20] ³	Temperature controls have setpoint overlap restrictions.	□Complies □Does Not □Not Observable □Not Applicable		
C403.2.4. 2 [FI39] ³	Each zone equipped with setback controls using automatic time clock or programmable control system.	□Complies □Does Not □Not Observable □Not Applicable		

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C403.2.4. 2.1, C403.2.4. 2.2 [FI40] ³		□Complies □Does Not □Not Observable □Not Applicable	
C403.2.4. 2.3 [FI41] ³	Systems include optimum start controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Exception: Requirement does not apply.
C404.3 [FI11] ³		□Complies □Does Not □Not Observable □Not Applicable	
C404.4 [FI25] ²	All piping insulated in accordance with section details and Table C403.2.10.		
C404.6.1 [FI12] ³		□Complies □Does Not □Not Observable □Not Applicable	
C408.2.1 [FI28] ¹	Commissioning plan developed by registered design professional or approved agency.	□Complies □Does Not □Not Observable □Not Applicable	
C408.2.3. 1 [FI31] ¹	HVAC equipment has been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.2.3. 2 [FI10] ¹		☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.2.4 [FI29] ¹	completed and certified by registered design professional or approved	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.2.5. 1 [FI7] ³		□Complies □Does Not □Not Observable □Not Applicable	
C408.2.5. 3 [FI43] ¹	balancing report is provided for HVAC systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C408.2.5. 4 [FI30] ¹	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	□Complies □Does Not □Not Observable □Not Applicable	

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