File No. _____

Date _____

UC3

Uniform Construction Code (UCC)

ENERGY CODE PRESCRIPTIVE COMPLIANCE REPORT

PROJECT INFORMATION

Project Name: _____

Street Number and Name: _____

City: _____ Zip Code: _____

Political Subdivision: _____ County: _____

IECC **Climate Zone**

- ☐ Zone 10B
- ☐ Zone 11B
- ☐ Zone 12A
- ☐ Zone 12B
- ☐ Zone 13B
- ☐ Zone 14A
- ☐ Zone 15

ASHRAE/IESNA 90.1 **Table**

- ☐ B-13
- ☐ B-14
- ☐ B-15
- ☐ B-16
- ☐ B-17

PROJECT DESCRIPTION

Building floor area: _____ square feet

☐ New construction ☐ Addition (conditioned) ☐ Alteration
☐ Unconditioned shell ☐ Unconditioned addition

If using *ASHRAE/IESNA* 90.1 prescriptions, indicate if ☐ Semi-heated Space or if ☐ Cooled Space

APPLICABLE STANDARDS

Check which standards will be used for each component listed below.

	IECC CHAPTER 8	*ASHRAE/IESNA 90.1*
Building Envelope	☐	☐
Mechanical Systems	☐	☐
Electrical/Lighting Systems	☐	☐

If no Building Envelope box was checked above, please indicate why the building envelope is exempt from the energy conservation requirements:

☐ Peak design rate of energy usage will be less than 3.4 Btu/h/sq. ft.

☐ Building or structure will be neither heated nor cooled.

Attach either the IECC Chapter 8 or the ASHRAE/IESNA "Prescriptive Report" for each of the components checked above.

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UC3

IECC Prescriptive Report: BUILDING ENVELOPE

Window and Glazed Door Area/Above Grade Wall Area Ratio: _____ **%**

Skylights

Total Roof Area: _____ **square feet**
Total Skylight Area: _____ **square feet**
U-factor: _____
Assembly Type: _____

R value of slab or below-grade walls: _____

Windows and Glass Doors (list individual assemblies):

Number/Location	PF	SHGC	U

Roof Assembly (list each type of assembly used):

Elements of Roof Assembly	Insulation Between Framing (R-Value)	Continuous Insulation (R-Value)

Floors Over Outdoor Air or Unconditioned Spaces (list each type of assembly used):

Elements Of Floor Assemblies	Insulation Between Framing (R-Value)	Continuous Insulation (R-Value)

Above-Grade Walls (list each type of assembly used):

Elements of Wall Assembly Used	No Framing (R-Value)	Metal Framing (R-Value)	Wood Framing (R-Value)

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UC3

IECC BUILDING ENVELOPE CHECKLIST (requirements that will also be checked during inspection process):

- All joints and penetrations caulked, gasketed, weather-stripped, or otherwise sealed.
- Windows, doors, and skylights certified as meeting leakage requirements.
- All component R-values and U-factors labeled as certified.
- Stair, elevator shafts, vents and other dampers integral to building envelope are equipped with motorized dampers. (Gravity dampers may be used in buildings less than 3-stories in height.)
- Cargo/loading dock doors weather sealed.
- Recessed lighting fixtures installed per Section 802.3.7
- Vestibule provided at building entrances, with self-closing doors.
- Vapor retarder installed.

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UC3

IECC Prescriptive Report: MECHANICAL SYSTEMS

Fill in all the requested information for either a simple or complex HVAC system.

Simple HVAC System & Equipment:
The section 803.2.1 design loads calculated per the ASHRAE *Fundamentals Handbook* are:

Heating Load = _____

Cooling Load = _____

803.2.2 HVAC Equipment Performance

Manufacturer Model Number	Capacity	Equipment Efficiency	Table used from Section 803	Required Efficiency

Complex HVAC Systems & Equipment:
The section 803.2.1 design loads calculated per the ASHRAE *Fundamentals Handbook* are:

Heating Load = _____

Cooling Load = _____

803.2.1 HVAC Equipment Performance

Manufacturer Model Number	Capacity	Equipment Efficiency	Table used from Section 803	Required Efficiency

Fill in all the information requested below for the service water heating system.

Section 804 Service Water Heating Equipment Performance

Manufacturer Model Number	Capacity	Equipment Efficiency	Equipment Type	Required Efficiency

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UC3

IECC Building Mechanical Systems & Service Water Heater Requirement Checklist (requirements that will also be checked during inspection process):

- Load calculations per *ASHRAE Fundamentals Handbook-2001*.
- Plant Equipment and system capacity not greater than needed to meet loads.
- Minimum one temperature control device per zone.
- Stair and elevator shaft vents are equipped with motorized dampers
- Discharge dampers prohibited on constant volume fans & variable volume fans with motors >25hp.
- Balancing and pressure test connections on all hydronic terminal devices.
- Single–duct Variable Air Volume (VAV) terminals reduce primary air before reheating.
- Dual-duct (VAV) mixing boxes installed to minimize mixing.
- Controls capable of resetting supply air temperature (SAT) by 25% of SAT-room temperate difference.
- Minimum one humidity control device per installed humidification/dehumidification system.
- Automatic Controls: Setback to 55 degrees F (heat) & 85 degrees F (cool)
- Outside air supply and exhaust ducts equipped with gravity or motorized dampers with automatic shut off.
- Duct insulation: R-5 unconditioned spaces, R-8 outside building, R-8 between duct and exterior envelope.
- Duct construction per *International Mechanical Code* (IMC).
- Balancing devices provided in accordance with IMC.
- Minimum pipe insulation per Table 803.3.
- Heat traps in inlet/outlet fittings for service water heating.
- Pipe insulation for Service Water Heating per Section 804.5
- Water temperature controls: 110 degrees F for dwelling units, or 90 degrees F for other occupancies.
- Hydronic three-pipe systems not used.
- Operation and maintenance manual provided to building owner.

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Date _____

UC3

IECC Prescriptive Report: Electrical Power & Lighting Systems

Fill in all the requested information for either the entire building method or the tenant portion/portion of the building method.

Entire Building Method:

Building Use or Area Type from Table 805.5.2: _____

Total Area of the Building (Sq. Ft.): _____

Total Interior Light Power (Watts): _____

Tenant Area or Portion of Building Method:

Tenant Area/ Building Portion	Use From Table 805.5.2	Total Area sq.ft.	Total Interior Lighting Power (Watts)

IECC Electrical Power & Lighting Systems Requirements Checklist requirements that will also be checked during inspection process):

- Exterior Lighting: Efficacy greater than 45 lumens/W
- Independent controls for each space (switch/occupancy sensor).
- Master switch at entry to hotel/motel guest rooms.
- Individual dwelling units separately metered.
- Each space provided with a manual control to provide uniform light reduction capability.
- If area is corridor, storeroom, restroom, or lobby; area must be continuously illuminated; areas greater than 250 sq. ft. or use less than 0.6 watts/sq. ft.
- Photocell/astronomical time switch on exterior lighting.
- Tandem wired one-lamp & 3-lamp ballasted luminaries.

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UC3

ASHRAE/IESNA 90.1 Prescriptive Report: Electrical Power & Lighting Systems

Fill in all the requested information for either the entire building method or the tenant portion/portion of the building method.

Entire Building Method:

Building Use or Area Type from Table 9.3.1.1: _____

Total Area of the Building (Sq.Ft.): _____

Total Interior Light Power (Watts): _____

Tenant Area or Portion of Building Method:

Tenant Area/ Building Portion	Use From Table 9.3.1.2	Total Area Sq. Ft.	Total Interior Lighting Power (Watts)

ASHRAE/IESNA 90.1 Electric Power & Lighting Requirements Checklist (requirements that will also be checked during inspection process):

- Minimum Efficacy of 60 lumens/watts for lamps greater than 100W used for exterior lighting.
- Lighting power for freestanding canopy areas for building entrances with canopies less than or equal to 3 watts per square foot.
- Lighting power for building entrances without a canopy less than or equal to 33 watts per linear foot of exterior door width.
- Lighting power for buildings exits less than or equal to 20 watts per linear foot of exit door width.
- Lighting power for building facades less than or equal to 0.25 watts per square foot of the illuminated area.
- Independent manual or occupancy sensing controls for each space (remote switch with indicator allowed for safety or security).
- Automatic shutoff control for lighting in > 5000 sq.ft. buildings by time-of-day device, occupant sensor or other automatic control.
- Master switch at entry to hotel/motel guest room.
- Photocell/astronomical time switch on exterior lights (except areas requiring lighting during daylight hours).
- Tandem wired one-lamp and three-lamp ballasted luminaries (except high-frequency ballasts; luminaries not on same switch).
- Feeder conductors have been designed for a maximum voltage drop of 2 percent.
- Branch circuit conductors have been designed for a maximum voltage drop of 3 percent.

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Date _____

UC3

ASHRAE/IESNA 90.1 Prescriptive Report: Building Envelope

Roof Assembly (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**Opaque Elements**	**Assembly Max. U**	**Insulation Min. R**

Walls, Above-Grade (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**Opaque Elements**	**Assembly Max. U**	**Insulation Min. R**

Floor Assembly (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**Opaque Elements**	**Assembly Max. U**	**Insulation Min. R**

Slab on Grade Floors (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**Opaque Elements**	**Assembly Max. U**	**Insulation Min. R**

Wall, Below Grade (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**Opaque Elements**	**Assembly Max. U**
		_____
		_____
		_____
		_____

Opaque Doors (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**Opaque Elements**	**Assembly Max. U**
		_____
		_____
		_____
		_____

File No. _____

Date _____

UC3

ASHRAE/IESNA 90.1 Prescriptive Report: Building Envelope (Continued)

Fenestration (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**% Vertical Glazing**	**SHGC Multiplier**	**Assembly Max. U**	**SHGC North**	**SHGC All**

Skylights (list each type of assembly used per table 5.3)

List Building Envelope Option: **Residential Non-residential Semi-heated**	**Type**	**% of Roof**	**Assembly Max.**	**SHGC Max.**

ASHRAE/IESNA 90.1 Building Envelope Requirements Checklist (requirements that will also be checked during inspection process):

- Open-blown or poured loose-fill insulation has not been used in attic roof spaces with ceiling slope greater than 3 in 12.
- Wherever vents occur, vents are baffled to deflect incoming air above the insulation.
- Recessed lights, equipment and ducts are not affecting insulation thickness.
- No roof insulation is installed on a suspended ceiling with removable ceiling panels.
- All exterior insulation is covered with protective material.
- Cargo and loading dock doors are equipped with weather seals.
- Windows & skylights are labeled & certified by the manufactures for U-factor & SHGC.
- Fixed windows & skylights unlabeled by manufacturer have been site labeled using the default U-factor & SHGC.
- Other unlabeled vertical fenestration, operable and fixed, not labeled by the manufacturer, has been site labeled using the default U-factor and SHGC.
- All joints & penetrations are caulked, gasketed, weather-stripped, or otherwise sealed.
- Windows, doors, and skylights certified as meeting leakage requirements.
- Components R-values & U-factors labeled as certified.
- Building entrance doors have a vestibule and equipped with closing devices.

File No. _____

Date _____

UC3

ASHRAE/IESNA 90.1 Prescriptive Report: Mechanical Systems (Simple)

A building that is less than 2 stories in height, and, has less than 25,000 total square feet floor area, and, has a single HVAC zone, must meet the requirements for a simple mechanical system.

If the requirements for a **simple mechanical system** apply, fill in all of the following information.

Cooling (if provided)			
Manufacturer Name	_____		
Mfg'er Specified Efficiency	_____		
☐	Air Conditioner	Min. Efficiency (Table 6.2.1A)	____
☐	Heat Pump	Min. Efficiency (Table 6.2.1B)	____
☐	Packaged Terminal & Room AC & Heat Pump	Min. Efficiency (Table 6.2.1D)	____
	Is Economizer required per Table 6.1.3?	☐ Yes ☐ No	
Heating			
Manufacturer Name	_____		
Mfg'er Specified Efficiency	_____		
☐	Heat Pump	Min. Efficiency (Table 6.2.1A)	____
☐	Heat Pump	Min. Efficiency (Table 6.2.1D)	____
☐	Fuel Fired Furnace	Min. Efficiency (Table 6.2.1E)	____
☐	Fuel Fired Boiler	Min. Efficiency (Table 6.2.1F)	____
☐	Electric Resistance Heat		
Service Hot Water			
Manufacturer Name	_____		
Mfg'er Specified Efficiency	_____		
	Load calculated per 7.2.1	_____	
	Efficiency/Performance Requirements per 7.2.2	_____	
	Prescriptive Path per 7.3, if combined boiler/service hot water	_____ _____	

ASHRAE/IESNA 90.1 Mechanical Systems (Simplified) Requirements Checklist (requirements that will also be checked during inspection process):

- Energy recovery ventilation required if outside air quality supplied by the system is greater than 3000 cfm & greater than 70% of the supply air quantity at min. outside air designs.
- Manual change over or dual set-point thermostat supplied.
- Heat pump controls to prevent supplemental heater operation.
- Systems controls to prevent reheat or any other form of simultaneous heating & cooling for humidity control supplied.
- Programmable time clock on HVAC systems greater than 15,000 BTU/H & supply fan greater than 3/4/hp.
- HVAC piping shall be insulated in accordance with Table 6.2.4.1.3 insulation suitable for outdoor service.
- Ductwork & plenums insulated in accordance with Table 6.2.4.1.2A & 6.2.4.1.2B and ducted systems air balanced.
- Thermostats shall be interconnected to prevent simultaneous heating & cooling.

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ASHRAE/IESNA 90.1 Mechanical Systems (Simple) Requirements Checklist (continued)

- Dampers automatically shut on systems greater than 300 cfm.
- Optimum start controls supplied on systems with capacities greater than 10,000 cfm.

ASHRAE/IESNA 90.1 Service Hot Water Systems Requirements Checklist (requirements that will also be checked during inspection process):

- Service Hot Water Piping Insulation meets 7.2.3
- Temperature maintenance automatic time switches installed (7.2.4.2)
- Outlet temperature controls installed (7.2.4.4)
- Circulating pump controls installed (7.2.4.4)
- Storage temperature controls installed (7.2.4.1)
- Heat traps installed (7.2.6)

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UC3

ASHRAE/IESNA 90.1 Prescriptive Report: Mechanical Systems (Complex)

If the requirements for a **complex mechanical system** apply, fill in all of the following information.

Heating System Design Load: _____
Cooling System Design Load: _____

HVAC Equipment Performance per section 6.2.1

Manufacturer/ Model #	Capacity	Equipment Efficiency	Table used from Section 6.2.1	Required Efficiency	1992 Epact

Service Hot Water		
Manufacturer Name	_____	
Mfg'er Specified Efficiency	_____	
	Load calculated per 7.2.1	_____
	Efficiency/Performance Requirements per 7.2.2	_____
	Prescriptive Path per 7.3, if combined boiler/service hot water	_____ _____

ASHRAE/IESNA 90.1 Mechanical Systems (Complex) Requirements Checklist (requirements that will also be checked during inspection process):

- Economizers per 6.3.1
- Simultaneous heating & cooling limitations per 6.3.2
- Air system design & condoles per 6.3.3
- Hydronic system design & control 6.3.2.2.3
- Heat rejection equipment per 6.3.5
- Energy recovery per 6.3.6.
- Exhaust Hoods per 6.3.7
- Radiant Heating systems per 6.3.8
- Hot gas bypass limitations per 6.3.9
- Service hot water piping insulation meets 7.2.3
- Temperature maintenance automatic time switches installed per 7.2.4.2
- Outlet temperature controls installed per 7.2.4.3
- Circulating pump controls installed per 7.2.4.4
- Storage temperature controls installed per 7.2.4.1
- Heat traps installed per 7.2.6