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Envelope Compliance Certificate

Section 1: Project Information

Energy Code: **2009 IECC**
Project Title: Cannery Trail Residences
Project Type: New Construction

Construction Site:
1750 N Oxford Ave
Eau Claire, Wisconsin

Owner/Agent:
W Capital Group
608-345-9848
tyler@wcapitalgroupre.com

Designer/Contractor:
Ryan Schultz
OpeningDesign
316W Washington Ave, Suite 675
Madison, Wisconsin 53703
773-425-6456
ryan@openingdesign.com

Building Location (for weather data): Eau Claire, Wisconsin
Climate Zone: 6a
Vertical Glazing / Wall Area Pct.: **20%**

Building Use: Activity Type(s)	**Floor Area**
1-3 FLOORS BUILDING (Multifamily) : Nonresidential	90026

Section 2: Envelope Assemblies and Requirements Checklist

Envelope PASSES: Design 4% better than code.

Envelope Assemblies:

Component Name/Description	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
CMU + CLADDING COMPOSITE SIDING/DECKING WALL: Wood-Framed, 16in. o.c., [Bldg. Use 1 - 3 FLOORS BUILDING]	684	15.0	3.6	0.061	0.051
COMPOSITE SIDING/DECKING WALL: Wood-Framed, 16in. o.c., [Bldg. Use 1 - 3 FLOORS BUILDING]	4226	20.0	3.6	0.050	0.051
1ST FLOOR WINDOWS: Wood Frame, Perf. Specs.: Product ID AND-N-24-02067-00001, SHGC 0.31, [Bldg. Use 1 - 3 FLOORS BUILDING] (c)	1437	---	---	0.300	0.350
STOREFRONT WINDOWS: Wood Frame, Perf. Type: Energy code default, Double Pane, Clear , SHGC 0.70, [Bldg. Use 1 - 3 FLOORS BUILDING]	341	---	---	0.550	0.350
1ST FLOOR DOORS - GLASS INSET: , Perf. Specs.: Product ID AND-N-65-00673-00001, SHGC 0.23, [Bldg. Use 1 - 3 FLOORS BUILDING] (c)	66	---	---	0.290	0.350
1ST FLOOR DOORS - TERRACE DOORS: , Perf. Specs.: Product ID AND-N-65-00673-00001, SHGC 0.23, [Bldg. Use 1 - 3 FLOORS BUILDING] (c)	407	---	---	0.290	0.350
GARAGE DOOR: Insulated Metal, Swinging, [Bldg. Use 1 - 3 FLOORS BUILDING]	128	---	---	0.350	0.700
COMPOSITE SIDING/DECKING WALL - 1hr: Wood-Framed, 16in. o.c., [Bldg. Use 1 - 3 FLOORS BUILDING]	892	20.0	3.6	0.050	0.051
COMPOSITE SIDING/DECKING WALL - COURTYARD: Wood-Framed, 16in. o.c., [Bldg. Use 1 - 3 FLOORS BUILDING]	247	20.0	3.6	0.050	0.051
EXT WALL - C8AØF - (10" CONCRETE + 2" EPS INSUL): Solid Concrete, 10in. Thickness,Normal Density , Furring: None, [Bldg. Use 1 - 3 FLOORS BUILDING]	6642	---	15.0	0.059	0.080
EXT WALL - C8AØF - WITH STUCCO: Solid Concrete, 10in. Thickness,Normal Density , Furring: None, [Bldg. Use 1 - 3 FLOORS BUILDING]	995	---	15.0	0.059	0.080

EXT WALL - M8AØF - (10" CMU + 2" EPS INSUL): Concrete Block, 10in., Solid Grouted,Normal Density , Furring: None, [Bldg. Use 1 - 3 FLOORS BUILDING]	852	---	15.0	0.058	0.080
EXT WALL - FIBER CEMENT - LARGE: Wood-Framed, 16in. o.c., [Bldg. Use 1 - 3 FLOORS BUILDING]	9376	20.0	3.6	0.050	0.051
2ND FLOOR WINDOWS: Wood Frame, Perf. Specs.: Product ID AND-N-24-02067-00001, SHGC 0.31, [Bldg. Use 1 - 3 FLOORS BUILDING] (c)	1971	---	---	0.300	0.350
2ND FLOOR DOORS - TERRACE DOORS: , Perf. Specs.: Product ID AND-N-65-00673-00001, SHGC 0.23, [Bldg. Use 1 - 3 FLOORS BUILDING] (c)	274	---	---	0.290	0.350
2ND FLOOR HVAC PANELS: Wood-Framed, 16in. o.c., [Bldg. Use 1 - 3 FLOORS BUILDING]	660	0.0	0.0	0.292	0.051
EXT WALL - FIBER CEMENT - LARGE - 1hr: Wood-Framed, 16in. o.c., [Bldg. Use 1 - 3 FLOORS BUILDING]	824	20.0	3.6	0.050	0.051
EXT WALL - FIBER CEMENT - SMALL: Wood-Framed, 16in. o.c., [Bldg. Use 1 - 3 FLOORS BUILDING]	5324	20.0	3.6	0.050	0.051
3RD FLOOR WINDOWS: Wood Frame, Perf. Specs.: Product ID AND-N-24-02067-00001, SHGC 0.31, [Bldg. Use 1 - 3 FLOORS BUILDING] (c)	1725	---	---	0.300	0.350
3RD FLOOR DOORS - TERRACE DOORS: , Perf. Specs.: Product ID AND-N-65-00673-00001, SHGC 0.23, [Bldg. Use 1 - 3 FLOORS BUILDING] (c)	299	---	---	0.290	0.350
3RD FLOOR HVAC PANELS: Wood-Framed, 16in. o.c., [Bldg. Use 1 - 3 FLOORS BUILDING]	660	0.0	0.0	0.292	0.051
EXT WALL - FIBER CEMENT - SMALL - 1hr: Wood-Framed, 16in. o.c., [Bldg. Use 1 - 3 FLOORS BUILDING]	475	20.0	3.6	0.050	0.051
POLYCARBONATE WALL - 2ND: Other Steel Framed Wall, [Bldg. Use 1 - 3 FLOORS BUILDING] (b)	117	---	---	0.188	0.064
POLYCARBONATE WALL - 3RD: Other Steel Framed Wall, [Bldg. Use 1 - 3 FLOORS BUILDING] (b)	1120	---	---	0.188	0.064
6" CONCRETE SLAB ON GRADE: Unheated Slab-On-Grade, Horizontal with vertical 1 ft., [Bldg. Use 1 - 3 FLOORS BUILDING]	675	---	11.0	---	---
COMPOSITE CEIING OVER EXTERIOR: Wood-Framed, [Bldg. Use 1 - 3 FLOORS BUILDING]	1979	30.0	3.6	0.029	0.033
12" CONCRETE SLAB BASEMENT/GARDEN W/ 6" POLYURETHANE: Insulation Entirely Above Deck, [Bldg. Use 1 - 3 FLOORS BUILDING]	8320	---	45.0	0.022	0.048
WOOD-FRAMED ROOF ABOVE 3RD FLOOR: Insulation Entirely Above Deck, [Bldg. Use 1 - 3 FLOORS BUILDING]	20572	---	50.0	0.020	0.048
WOOD-FRAMED ROOF ABOVE CORRIDORS (USG - L521): Insulation Entirely Above Deck, [Bldg. Use 1 - 3 FLOORS BUILDING]	2021	---	25.0	0.039	0.048

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.

(b) 'Other' components require supporting documentation for proposed U-factors.

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

Air Leakage, Component Certification, and Vapor Retarder Requirements:

- ❑ 1. All joints and penetrations are caulked, gasketed or covered with a moisture vapor-permeable wrapping material installed in accordance with the manufacturer's installation instructions.
- ❑ 2. Windows, doors, and skylights certified as meeting leakage requirements.
- ❑ 3. Component R-values & U-factors labeled as certified.
- ❑ 4. No roof insulation is installed on a suspended ceiling with removable ceiling panels.
- ❑ 5. 'Other' components have supporting documentation for proposed U-Factors.
- ❑ 6. Insulation installed according to manufacturer's instructions, in substantial contact with the surface being insulated, and in a manner that achieves the rated R-value without compressing the insulation.
- ❑ 7. Stair, elevator shaft vents, and other outdoor air intake and exhaust openings in the building envelope are equipped with motorized dampers.
- ❑ 8. Cargo doors and loading dock doors are weather sealed.
- ❑ 9. Recessed lighting fixtures installed in the building envelope are Type IC rated as meeting ASTM E283, are sealed with gasket or caulk.
- ❑ 10. Building entrance doors have a vestibule equipped with self-closing devices.
  Exceptions:
  - ❑ Building entrances with revolving doors.
  - ❑ Doors not intended to be used as a building entrance.

- ❑ Doors that open directly from a space less than 3000 sq. ft. in area.
- ❑ Doors used primarily to facilitate vehicular movement or materials handling and adjacent personnel doors.
- ❑ Doors opening directly from a sleeping/dwelling unit.

Section 3: Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed envelope system has been designed to meet the 2009 IECC requirements in COM*check-Web* and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title	Signature	Date

Project Notes:

Building area calculation: 1rst floor = 19292sqft + 2nd and 3rd floors = 38968 sqft + corridors = 3597 sqft + basement = 28169 sqft, total = 90026 sqft

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Interior Lighting Compliance Certificate

Section 1: Project Information

Energy Code: **2009 IECC**
Project Title: Cannery Trail Residences
Project Type: New Construction

Construction Site:
1750 N Oxford Ave
Eau Claire, Wisconsin

Owner/Agent:
W Capital Group
608-345-9848
tyler@wcapitalgroupre.com

Designer/Contractor:
Ryan Schultz
OpeningDesign
316W Washington Ave, Suite 675
Madison, Wisconsin 53703
773-425-6456
ryan@openingdesign.com

Section 2: Interior Lighting and Power Calculation

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B x C)
3 FLOORS BUILDING (Multifamily)	90026	0.7	63018
		Total Allowed Watts =	63018

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)
3 FLOORS BUILDING (Multifamily, 90026 sq.ft.)				
			Total Proposed Watts =	0

Section 4: Requirements Checklist

Interior Lighting TBD: No lighting fixtures specified

Lighting Wattage:

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

Allowed Watts	Proposed Watts	Complies
63018	0	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.

❑ 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.

❑ 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.

❑ 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.

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Exterior Lighting Compliance Certificate

Section 1: Project Information

Energy Code: **2009 IECC**
Project Title: Cannery Trail Residences
Project Type: New Construction
Exterior Lighting Zone: 0 (Unspecified)

Construction Site:
1750 N Oxford Ave
Eau Claire, Wisconsin

Owner/Agent:
W Capital Group
608-345-9848
tyler@wcapitalgroupre.com

Designer/Contractor:
Ryan Schultz
OpeningDesign
316W Washington Ave, Suite 675
Madison, Wisconsin 53703
773-425-6456
ryan@openingdesign.com

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
			Total Tradable Watts* =	0	0
			Total Allowed Watts =	0	
			Total Allowed Supplemental Watts** =	500	

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

** A supplemental allowance equal to 500 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)
			Total Tradable Proposed Watts =	0

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: Exterior lighting zone not specified (see project screen)

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.

❑ 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.

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 statue, ordinance, or regulation.
- ❑ Emergency lighting that is automatically off during normal building operation.
- ❑ Lighting that is controlled by motion sensor.

Exterior Lighting TBD: Exterior lighting zone not specified (see project screen)

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Mechanical Compliance Certificate

Section 1: Project Information

Energy Code: **2009 IECC**
Project Title: Cannery Trail Residences
Project Type: New Construction

Construction Site:
1750 N Oxford Ave
Eau Claire, Wisconsin

Owner/Agent:
W Capital Group
608-345-9848
tyler@wcapitalgroupre.com

Designer/Contractor:
Ryan Schultz
OpeningDesign
316W Washington Ave, Suite 675
Madison, Wisconsin 53703
773-425-6456
ryan@openingdesign.com

Section 2: General Information

Building Location (for weather data):	Eau Claire, Wisconsin
Climate Zone:	6a

Section 3: Mechanical Systems List

Quantity	System Type & Description

Section 4: Requirements Checklist

Section 5: 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 2009 IECC requirements in COM*check-Web* and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title	Signature	Date

Section 6: Post Construction Compliance Statement

- ❑ HVAC record drawings of the actual installation, system capacities, calibration information, and performance data for each equipment provided to the owner.
- ❑ HVAC O&M documents for all mechanical equipment and system provided to the owner by the mechanical contractor.
- ❑ Written HVAC balancing and operations report provided to the owner.

The above post construction requirements have been completed.

Principal Mechanical Designer-Name	Signature	Date