



Envelope Compliance Certificate

Project Information

Energy Code: 2018 IECC
 Project Title: CONTRACTOR BAYS - BUILDING A
 Location: Bennington, Nebraska
 Climate Zone: 5a
 Project Type: New Construction
 Vertical Glazing / Wall Area: 5%

Construction Site:
 PIN 1729720452
 Bennington, NE 68007

Owner/Agent:
 Geoff McGregor
 McGregor Interests
 11750 Stonegate Circle
 Omaha, NE 68164
 (402) 334-2123
 geoff@mcgregorint.com

Designer/Contractor:
 Paul Kelly
 PJK Architecture
 440 North 61st Street
 Omaha, NE 68132
 (402) 320-4131
 pjkkarchitect@gmail.com

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
 High Performance SWH, 1.0 credit

Building Area

Floor Area

| | |
|------------------------------|-------|
| 1-Warehouse : Nonresidential | 20000 |
|------------------------------|-------|

Envelope Assemblies

| Assembly | Gross Area or Perimeter | Cavity R-Value | Cont. R-Value | Proposed U-Factor | Budget U- Factor ^(a) |
|--|-------------------------------|-------------------|------------------|----------------------|------------------------------------|
| Roof 1: Other Metal Building Roof, [Bldg. Use 1 - Warehouse] (b) | 20000 | --- | --- | 0.032 | 0.035 |
| Floor 1: Slab-On-Grade:Unheated, Vertical 2 ft., [Bldg. Use 1 - Warehouse] (d) | 600 | --- | 10.0 | 0.540 | 0.540 |
| <u>NORTH</u> | | | | | |
| North Wall: Other Metal Building Wall, [Bldg. Use 1 - Warehouse] (b) | 3350 | --- | --- | 0.031 | 0.052 |
| Window 2: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID P-KAW-5104, SHGC 0.34, PF 0.50, [Bldg. Use 1 - Warehouse] (c) | 78 | --- | --- | 0.360 | 0.380 |
| Entry Doors: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Specs.: Product ID P-KAW-38228, SHGC 0.38, [Bldg. Use 1 - Warehouse] (c) | 168 | --- | --- | 0.770 | 0.770 |
| Door 5: Other Door, Garage door 14% glazing, [Bldg. Use 1 - Warehouse] | 1232 | --- | --- | 0.380 | 0.310 |
| <u>EAST</u> | | | | | |
| East Wall: Other Metal Building Wall, [Bldg. Use 1 - Warehouse] (b) | 1804 | --- | --- | 0.031 | 0.052 |
| Utility Door: Insulated Metal, Swinging, [Bldg. Use 1 - Warehouse] | 21 | --- | --- | 0.610 | 0.370 |
| <u>SOUTH</u> | | | | | |
| South Wall: Other Metal Building Wall, [Bldg. Use 1 - Warehouse] (b) | 3350 | --- | --- | 0.031 | 0.052 |
| Sidelites: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID P-KAW-5104, SHGC 0.34, PF 0.50, [Bldg. Use 1 - Warehouse] (c) | 78 | --- | --- | 0.360 | 0.380 |
| OH Doors: Insulated Metal, Garage door 14% glazing, [Bldg. Use 1 - Warehouse] | 1232 | --- | --- | 0.380 | 0.310 |

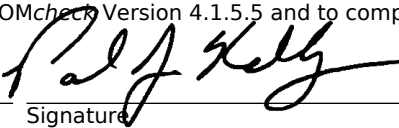
| Assembly | Gross Area or Perimeter | Cavity R-Value | Cont. R-Value | Proposed U-Factor | Budget U- Factor ^(a) |
|--|-------------------------------|-------------------|------------------|----------------------|------------------------------------|
| Entry Doors: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Specs.: Product ID P-KAW-38228, SHGC 0.38, PF 0.50, [Bldg. Use 1 - Warehouse] (c) | 168 | --- | --- | 0.770 | 0.770 |
| <u>WEST</u> West Wall: Other Metal Building Wall, [Bldg. Use 1 - Warehouse] (b) | 1804 | --- | --- | 0.031 | 0.052 |

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

Envelope PASSES: Design 2% better than code

Envelope 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 systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

| | | |
|-----------------------|--|------------|
| Paul Kelly, Architect |  | 10-30-2024 |
| Name - Title | Signature | Date |



Inspection Checklist

Energy Code: 2018 IECC

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 |
|------------------------------|--|--|----------------------|
| 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. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C402.4.1 [PR10] ¹ | The vertical fenestration area <= 30 percent of the gross above-grade wall area. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C402.4.1 [PR11] ¹ | The skylight area <= 3 percent of the gross roof area. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C402.4.2 [PR14] ¹ | In enclosed spaces > 2,500 ft ² 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. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C406 [PR9] ¹ | Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |

Additional Comments/Assumptions:

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

| Section # & Req.ID | Footing / Foundation Inspection | Complies? | Comments/Assumptions |
|-----------------------------|---|--|---|
| C303.2 [FO4] ² | Slab edge insulation installed per manufacturer's instructions. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C303.2.1 [FO6] ¹ | Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C105 [FO3] ² | Installed slab-on-grade insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | See the Envelope Assemblies table for values. |
| C402.2.4 [FO7] ² | Slab edge insulation depth/length. Slab insulation extending away from building is covered by pavement or >= 10 inches of soil. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | See the Envelope Assemblies table for values. |

Additional Comments/Assumptions:

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

| Section # & Req.ID | Framing / Rough-In Inspection | Complies? | Comments/Assumptions |
|---|--|--|---|
| C303.1.3 [FR12] ² | Fenestration products rated in accordance with NFRC. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C303.1.3 [FR13] ¹ | Fenestration products are certified as to performance labels or certificates provided. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C402.4.3 [FR10] ¹ | Vertical fenestration SHGC value. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | See the Envelope Assemblies table for values. |
| C402.4.3, C402.4.3.4 [FR8] ¹ | Installed vertical fenestration U-factor and SHGC consistent with label specifications and as reported in plans and COMcheck reports. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | See the Envelope Assemblies table for values. |
| C402.5.1.2.1 [FR19] ¹ | The building envelope contains a continuous air barrier that is sealed in an approved manner and material permeability ≤ 0.004 dfm/ft ² . Air barrier penetrations are sealed in an approved manner. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C402.5.2, C402.5.4 [FR18] ³ | Factory-built fenestration and doors are labeled as meeting air leakage requirements. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C402.5.7 [FR17] ³ | Vestibules are installed on all building entrances. Doors have self-closing devices. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |

Additional Comments/Assumptions:

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

| Section # & Req.ID | Mechanical Rough-In Inspection | Complies? | Comments/Assumptions |
|---|---|--|----------------------|
| C402.5.5, C403.2.4.3 [ME3] ³ | Stair and elevator shaft vents have motorized dampers that automatically close. Refernece section C403.7.7 for operational details. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C403.7.7 [ME58] 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. Reference section language for operational details. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |

Additional Comments/Assumptions:

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

| Section # & Req.ID | Rough-In Electrical Inspection | Complies? | Comments/Assumptions |
|--|--|--|----------------------|
| C405.6 [EL26] ² | Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C405.7 [EL27] ² | Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist). | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C405.8.2, C405.8.2.1 [EL28] ² | Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C405.9 [EL29] ² | Total voltage drop across the combination of feeders and branch circuits <= 5%. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |

Additional Comments/Assumptions:

| | | |
|------------------------|--------------------------|-----------------------|
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|------------------------|--------------------------|-----------------------|

| Section # & Req.ID | Insulation Inspection | Complies? | Comments/Assumptions |
|-------------------------------|--|--|---|
| C303.1 [IN3] ¹ | Roof insulation installed per manufacturer's instructions. Blown or poured loose-fill insulation is installed only where the roof slope is <=3 in 12. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C402.2.1 [IN20] ¹ | Insulation installed on a suspended ceiling having ceiling tiles is not being specified for roof/ceiling assemblies. Continuous insulation board installed in 2 or more layers with edge joints offset between layers. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C303.1 [IN10] ² | Building envelope insulation is labeled with R-value or insulation certificate providing R-value and other relevant data. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C303.2 [IN7] ¹ | Above-grade wall insulation installed per manufacturer's instructions. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C303.2.1 [IN14] ² | Exterior insulation is protected from damage with a protective material. Verification for exposed foundation insulation may need to occur during Foundation Inspection. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C105 [IN6] ¹ | Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | See the Envelope Assemblies table for values. |
| C402.2.3 [IN8] ² | Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | See the Envelope Assemblies table for values. |
| C402.2.6 [IN18] ³ | Radiant panels and associated components, designed for heat transfer from the panel surfaces to the occupants or indoor space are insulated with a minimum of R-3.5. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C105 [IN2] ¹ | Installed roof insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. For some ceiling systems, verification may need to occur during Framing Inspection. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | See the Envelope Assemblies table for values. |
| C402.5.1.1 [IN1] ¹ | All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-permeable wrapping material to minimize air leakage. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |

Additional Comments/Assumptions:

| | | | | | |
|---|----------------------|---|------------------------|---|---------------------|
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|---|----------------------|---|------------------------|---|---------------------|

| Section # & Req.ID | Final Inspection | Complies? | Comments/Assumptions |
|--------------------------------------|---|--|----------------------|
| C402.5.6 [FI37] ¹ | Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C402.5.8 [FI26] ³ | Recessed luminaires in thermal envelope to limit infiltration and be IC rated and labeled. Seal between interior finish and luminaire housing. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C406.7, C406.7.1 [FI53] ¹ | Enhanced Service Water Heat System efficiency package. One of the following SWH system enhancements must satisfy 60 percent of buildings annual hot water requirements, or 100 percent if the building requirements otherwise complies with heat recovery per Section C403.9.5: Waste heat recovery (from SWH, process equipment, OR on-site renewable water-heating. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| C408.1.1 [FI57] ¹ | Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |

Additional Comments/Assumptions:

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

