# COMcheck Software Version 4.1.0.0 Envelope Compliance Certificate

## **Project Information**

Energy Code: 2015 IECC

Project Title: National Ability Center Equestrian Center Expansion

Location: Park City, Utah

Climate Zone: 6b
Project Type: Addition
Vertical Glazing / Wall Area: 13%

Construction Site: 1000 Ability Way Park City, UT 84060 Owner/Agent: National Ability Center 1000 Ability Way Park City, UT 84060 Designer/Contractor:
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Building Area Floor Area

1-Gymnasium : Nonresidential 9405

#### **Envelope Assemblies**

| Assembly   | Gross Area<br>or<br>Perimeter | Cavity<br>R-Value | Cont.<br>R-Value | Proposed<br>U-Factor | Budget U-<br>Factor <sub>(a)</sub> |
|--|-------------------------------|-------------------|------------------|----------------------|------------------------------------|
| Roof 1: Insulation Entirely Above Deck, [Bldg. Use 1 - Gymnasium]  | 8790                          |                   | 39.0             | 0.025                | 0.032                              |
| Floor 1: Slab-On-Grade:Unheated, Vertical 2 ft., [Bldg. Use 1 - Gymnasium] (d)   | 7979                          |                   | 10.0             | 0.540                | 0.540                              |
| <u>NORTH</u>   |                               |                   |                  |                      |                                    |
| Exterior Wall 1: Wood-Framed, 16" o.c., [Bldg. Use 1 - Gymnasium]  | 2186                          | 0.0               | 19.5             | 0.043                | 0.051                              |
| Window 1: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID Solarban 60, SHGC 0.39, [Bldg. Use 1 - Gymnasium] (c) | 620                           |                   |                  | 0.290                | 0.360                              |
| Door 1: Other Door, Non-Swinging, [Bldg. Use 1 - Gymnasium]  | 307                           |                   |                  | 0.230                | 0.179                              |
| EAST   |                               |                   |                  |                      |                                    |
| Exterior Wall 3: Wood-Framed, 16" o.c., [Bldg. Use 1 - Gymnasium]  | 1958                          | 0.0               | 19.5             | 0.043                | 0.051                              |
| Window 3: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID Solarban 60, SHGC 0.39, [Bldg. Use 1 - Gymnasium] (c) | 144                           |                   |                  | 0.290                | 0.360                              |
| Door 5: Insulated Metal, Swinging, [Bldg. Use 1 - Gymnasium]   | 24                            |                   |                  | 0.150                | 0.370                              |
| SOUTH  |                               |                   |                  |                      |                                    |
| Exterior Wall 2: Wood-Framed, 16" o.c., [Bldg. Use 1 - Gymnasium]  | 2214                          | 0.0               | 19.5             | 0.043                | 0.051                              |
| Window 2: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID Solarban 60, SHGC 0.39, [Bldg. Use 1 - Gymnasium] (c) | 313                           |                   |                  | 0.290                | 0.360                              |
| Door 3: Insulated Metal, Swinging, [Bldg. Use 1 - Gymnasium]   | 55                            |                   |                  | 0.150                | 0.370                              |
| Door 4: Other Door, Non-Swinging, [Bldg. Use 1 - Gymnasium]  | 307                           |                   |                  | 0.230                | 0.179                              |
| WEST   |                               |                   |                  |                      |                                    |
| Exterior Wall 4: Wood-Framed, 16" o.c., [Bldg. Use 1 - Gymnasium]  | 1664                          | 0.0               | 19.5             | 0.043                | 0.051                              |
| Door 6: Insulated Metal, Swinging, [Bldg. Use 1 - Gymnasium]   | 48                            |                   |                  | 0.150                | 0.370                              |

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- (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 2015 IECC requirements in COMcheck Version 4.1.0.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

| Kelly Holland - Project Manager | Kuntha    | 8/13/18 |
|---------------------------------|-----------|---------|
| Name - Title                    | Signature | Date    |

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# COMcheck Software Version 4.1.0.0 Inspection Checklist

Energy Code: 2015 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<br>#<br>& Req.ID        | Plan Review  | Complies?   | Comments/Assumptions |
|---------------------------------|--|---|----------------------|
| C103.2<br>[PR1] <sup>1</sup>    | 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 |                      |
| C402.4.1<br>[PR10] <sup>1</sup> | The vertical fenestration area <= 30 percent of the gross above-grade wall area.   | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable |                      |
| C402.4.1<br>[PR11] <sup>1</sup> | The skylight area <= 3 percent of the gross roof area.   | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable |                      |
| C406<br>[PR9] <sup>1</sup>      | Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.                 | □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) |
|---------------------------------------|--------------------------|-----------------------|
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| Section<br>#<br>& Req.ID        | Footing / Foundation Inspection   | Complies?                             | Comments/Assumptions                          |
|---------------------------------|---|---------------------------------------|---|
| C303.2<br>[FO4] <sup>2</sup>    | Slab edge insulation installed per manufacturer's instructions.         | $\square$ Complies $\square$ Does Not |   |
|                                 |   | □Not Observable<br>□Not Applicable    |   |
| C303.2.1<br>[FO6] <sup>1</sup>  | Exterior insulation protected against damage, sunlight, moisture, wind, | $\square$ Complies $\square$ Does Not |   |
|                                 | landscaping and equipment maintenance activities.                       |                                       |   |
| C402.2.5<br>[FO3] <sup>2</sup>  | Slab edge insulation R-value.   | $\square$ Complies $\square$ Does Not | See the Envelope Assemblies table for values. |
|                                 |   | □Not Observable<br>□Not Applicable    |   |
| C402.2.6<br>[FO12] <sup>3</sup> | Radiant heating systems panels insulated to >=R-3.5 on face opposite    | □Complies<br>□Does Not                | See the Envelope Assemblies table for values. |
|                                 | space being heated.   | □Not Observable<br>□Not Applicable    |   |

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

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| Section<br>#<br>& Req.ID        | Framing / Rough-In Inspection   | Complies?                             | Comments/Assumptions                          |
|---------------------------------|---|---------------------------------------|---|
| C303.1.3<br>[FR12] <sup>2</sup> | Fenestration products rated in accordance with NFRC.  | □Complies<br>□Does Not                |   |
|                                 |   | □Not Observable □Not Applicable       |   |
| C303.1.3<br>[FR13] <sup>1</sup> | Fenestration products are certified as to performance labels or certificates  | □Complies<br>□Does Not                |   |
|                                 | provided.   | □Not Observable<br>□Not Applicable    |   |
| C402.4.3<br>[FR10] <sup>1</sup> | Vertical fenestration SHGC value.   | $\square$ Complies $\square$ Does Not | See the Envelope Assemblies table for values. |
|                                 |   | □Not Observable<br>□Not Applicable    |   |
| C402.4.3.                       | Vertical fenestration U-Factor.   | □Complies<br>□Does Not                | See the Envelope Assemblies table for values. |
| 4<br>[FR8] <sup>1</sup>         |   | □Not Observable<br>□Not Applicable    |   |
| C402.4.4<br>[FR14] <sup>2</sup> | U-factor of opaque doors associated with the building thermal envelope  | □Complies<br>□Does Not                | See the Envelope Assemblies table for values. |
|                                 | meets requirements.   | □Not Observable<br>□Not Applicable    |   |
| 2.1                             | The building envelope contains a continuous air barrier that is sealed in   | □Complies<br>□Does Not                |   |
| [FR19] <sup>1</sup>             | an approved manner and material permeability <= 0.004 dfm/ft2. Air barrier penetrations are sealed in an approved manner. | □Not Observable<br>□Not Applicable    |   |
| C402.5.4                        | are labeled as meeting air leakage  | □Complies<br>□Does Not                |   |
| [FR18] <sup>3</sup>             | requirements.   | □Not Observable<br>□Not Applicable    |   |
| C402.5.7<br>[FR17] <sup>3</sup> | Vestibules are installed on all building entrances. Doors have self-closing   | □Complies<br>□Does Not                |   |
|                                 | devices.  | □Not Observable<br>□Not Applicable    |   |

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

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| Section<br>#<br>& Req.ID                           | Mechanical Rough-In Inspection  | Complies?   | Comments/Assumptions |
|--|---|---|----------------------|
| C402.5.5,<br>C403.2.4.<br>3<br>[ME3] <sup>3</sup>  | Stair and elevator shaft vents have motorized dampers that automatically close.   | □Complies □Does Not □Not Observable □Not Applicable |                      |
| C402.5.5,<br>C403.2.4.<br>3<br>[ME58] <sup>3</sup> | Outdoor air and exhaust systems have<br>motorized dampers that automatically<br>shut when not in use and meet<br>maximum leakage rates. Check<br>gravity dampers where allowed. |   |                      |

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

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| Section<br>#<br>& Req.ID             | Insulation Inspection   | Complies?   | Comments/Assumptions                          |
|--------------------------------------|---|---|---|
| C303.1<br>[IN3] <sup>1</sup>         |   | □Complies □Does Not □Not Observable □Not Applicable |   |
| C303.1<br>[IN10] <sup>2</sup>        | providing R-value and other relevant data.  | □Complies □Does Not □Not Observable □Not Applicable |   |
| C303.2<br>[IN7] <sup>1</sup>         |   | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable |   |
| C303.2.1<br>[IN14] <sup>2</sup>      | damage with a protective material. Verification for exposed foundation insulation may need to occur during      | □Complies □Does Not □Not Observable □Not Applicable |   |
| C402.1.3<br>[IN19] <sup>3</sup>      | 4.75 insulation.  | □Complies □Does Not □Not Observable □Not Applicable |   |
| C402.2.1<br>[IN17] <sup>3</sup>      |   | □Complies □Does Not □Not Observable □Not Applicable |   |
| C402.2.3<br>[IN6] <sup>1</sup>       |   | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | See the Envelope Assemblies table for values. |
| C402.2.5<br>[IN8] <sup>2</sup>       | Floor insulation R-value.   | □Complies □Does Not □Not Observable □Not Applicable | See the Envelope Assemblies table for values. |
| C402.2.6<br>[IN18] <sup>3</sup>      | components, designed for heat<br>transfer from the panel surfaces to the<br>occupants or indoor space are       | □Complies □Does Not □Not Observable □Not Applicable |   |
| C402.2.2<br>[IN2] <sup>1</sup>       | 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.<br>1<br>[IN1] <sup>1</sup> | building thermal envelope are sealed,<br>caulked, gasketed, weather stripped<br>or wrapped with moisture vapor- | □Complies □Does Not □Not Observable □Not Applicable |   |

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

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| Section<br>#<br>& Req.ID        | Final Inspection  | Complies?   | Comments/Assumptions |
|---------------------------------|---|---|----------------------|
| C402.5.3<br>[FI51] <sup>3</sup> | 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 |                      |
| C402.5.6<br>[FI37] <sup>1</sup> | Weatherseals installed on all loading dock cargo doors.   | □Complies<br>□Does Not                              |                      |
|                                 |   | □Not Observable □Not Applicable                     |                      |
| C402.5.8<br>[FI26] <sup>3</sup> | envelope to limit infiltration and be IC  | □Complies<br>□Does Not                              |                      |
|                                 | rated and labeled. Seal between interior finish and luminaire housing.  | □Not Observable □Not Applicable                     |                      |

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

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