COM*check* Software Version 3.9.2

Envelope Compliance Certificate

90.1 (2010) Standard

Section 1: Project Information

Project Type: **New Construction**
Project Title :

Construction Site: Owner/Agent: Designer/Contractor:

Section 2: General Information

Building Location (for weather data):	**Andrews, North Carolina**
Climate Zone:	**4a**
Building Type for Envelope Requirements:	**Nonresidential**
Vertical Glazing / Wall Area Pct.:	**14%**

Building Type	Floor Area
Office	1186

Section 3: Requirements Checklist

Envelope PASSES: Design 3% better than code.

Climate-Specific Requirements:

Component Name/Description	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Orientation: NORTH					
Exterior Wall 1: Wood-Framed, 16" o.c.	414	19.0	0.0	0.067	0.089
Window 1: Wood Frame:Double Pane with Low-E, Clear, SHGC 0.63	50	---	---	0.480	0.400
Orientation: EAST					
Exterior Wall 2: Wood-Framed, 16" o.c.	416	19.0	0.0	0.067	0.089
Window 2: Wood Frame:Double Pane with Low-E, Clear, SHGC 0.63	16	---	---	0.480	0.400
Orientation: SOUTH					
Exterior Wall 3: Wood-Framed, 16" o.c.	414	19.0	0.0	0.067	0.089
Window 3: Wood Frame:Double Pane with Low-E, Clear, SHGC 0.63	63	---	---	0.480	0.400
Door 1: Insulated Metal, Swinging	21	---	---	0.500	0.700
Door 2: Glass (> 50% glazing):Metal Frame, Clear, Entrance Door, SHGC 0.87	21	---	---	0.920	0.850
Orientation: WEST					
Exterior Wall 4: Wood-Framed, 16" o.c.	416	19.0	0.0	0.067	0.089
Window 4: Wood Frame:Double Pane with Low-E, Clear, SHGC 0.63	39	---	---	0.480	0.400
Door 3: Glass (> 50% glazing):Metal Frame, Clear, Entrance Door, SHGC 0.40	42	---	---	0.920	0.850
Orientation: UNSPECIFIED ORIENTATION					
Floor 1: Wood-Framed	1186	38.0	0.0	0.027	0.033
Roof 1: Attic Roof with Wood Joists	1186	24.0	15.0	0.026	0.027

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

Insulation:

- ❑ 1. Open-blown or poured loose-fill insulation has not been used in attic roof spaces with ceiling slope greater than 3 in 12.
- ❑ 2. Wherever vents occur, they are baffled to deflect incoming air above the insulation.
- ❑ 3. Recessed lights, equipment and ducts are not affecting insulation thickness.
- ❑ 4. No roof insulation is installed on a suspended ceiling with removable ceiling panels.
- ❑ 5. All exterior insulation is covered with protective material.
- ❑ 6. Cargo and loading dock doors are equipped with weather seals.
- ❑ 7. Where two or more layers of rigid insulation board are used the edge joints between each layer is staggered.

Fenestration and Doors:

- ❑ 8. Windows and skylights are labeled and certified by the manufacturer for U-factor and SHGC.
- ❑ 9. Fixed windows and skylights unlabeled by the manufacturer have been site labeled using the default U-factor and SHGC.
- ❑ 10. Other unlabeled vertical fenestration, operable and fixed, that are unlabeled by the manufacturer have been site labeled using the default U-factor and SHGC. No credit has been given for metal frames with thermal breaks, low-emissivity coatings, gas fillings, or insulating spacers.

Air Leakage and Component Certification:

- ❑ 11. Component R-values & U-factors labeled as certified.
- ❑ 12. 'Other' components have supporting documentation for proposed U-Factors.
- ❑ 13. All joints and penetrations are caulked, gasketed, weather-stripped, or otherwise sealed.
- ❑ 14. Continuous air barrier exists aroung entire building envelope, covering all surfaces, and is designed to resist positive and negative pressures. Air barrier is clearly identified or otherwise noted on construction documents.
- ❑ 15. Windows, doors, and skylights certified as meeting leakage requirements.
- ❑ 16. Air leakage ratings do not exceed 1.0 cfm/ft2 for glazed swinging entrance doors and revolving doors, 0.06 cfm/ft2 for curtainwall and storefront glazing, 0.3 cfm/ft2 for skylights with condensation weepage openings.
  Exceptions:
  - ❑ Field-fabricated fenestration and doors.
  - ❑ Metal coiling doors in semi-heated spaces.
- ❑ 17. Building entrances that separate conditioned space from the exterior have an enclosed vestibule with all doors equipped with self-closing devices. Interior and exterior doors in the closed position are no less than 7 ft apart. Conditioned vestibules comply with the requirements for a conditioned space. Unconditioned vestibules comply with the requirements of a semiheated space.
  Exceptions:
  - ❑ Building entrances with revolving doors.
  - ❑ Doors not intended to be used as a building entrance.
  - ❑ Doors opening directly from a dwelling unit.
  - ❑ Doors that open directly from a space less than 3000 sq. ft. in area and is separate from the building entrance.

Minimum Skylight-Daylighting Requirements:

- ❑ 18. In buildings having <= four stories, any enclosed spaces > 5,000 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 unless exempted:
  - ❑ The daylight zone under skylights is >= half the floor area;
  - ❑ The skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40; or a minimum skylight effective aperture >= 1 percent.
  - ❑ The skylights have a measured haze value > 90 percent.

  Exceptions:
  - ❑ Spaces where the proposed general lighting power densities < 0.5 W/ft2.
  - ❑ Areas with obstructions that block direct beam sunlight on >= 1/2 of the roof over the enclosed area for more than 1,500 daytime hours per year between 8 am and 4 pm.
  - ❑ Spaces where the daylight zone under rooftop monitors is > 50 percent of the enclosed space floor area.
  - ❑ Enclosed spaces where 90 percent of the skylight area is shaded on June 21 at noon by permanent architectural features of the building (documentation required)..
  - ❑ Required daylight area under skylights may be reduced by the amount of primary sidelighted area with a sidelighting effective aperture > 0.15 and with general lighting controlled as described in Section 9.4.1.3 (without exceptions).
  - ❑ Required daylight area under skylights may be reduced by the amount of secondary sidelighted area with a sidelighting effective aperture > 0.30 and with general lighting controlled by continuous daylight dimming.

Section 4: 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 90.1 (2010) Standard requirements in COM*check* Version 3.9.2 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title _____ Signature _____ Date _____

1 **LIFE SAFETY PLAN**
SCALE: 1/8" = 1'-0"

AREAS

1,130 SF	EXISTING HTD. AREA
56 SF	NEW ADDITION
144 SF	NEW PORCH AREA
1,330 SF	**TOTAL AREA**

EGRESS REQ. & CODE REF.

USE: BUSINESS
1,186 SF/100 = 12 PEOPLE

12 x 0.2" = 2.4" CLEAR EGRESS WIDTH PER 1005.1 OF NCSBC

SINGLE EXIT PER TABLE 1015.1 (LESS THAN 49 PERSONS) & 1014.3 (LESS THAN 100 FT. EGRESS TRAVEL) OF NCSBC

DOORS TO HAVE 32" MIN. CLR. PER 404.2.2 OF ANSI A117.1

THE CLEAR WIDTH OF EXT. PATH OF TRAVEL IS 48" MIN. BTWN. HANDRAILS PER 1104.2 OF NCSBC

THE CLEAR WIDTH OF ACCESSIBLE ROUTE IS 36" MIN. PER 403.5 OF ANSI A117.1

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E9D26A5B6D04D
10/19/2016

STATE ID# 16-16033-01A
WBS ELEMENT 51213.011

PROJECT TITLE
CHEROKEE COUNTY REST AREA
US 19 AND COVER STREET
ANDREWS, NORTH CAROLINA

PROJECT NO.
1504a

DRAWING TITLE
LIFE SAFETY

SHEET 2 OF 22

A0.2

PLOT DATE	10/18/16
REVISION	00/00/08

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