



COMcheck Software Version COMcheckWeb

Envelope Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: K1 Speed Lee's Summit
Location: Lees Summit, Missouri
Climate Zone: 4a
Project Type: New Construction
Vertical Glazing / Wall Area: 11%

Construction Site:
Lot 4C Strother Crossing, Lots 4A-4C
Lee's Summit, Missouri

Owner/Agent:

Designer/Contractor:
CW Keller
Slaggie Architects Inc.
4600 Madison Avenue, Suite 350
Kansas City, Missouri 64112
816-756-1958

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
Reduced Air Infiltration, 1.0 credit

Building Area

Floor Area

1-Sports Arena : Nonresidential	30577
2-Dining: Bar Lounge/Leisure : Nonresidential	13094
3-Workshop : Nonresidential	1560

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U- Factor ^(a)
Roof: Insulation Entirely Above Deck, [Bldg. Use 1 - Sports Arena]	30546	---	30.0	0.032	0.032
Roof: Insulation Entirely Above Deck, [Bldg. Use 2 - Dining: Bar Lounge/Leisure]	13104	---	30.0	0.032	0.032
Roof: Insulation Entirely Above Deck, [Bldg. Use 3 - Workshop]	1560	---	30.0	0.032	0.032
Floor: Unheated Slab-On-Grade, Horizontal with vertical 2 ft., [Bldg. Use 3 - Workshop] (d)	112	---	10.0	0.700	0.540
Floor: Unheated Slab-On-Grade, Horizontal with vertical 2 ft., [Bldg. Use 1 - Sports Arena] (d)	439	---	10.0	0.700	0.540
Floor: Unheated Slab-On-Grade, Horizontal with vertical 2 ft., [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (d)	376	---	10.0	0.700	0.540
NORTH					
Ext. Wall 12: Other Mass Wall, Heat capacity 0.0, [Bldg. Use 1 - Sports Arena] (b)	2440	---	---	0.050	0.064
Ext. Wall 14: Other Mass Wall, Heat capacity 0.0, [Bldg. Use 1 - Sports Arena] (b)	4066	---	---	0.050	0.064
Window 17: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 18: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 19: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U- Factor ^(a)
Arena] (c)					
Window 20: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 21: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 22: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 23: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 24: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 25: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 26: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 27: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 28: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 29: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 30: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Door 8: Insulated Metal, Swinging, [Bldg. Use 1 - Sports Arena]	24	---	---	0.610	0.610
Ext. Wall 15: Other Mass Wall, Heat capacity 0.0, [Bldg. Use 3 - Workshop] (b)	511	---	---	0.050	0.064
EAST					
ext. Wall 2: Other Steel Framed Wall, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (b)	151	---	---	0.110	0.064
Ext. Wall 4: Other Steel Framed Wall, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (b)	681	---	---	0.110	0.064
Window 7: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, PF 1.31, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (c)	526	---	---	0.290	0.380
Door 2: Glass (over 50% glazing): Metal Frame, Entrance Door, Perf. Specs.: Product ID na, SHGC 0.41, PF 1.31, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (c)	56	---	---	0.290	0.770
Ext. Wall 8: Other Mass Wall, Heat capacity 0.0, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (b)	609	---	---	0.050	0.064
Ext. Wall 9: Other Mass Wall, Heat capacity 0.0, [Bldg. Use 1 - Sports Arena] (b)	1672	---	---	0.050	0.064
Window 10: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 11: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 12: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 13: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U- Factor ^(a)
Window 14: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 15: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 16: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Door 7: Insulated Metal, Swinging, [Bldg. Use 1 - Sports Arena]	24	---	---	0.610	0.610
Ext. Wall 11: Other Mass Wall, Heat capacity 0.0, [Bldg. Use 1 - Sports Arena] (b)	1347	---	---	0.050	0.064
Ext. Wall 13: Other Mass Wall, Heat capacity 0.0, [Bldg. Use 1 - Sports Arena] (b)	101	---	---	0.050	0.064
SOUTH					
Ext. Wall 1: Other Steel Framed Wall, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (b)	1942	---	---	0.110	0.064
Window 1: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, PF 0.29, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (c)	46	---	---	0.290	0.380
Window 2: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, PF 0.29, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (c)	46	---	---	0.290	0.380
Window 3: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, PF 0.29, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (c)	46	---	---	0.290	0.380
Window 4: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, PF 0.29, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (c)	46	---	---	0.290	0.380
Window 5: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, PF 0.29, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (c)	46	---	---	0.290	0.380
Ext. Wall 3: Other Steel Framed Wall, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (b)	999	---	---	0.110	0.064
Window 6: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.41, PF 0.46, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (c)	802	---	---	0.290	0.380
Door 1: Glass (over 50% glazing): Metal Frame, Entrance Door, Perf. Specs.: Product ID na, SHGC 0.41, PF 1.09, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (c)	42	---	---	0.290	0.770
Ext. Wall 5: Other Mass Wall, Heat capacity 0.0, [Bldg. Use 3 - Workshop] (b)	481	---	---	0.050	0.064
Door 3: Insulated Metal, Swinging, [Bldg. Use 3 - Workshop]	24	---	---	0.610	0.610
Door 4: Insulated Metal, Garage door 14% glazing, [Bldg. Use 3 - Workshop]	100	---	---	0.071	0.310
Ext. Wall 6: Other Mass Wall, Heat capacity 0.0, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (b)	1482	---	---	0.050	0.064
Window 8: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (c)	20	---	---	0.290	0.380
Window 9: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (c)	20	---	---	0.290	0.380
Ext. Wall 7: Other Mass Wall, Heat capacity 0.0, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (b)	624	---	---	0.050	0.064
Door 5: Insulated Metal, Garage door 14% glazing, [Bldg. Use 2 - Dining: Bar Lounge/Leisure]	64	---	---	0.071	0.310
Door 6: Insulated Metal, Swinging, [Bldg. Use 2 - Dining: Bar Lounge/Leisure]	24	---	---	0.610	0.610
Ext. Wall 10: Other Mass Wall, Heat capacity 0.0, [Bldg. Use 1 - Sports Arena] (b)	97	---	---	0.050	0.064
WEST					
Ext. Wall 16: Other Mass Wall, Heat capacity 0.0, [Bldg. Use 1 - Sports Arena] (b)	1666	---	---	0.050	0.064

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U- Factor ^(a)
Window 31: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 32: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 33: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Window 34: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 1 - Sports Arena] (c)	20	---	---	0.290	0.380
Door 9: Insulated Metal, Swinging, [Bldg. Use 1 - Sports Arena]	24	---	---	0.610	0.610
Ext. Wall 17: Other Mass Wall, Heat capacity 0.0, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (b)	1103	---	---	0.050	0.064
Window 35: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (c)	20	---	---	0.290	0.380
Window 36: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (c)	20	---	---	0.290	0.380
Door 10: Insulated Metal, Swinging, [Bldg. Use 2 - Dining: Bar Lounge/Leisure]	24	---	---	0.610	0.610
Ext. Wall: Other Mass Wall, Heat capacity 0.0, [Bldg. Use 3 - Workshop] (b)	1138	---	---	0.050	0.064
Window 37: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 3 - Workshop] (c)	20	---	---	0.290	0.380
Window 38: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID na, SHGC 0.36, [Bldg. Use 3 - Workshop] (c)	20	---	---	0.290	0.380
Ext. Wall: Other Steel Framed Wall, [Bldg. Use 2 - Dining: Bar Lounge/Leisure] (b)	57	---	---	0.110	0.064

(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 6% 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 COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

C.W. KELLER

Name - Title

C.W. Keller

Signature

7.20.22

Date