COMcheck Software Version 4.0.7.0

Mechanical Compliance Certificate

Project Information

Energy Code:	2014 Florida Building Code, Energy Conservation
Project Title:	The North Face
Location:	Miami, Florida
Climate Zone:	1a
Project Type:	Alteration

Construction Site:
Aventura Mall
Aventura, FL

Owner/Agent:

Designer/Contractor:
KLH Engineers
1538 Alexandria Pike
Fort Thomas, KY 41075

Mechanical Systems List

Quantity	System Type & Description
1	HVAC System 1 (Single Zone): Split System Heat Pump Heating Mode: Capacity = 13 kBtu/h, Proposed Efficiency = 3.50 COP, Required Efficiency = 3.30 COP Cooling Mode: Capacity = 120 kBtu/h, Proposed Efficiency = 12.00 EER, Required Efficiency: 11.00 EER + 11.2 IEER Fan System: FAN SYSTEM 1 -- Compliance (Motor nameplate HP method) : Passes Fans: FAN 1 Supply, Constant Volume, 3000 CFM, 2.0 motor nameplate hp

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project 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 2014 Florida Building Code, Energy Conservation requirements in COM*check* Version 4.0.7.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Robert A. Lonnemann, P.E.
Name - Title Signature Date

COMcheck Software Version 4.0.7.0

Inspection Checklist

Energy Code: 2014 Florida Building Code, Energy Conservation

Requirements: 98.0% were addressed directly in the COM*check* 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 [PR2][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.7 [PR17][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Provisions are made for metering individual tenant units. Feeder connectors sized in accordance with approved plans with maximum drop of 2% and branch circuits sized for maximum drop of 3%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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
C403.2.4.5 [FO9][3]	Freeze protection and snow/ice melting system sensors for future connection to controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

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
C403.2.3 [ME55][2]	HVAC equipment efficiency verified.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
C403.2.5.1 [ME59][1]	Demand control ventilation provided for spaces >500 sq.ft. and >25 people/1000 sq.ft. occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.2.7.1 [ME60][2]	HVAC ducts and plenums insulated and sealed according to Florida Section C403.2.7, Table C403.2.7.1, Table C403.2.7.2.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7.2 [ME79][2]	All ducts, air handlers, filter boxes, building cavities, mechanical closets and enclosed support platforms that form the primary air containment passageways for air distribution systems are constructed and erected in accordance with Table C403.2.7.2 and with Chapter 6 of the Florida Building Code, Mechanical. Ducts are be constructed, braced, reinforced and installed to provide structural strength and durability. All transverse joints, longitudinal seams and fitting connections are securely fastened in accordance with the applicable standards of this section.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7.1.2 [ME80][2]	Duct insulation is protected from damage but not limited to the following: 1. Insulation exposed to weather is suitable for outdoor service; cellular foam insulation is protected or painted with a coating that is water retardant and provides shielding from solar radiation. 2. Insulation covering cooling ducts located outside the conditioned space is vapor retarder located outside the insulation, all penetrations and joints of which shall be sealed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7.1.3 [ME8[illegible]]	Additional insulation with vapor barrier is provided where the minimum duct insulation requirements of Section C403.2.7.1.1 are determined to be insufficient to prevent condensation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.8 [ME61][2]	HVAC piping insulation thickness. Where piping is installed in or under a slab, verification may need to occur during Foundation Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.8.3 [ME7[illegible]]	Piping insulation exposed to weather is protected from damage (due to sun, moisture, wind, etc.).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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
C403.2.8 [ME41][3]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7.3 [ME10][2]	Ducts, air handlers, filter boxes, building cavities, mechanical closets and enclosed support platforms that form the primary air containment passageways for air distribution systems are sealed in accordance with the applicable criteria of this section and Table C403.2.7.2.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7.5 [ME76][3]	Air distribution systems are sized and designed in accordance with recognized engineering standards. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7.6 [ME77][2]	Air-handling units not installed in attics of commercial buildings.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7.4 [ME78][2]	Cavities in framed spaces are not used to deliver air from or return air to the conditioning system unless they contain an air duct insert which is insulated in accordance with Section C403.2.7.1 and constructed and sealed in accordance with the requirements of Section C403.2.7.2 appropriate for the duct materials used.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7.3.3 [ME11][3]	Ductwork operating >3 in. water column requires air leakage testing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.2.1 [ME53][3]	Air outlets and zone terminal devices have means for air balancing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.2 [ME66][3]	VAV fan motors >=7.5 hp to be driven by variable speed drive, have a vane-axial fan with variable pitch blades, or have controls to limit fan motor demand.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.2.6 [ME57][1]	Exhaust air energy recovery on systems meeting Table C403.2.6	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.2.11 [ME71][2]	Unenclosed spaces that are heated use only radiant heat.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C403.2.4.3 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.3.4 [FI51][3]	Minimum one humidity control device per installed humidification/dehumidification system. Controls prevent simultaneous operation of humidification and dehumidification equipment.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2 [FI38][3]	Thermostatic controls have a 5 °F deadband.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2 [FI20][3]	Temperature controls have setpoint overlap restrictions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.3 [FI39][3]	Each zone equipped with setback controls using automatic time clock or programmable control system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.3 [FI40][3]	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.3.3 [illegible]	Systems include optimum start controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [illegible]	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
[illegible]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C303.3, C408.2.5.3 [FI8][3]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.3 [FI43][1]	An air and/or hydronic system balancing report is provided for HVAC systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.2 [FI10][2]	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.2 [FI54][3]	An air and/or hydronic system balancing report is provided for HVAC systems serving zones >5,000 ft2 of conditioned area. Refer to section for full details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.1 [FI50][3]	HVAC systems and equipment design loads calculated in accordance with ANSI/ASHRAE/ACCA Standard 183 or 183 or ACCA Manual N and shall be attached to the code compliance form submitted to the building department when the building is permitted or, in the event the mechanical permit is obtained at a later time, the sizing calculation shall be submitted with the application for the mechanical permit.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.2 [FI27][3]	HVAC systems and equipment capacity does not exceed calculated loads.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.1 [FI28][1]	Commissioning plan developed by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.4 [FI29][1]	Preliminary commissioning report completed and certified by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.4 [FI30][1]	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.1 [FI31][1]	HVAC equipment has been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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

KLH ENGINEERS
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11 FT. THOMAS, KENTUCKY 41075 800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
COLUMBUS, OHIO
NEW YORK, NEW YORK

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
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robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

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AVENTURA MALL
19501 BISCAYNE BLVD
SPACE #327
AVENTURA, FL 33180

MECHANICAL COMPLIANCE

DRAWN BY	BJC
CHECKED BY	KCN
JOB NUMBER	19811
SHEET NAME	M5.1

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