

PROJECT # 16104

**WOODFIELD HUNT CLUB
BOCA RATON, FL**

CONTENTS:

ENERGY CALCULATIONS

DESIGN CRITERIA:

ROOF INSULATION: R-16

WALL INSULATION R-11

WINDOW VALUES:

U-FACTOR:0.85

SHGC:0.49

DATE:

07/21/2016

PREPARED BY:



**700 W. HILLSBORO BLVD, BLDG. #1-204
DEERFIELD BEACH, FL 33441**

Florida Building Code, Fifth Edition (2014) - Energy Conservation

EnergyGauge Summit® Fla/Com-2015, Effective Date: June 30, 2015

ASHRAE 90.1-2010 - Energy Cost Budget Option

Check List

Applications for compliance with the Florida Building Code, Energy Conservation shall include:

- This Checklist
- An Input report generated from the software just after completing compliance calculations without any further changes
- The full compliance report generated by the software that contains the project summary, compliance summary, certifications and detailed component compliance reports
- Boxes appropriately checked in the Miscellaneous report generated by the software at the end of the compliance report

PROJECT SUMMARY

Short Desc: 16104

Description: 16104_Woodfield Hunt Club

Owner: Enter Owner's name here

Address1: 4420 Woodfield Blvd.

City: Boca Raton

Address2:

State: Florida

Zip: 33434

Type: Gymnasium

Class: Addition to existing Building

Jurisdiction: BOCA RATON, PALM BEACH COUNTY, FL (601300)

Conditioned Area: 2511 SF

Conditioned & UnConditioned Area: 2511 SF

No of Stories: 1

Area entered from Plans 2420 SF

Permit No: 0

Max Tonnage 4.7

If different, write in: _____

Compliance Summary

Component	Design	Criteria	Result
Gross Energy Cost (in \$)	1,293.0	1,691.0	PASSED
LIGHTING CONTROLS			PASSES
EXTERNAL LIGHTING			No Entry
HVAC SYSTEM			PASSES
PLANT			No Entry
WATER HEATING SYSTEMS			PASSES
PIPING SYSTEMS			No Entry
Met all required compliance from Check List?			Yes/No/NA

IMPORTANT MESSAGE

Info 5009 -- -- -- An input report of this design building must be submitted along with this Compliance Report

CERTIFICATIONS

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code

Prepared By: Jason Barber

Building Official: _____

Date: _____

Date: _____

I certify that this building is in compliance with the FLorida Energy Efficiency Code

Owner Agent: _____

Date: _____

If Required by Florida law, I hereby certify (*) that the system design is in compliance with the Florida Energy Efficiency Code

Architect: _____

Reg No: _____

Electrical Designer: Ursula Iafrate

Reg No: 73122

Lighting Designer: Ursula Iafrate

Reg No: 73122

Mechanical Designer: Jason Barber

Reg No: 73050

Plumbing Designer: Jason Barber

Reg No: 73050

(*) Signature is required where Florida Law requires design to be performed by registered design professionals. Typed names and registration numbers may be used where all relevant information is contained on signed/sealed plans.

Project: 16104
 Title: 16104_Woodfield Hunt Club 16-05-16
 Type: Gymnasium
 (WEA File: Miami.tmy)

Building End Uses

	1) Proposed	2) Baseline
Total	<i>81.80</i>	<i>107.20</i>
	<i>\$1,293</i>	<i>\$1,691</i>
ELECTRICITY(MBtu/kWh/\$)	81.80 23986 <i>\$1,293</i>	107.20 31437 <i>\$1,691</i>
AREA LIGHTS	10.10 2965 <i>\$160</i>	19.50 5712 <i>\$307</i>
MISC EQUIPMT	12.30 3611 <i>\$195</i>	12.30 3611 <i>\$194</i>
PUMPS & MISC	0.00 8 <i>\$0</i>	0.00 7 <i>\$0</i>
SPACE COOL	33.00 9663 <i>\$521</i>	47.00 13785 <i>\$742</i>
SPACE HEAT	0.10 37 <i>\$2</i>	0.20 68 <i>\$4</i>
VENT FANS	26.30 7702 <i>\$415</i>	28.20 8254 <i>\$444</i>

Credits Applied: None

Passing Criteria = 1691

Design (including any credits) = 1293

Passing requires Proposed Building cost to be at most 100% of Baseline cost. This Proposed Building is at 76.4%

PASSES

External Lighting Compliance						
Description	Category	Tradable?	Allowance (W/Unit)	Area or Length or No. of Units (Sqft or ft)	ELPA (W)	CLP (W)
None						

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Lighting Controls Compliance						
Acronym	Ashrae ID	Description	Area (sq.ft)	Design CP	Min CP	Compli- ance
105 New Fitness	9,003	Exercise Area (Gym)	1,480	1	1	PASSES
103 New Vest	5	Corridor	50	1	1	PASSES
111 AHU Closet	1	Electrical Mechanical Equipment Room - General	20	1	1	PASSES
110 New Gym Clo	3	Storage & Warehouse - Bulky Active Storage	110	1	1	PASSES
107 New Vest	5	Corridor	69	1	1	PASSES
109 Unisex Bathrc	6	Toilet and Washroom	66	1	1	PASSES
108 Unisex Bathrc	6	Toilet and Washroom	66	1	1	PASSES
104 Aerobics Roor	9,003	Exercise Area (Gym)	559	1	1	PASSES
Tennis Office	17	Office - Enclosed	91	1	1	PASSES
PASSES						

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System Report Compliance

AHU-1 System 1 Constant Volume Air Cooled No. of Units
Split System < 65000 Btu/hr 1

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled Split System < 65000 Btu/h Cooling Capacity	55900	16.50	13.00	8.00		PASSES
Heating System	Electric Furnace	34130	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	2000	0.35	0.82			PASSES
Air Handling System - Return	Air Handler (Return) - Constant Volume	1792	0.35	0.82			PASSES
Air Distribution System (Sup)	Not in Check list - Compliance Ignored		6.00	6.00			N/A
Air Distribution System (Ret)	Not in Check list - Compliance Ignored		6.00	6.00			N/A

MS-1 System 2 Constant Volume Air Cooled No. of Units
Split System < 65000 Btu/hr 1

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled Split System < 65000 Btu/h Cooling Capacity	17200	19.20	13.00	8.00		PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	533	0.35	0.82			PASSES
Air Handling System - Return	Air Handler (Return) - Constant Volume	533	0.35	0.82			PASSES

MS-2 System 2 Constant Volume Air Cooled No. of Units
Split System < 65000 Btu/hr 1

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled Split System < 65000 Btu/h Cooling Capacity	12000	20.50	13.00	8.00		PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	399	0.35	0.82			PASSES
Air Handling System - Return	Air Handler (Return) - Constant Volume	399	0.35	0.82			PASSES

PASSES

Plant Compliance								
Description	Installed No	Size	Design Eff	Min Eff	Design IPLV	Min IPLV	Category	Comp liance
None								

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Water Heater Compliance								
Description	Type	Category	Design Eff	Min Eff	Design Loss	Max Loss	Comp liance	
Water Heater 1	Electric water heater	<= 12 [kW]	0.96	0.96			PASSES	
PASSES								

Piping System Compliance								
Category	Pipe Dia [inches]	Is Runout?	Operating Temp [F]	Ins Cond [Btu-in/hr .SF.F]	Ins Thick [in]	Req Ins Thick [in]	Compliance	
None								

Mandatory Requirements (as applicable)

Mandatory requirements compiled by US Department of Energy and Pacific Northwest National Laboratory. Adopted with permission

Topic	Section	Component	Description	Yes	N/A	Ex
1. To be checked by Designer or Engineer						
Fenestration	5.8.2.3,5.5.3.6	Envelope	U-factor of opaque doors associated with the building thermal envelope meets requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	6.4.4.1.5	Envelope	Bottom surface of floor structures incorporating radiant heating insulated to $\geq R-3.5$.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.5.3.1.1	Envelope	High-albedo roofs satisfy one of the following: Solar reflectance ≥ 0.55 and thermal emittance ≥ 0.75 , Solar reflectance index ≥ 64.0 , or increased insulation (assembly $\leq U-0.03$ or $\geq R-33.0$ insulation).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wattage	9.4.3	Exterior Lighting	Exterior grounds lighting over 100 W provides >60 lm/W unless on motion sensor or fixture is exempt from scope of code or from external LPD.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wattage	9.4.2	Interior Lighting	Exit signs do not exceed 5 watts per face.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Controls	10.4.3	Mechanical	Elevators are designed with the proper lighting, ventilation power, and standby mode.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.5.6.1	Mechanical	Exhaust air energy recovery on systems meeting Table 6.5.6.1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.1.4	Mechanical	Economizer operation will not increase heating energy use during normal operation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.2.2.1	Mechanical	Three-pipe hydronic systems using a common return for hot and chilled water are not used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.2.2.3	Mechanical	Hydronic heat pump systems connected to a common water loop meet heat rejection and heat addition requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.2.4	Mechanical	Water economizer specified on hydronic cooling and humidification systems designed to maintain inside humidity at >35 °F dewpoint if an economizer is required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.3.1.1	Mechanical	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.3.1.2	Mechanical	HVAC fan motors not larger than allowable limits.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	7.4.2	Mechanical	Service water heating equipment meets efficiency requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	7.5.2	Mechanical	Service water heating equipment used for space heating complies with the service water heating equipment requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. To be checked by Plan Reviewer						
Air Leakage	5.4.3.4	Envelope	Vestibules are installed where building entrances separate conditioned space from the exterior, and meet exterior envelope requirements. Doors have self-closing devices, and are ≥ 7 ft apart.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.8.1.7.3	Envelope	Insulation in contact with the ground has $\leq 0.3\%$ water absorption rate per ASTM C272.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plan Review	4.2.2,5.4.3.1.1,5.7	Envelope	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"/>	<input type="checkbox"/>	<input type="checkbox"/>

Plan Review	9.7	Exterior Lighting	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wattage	9.4.3	Exterior Lighting	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plan Review	4.2.2,9.4.4,9.7	Interior Lighting	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.3.4.4	Mechanical	Ventilation fans >0.75 hp have automatic controls to shut off fan when not required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.3.9	Mechanical	Demand control ventilation provided for spaces >500 ft2 and >40 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.4.1.4	Mechanical	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.5.2.3	Mechanical	Dehumidification controls provided to prevent reheating, recooling, mixing of hot and cold airstreams or concurrent heating and cooling of the same airstream.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.5.4.1	Mechanical	HVAC pumping systems >10 hp designed for variable fluid flow.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.5.7.1.1	Mechanical	Kitchen hoods >5,000 cfm have make up air >=50% of exhaust air volume.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.5.7.2	Mechanical	Fume hoods exhaust systems >=15,000 cfm have VAV hood exhaust and supply systems, direct make-up air or heat recovery.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.5.8.1	Mechanical	Unenclosed spaces that are heated use only radiant heat.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.3.3.2	Mechanical	Setback controls allow automatic restart and temporary operation as required for maintenance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Equipment	10.4.1	Mechanical	Electric motors meet requirements where applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plan Review	4.2.2,6.4.4.2.1,6.7.2	Mechanical	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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plan Review	4.2.2,7.7.1,10.4.2	Mechanical	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and equipment and document where exceptions to the standard are claimed. Hot water system sized per manufacturer's sizing guide.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plan Review	6.7.2.4	Mechanical	Detailed instructions for HVAC systems commissioning included on the plans or specifications for projects >=50,000 ft2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.4.3.10	Mechanical	Single zone HVAC systems with fan motors >=5 hp have variable airflow controls. Air conditioning equipment with a cooling capacity >=110,000 Btu/h has variable airflow controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SYSTEM_SPECIFIC	6.5.1,6.5.1.1,6.5.1.3	Mechanical	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.1,6.5.1.2,6.5.1.3	Mechanical	Water economizers provided where required, meet the requirements for design capacity, maximum pressure drop and integrated economizer control.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.3.2.1	Mechanical	VAV fan motors >=10 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.3.2.3	Mechanical	Reset static pressure setpoint for DDC controlled VAV boxes reporting to central controller based on the zones requiring the most pressure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.3.3	Mechanical	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.3.4	Mechanical	Multiple zone HVAC systems have supply air temperature reset controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.4.2	Mechanical	Reduce flow in pumping systems >10 hp. to multiple chillers or boilers when others are shut down.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.4.3	Mechanical	Temperature reset by representative building loads in pumping systems >10 hp for chiller and boiler systems >300,000 Btu/h.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.4.4.1	Mechanical	Two-position automatic valve interlocked to shut off water flow when hydronic heat pump with pumping system >10 hp is off.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.4.4.2	Mechanical	Hydronic heat pumps and water-cooled unitary air conditioners with pump systems >5 hp have controls or devices to reduce pump motor demand.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.5.2	Mechanical	Fan systems with motors >=7.5 hp associated with heat rejection equipment to have capability to operate at 2/3 of full-speed and auto speed controls to control the leaving fluid temperature or condensing temp/pressure of heat rejection device.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.6.2	Mechanical	Condenser heat recovery system that can heat water to 85 °F or provide 60% of peak heat rejection is installed for preheating of service hot water in 24/7 facility, water cooled systems reject >6 MMBtu, SHW load >=1 MMBtu.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.7.1.2	Mechanical	Conditioned supply air to space with a kitchen hood shall not exceed the greater of a) supply flow required to meet space heating or cooling, or b) hood exhaust flow minus the available air transfer from available spaces.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.7.1.3	Mechanical	Kitchen hoods with a total exhaust airflow rate >5000 cfm meet replacement air, ventilation system, or energy recovery requirements shown in Table 6.5.7.1.3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.7.1.4	Mechanical	Kitchen hoods with a total exhaust airflow rate >5000 cfm meet replacement air, ventilation system, or energy recovery requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.9	Mechanical	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	7.5.1	Mechanical	Combined space and water heating system not allowed unless standby loss less than calculated maximum. AHJ has approved or combined connected load <150 kBtu/h.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.4.3.1.1	Mechanical	Heating and cooling to each zone is controlled by a thermostat control.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.4.3.3.3	Mechanical	Systems with air capacity >10,000 cfm include optimum start controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.4.3.5	Mechanical	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	7.4.4.3	Mechanical	Public lavatory faucet water temperature <=110°F.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Controls	8.4.2	Project	At least 50% of all 125 volt 15- and 20-Amp receptacles are controlled by an automatic control device.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Plan Review	4.2.2,8.4.1.1,8.4.1.2,1	Project	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. Feeder connectors sized in accordance with approved plans and branch circuits sized for maximum drop of 3%.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. To be checked by Inspector						
Air Leakage	5.4.3.1	Envelope	Continuous air barrier is wrapped, sealed, caulked, gasketed, and/or taped in an approved manner, except in semiheated spaces and in climate zones 1-6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air Leakage	5.4.3.2	Envelope	Factory-built fenestration and doors are labeled as meeting air leakage requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air Leakage	5.4.3.1	Envelope	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"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fenestration	5.8.2.1	Envelope	Fenestration products rated in accordance with NFRC.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fenestration	5.8.2.2	Envelope	Fenestration products are certified as to performance labels or certificates provided.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.8.1.2	Envelope	Below-grade wall insulation installed per manufacturer's instructions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.8.1.2	Envelope	Slab edge insulation installed per manufacturer's instructions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.5.3.1	Envelope	Roof R-value. For some ceiling systems, verification may need to occur during Framing Inspection.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.8.1.2,5.8.1.3	Envelope	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"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.5.3.1	Envelope	Skylight curbs are insulated to the level of roofs with insulation above deck or R-5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.8.1.2	Envelope	Above-grade wall insulation installed per manufacturer's instructions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.8.1.2	Envelope	Floor insulation installed per manufacturer's instructions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.8.1.1	Envelope	Building envelope insulation is labeled with R-value or insulation certificate providing R-value and other relevant data.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.8.1.4	Envelope	Eaves are baffled to deflect air to above the insulation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.8.1.5	Envelope	Insulation is installed in substantial contact with the inside surface separating conditioned space from unconditional space.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.8.1.6	Envelope	Recessed equipment installed in building envelope assemblies does not compress the adjacent insulation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.8.1.7	Envelope	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"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.8.1.7.1	Envelope	Attics and mechanical rooms have insulation protected where adjacent to attic or equipment access.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.8.1.7.2	Envelope	Foundation vents do not interfere with insulation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	5.8.1.8	Envelope	Insulation intended to meet the roof insulation requirements cannot be installed on top of a suspended ceiling. Mark this requirement compliant if insulation is installed accordingly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Controls	9.4.1.7	Exterior Lighting	Automatic lighting controls for exterior lighting installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Controls	9.4.1.1	Interior Lighting	Automatic controls to shut off all building lighting installed in buildings >5,000 ft ² .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Controls	9.4.1.2	Interior Lighting	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Controls	9.4.1.3	Interior Lighting	Parking garage lighting is equipped with required lighting controls and daylight transition zone lighting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Controls	9.4.1.4	Interior Lighting	Primary sidelighted areas >=250 ft2 are equipped with required lighting controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Controls	9.4.1.5	Interior Lighting	Enclosed spaces with daylight area under skylights and rooftop monitors >900 ft2 are equipped with required lighting controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Controls	9.4.1.6	Interior Lighting	Separate lighting control devices for specific uses installed per approved lighting plans.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wattage	9.6.2	Interior Lighting	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wattage	9.6.3	Interior Lighting	Where space LPD requirements are adjusted based on room cavity ratios, dimensions are consistent with approved plans.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wattage	9.2.2.3	Interior Lighting	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.3.8	Mechanical	Freeze protection and snow/ice melting system sensors for future connection to controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.1.4,6.4.1.5	Mechanical	HVAC equipment efficiency verified. Non-NAECA HVAC equipment labeled as meeting 90.1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.3.4.1	Mechanical	Stair and elevator shaft vents have motorized dampers that automatically close.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.3.4.2,6.4.3.4.3	Mechanical	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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.3.4.5	Mechanical	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.4.1.1	Mechanical	Insulation exposed to weather protected from damage. Insulation outside of the conditioned space and associated with cooling systems is vapor retardant.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.4.1.2	Mechanical	HVAC ducts and plenums insulated. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation Inspection.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.4.1.3	Mechanical	HVAC piping insulation thickness. Where piping is installed in or under a slab, verification may need to occur during Foundation Inspection.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.4.2.1	Mechanical	Ducts and plenums sealed based on static pressure and location.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.5.7.1.5	Mechanical	Approved field test used to evaluate design air flow rates and demonstrate proper capture and containment of kitchen exhaust systems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.3.1.2	Mechanical	Thermostatic controls have a 5 °F deadband.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.3.2	Mechanical	Temperature controls have setpoint overlap restrictions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.3.3.1	Mechanical	HVAC systems equipped with at least one automatic shutdown control.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.4.3.7	Mechanical	When humidification and dehumidification are provided to a zone, simultaneous operation is prohibited.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	7.4.4.1	Mechanical	Temperature controls installed on service water heating systems (<=120°F to maximum temperature for intended use).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	7.4.4.2	Mechanical	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SYSTEM_SPECIFIC	7.4.6	Mechanical	Heat traps installed on non-circulating storage water tanks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.4.1.5.2	Mechanical	PTAC and PTHP with sleeves 16 in. by 42 in. labeled for replacement only.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.4.4.2.2	Mechanical	Ductwork operating >3 in. water column requires air leakage testing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.2.1	Mechanical	Zone controls can limit simultaneous heating and cooling and sequence heating and cooling to each zone.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.2.2.2	Mechanical	Two-pipe hydronic systems using a common distribution system have controls to allow a deadband ≥ 15 °F, allow operation in one mode for at least 4 hrs before changeover, and have reset controls to limit heating and cooling supply temperature to ≤ 30 °F.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	6.5.3.2.2	Mechanical	VAV fans have static pressure sensors positioned so setpoint $\leq 1/3$ total design pressure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	7.4.4.4	Mechanical	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	7.4.5.1	Mechanical	Pool heaters are equipped with on/off switch and no continuously burning pilot light.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	7.4.5.2	Mechanical	Pool covers are provided for heated pools and pools heated to >90 °F have a cover $\geq R-12$.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	7.4.5.3	Mechanical	Time switches are installed on all pool heaters and pumps.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	7.4.3	Mechanical	All piping in circulating system insulated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	7.4.3	Mechanical	First 8 ft of outlet piping is insulated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SYSTEM_SPECIFIC	7.4.3	Mechanical	All heat traced or externally heated piping insulated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. To be checked by Inspector at Project Completion and Prior to Issuance of Certificate of Occupancy

Post Construction	8.7.1	Interior Lighting	Furnished as-built drawings for electric power systems within 30 days of system acceptance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Post Construction	8.7.2	Interior Lighting	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC	6.7.2.4	Mechanical	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Post Construction	6.7.2.1	Mechanical	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Post Construction	6.7.2.2	Mechanical	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Post Construction	6.7.2.3	Mechanical	An air and/or hydronic system balancing report is provided for HVAC systems serving zones $>5,000$ ft ² of conditioned area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

EnergyGauge Summit® v5.20
INPUT DATA REPORT

Project Information

Project Name: 16104

Orientation: North

Project Title: 16104_Woodfield Hunt Club 16-05-16

Building Type: Gymnasium

Address: 4420 Woodfield Blvd.

Building Classification: Addition to existing Building

State: Florida

No.of Stories: 1

Zip: 33434

GrossArea: 2511 SF

Owner: Enter Owner's name here

Zones

No	Acronym	Description	Type	Area [sf]	Multiplier	Total Area [sf]	
1	AHU-1	Zone 1	CONDITIONED	1861.0	1	1861.0	<input type="checkbox"/>
2	MS-1	Zone 2	CONDITIONED	559.0	1	559.0	<input type="checkbox"/>
3	MS-2	Zone 2	CONDITIONED	91.0	1	91.0	<input type="checkbox"/>

Spaces

No	Acronym	Description	Type	Depth [ft]	Width [ft]	Height [ft]	Multiplier	Total Area [sf]	Total Volume [cf]	
In Zone: AHU-1										
1	105 New FitneZo0Sp1		Exercise Area (Gym)	10.00	148.00	10.00	1	1480.0	14800.0	<input type="checkbox"/>
2	103 New Vest Zo0Sp2		Corridor	10.00	5.00	10.00	1	50.0	500.0	<input type="checkbox"/>
3	111 AHU ClosZo0Sp3		Electrical Mechanical Equipment Room - General	10.00	2.00	10.00	1	20.0	200.0	<input type="checkbox"/>
4	110 New Gym Zo0Sp3		Storage & Warehouse - Bulky Active Storage	10.00	11.00	10.00	1	110.0	1100.0	<input type="checkbox"/>
5	107 New Vest Zo0Sp2		Corridor	10.00	6.90	10.00	1	69.0	690.0	<input type="checkbox"/>
6	109 Unisex BaZo0Sp3		Toilet and Washroom	10.00	6.60	10.00	1	66.0	660.0	<input type="checkbox"/>
7	108 Unisex BaZo0Sp3		Toilet and Washroom	10.00	6.60	10.00	1	66.0	660.0	<input type="checkbox"/>
In Zone: MS-1										
1	104 Aerobics FZo0Sp1		Exercise Area (Gym)	10.00	55.90	10.00	1	559.0	5590.0	<input type="checkbox"/>
In Zone: MS-2										
1	Tennis Office Zo0Sp1		Office - Enclosed	10.00	9.10	10.00	1	91.0	910.0	<input type="checkbox"/>

Lighting

No	Type	Category	No. of Luminaires	Watts per Luminaire	Power [W]	Control Type	No. of Ctrl pts	
In Zone: AHU-1								
In Space: 105 New Fitness								
1	Compact Fluorescent	General Lighting	1	370	370	Occupancy sensor without Daylighting	1	<input type="checkbox"/>
In Space: 103 New Vest								
1	Compact Fluorescent	General Lighting	1	42	42	Occupancy sensor without Daylighting	1	<input type="checkbox"/>
In Space: 111 AHU Closet								

	1	Compact Fluorescent	General Lighting	1	22	22	Occupancy sensor without Daylighting	1	<input type="checkbox"/>	
In Space: 110 New Gym Closet										
	1	Compact Fluorescent	General Lighting	1	75	75	Occupancy sensor without Daylighting	1	<input type="checkbox"/>	
In Space: 107 New Vest										
	1	Compact Fluorescent	General Lighting	1	42	42	Occupancy sensor without Daylighting	1	<input type="checkbox"/>	
In Space: 109 Unisex Bathroom										
	1	Compact Fluorescent	General Lighting	1	44	44	Occupancy sensor without Daylighting	1	<input type="checkbox"/>	
In Space: 108 Unisex Bathroom										
	1	Compact Fluorescent	General Lighting	1	44	44	Occupancy sensor without Daylighting	1	<input type="checkbox"/>	
In Zone: MS-1										
In Space: 104 Aerobics Room										
	1	Compact Fluorescent	General Lighting	1	254	254	Occupancy sensor without Daylighting	1	<input type="checkbox"/>	
In Zone: MS-2										
In Space: Tennis Office										
	1	Compact Fluorescent	General Lighting	1	75	75	Occupancy sensor without Daylighting	1	<input type="checkbox"/>	

Walls

No	Description	Type	Width [ft]	H (Effec) [ft]	Multi plier	Area [sf]	Orientation	Conductance [Btu/hr. sf. F]	Heat Capacity [Btu/sf.F]	Dens. [lb/cf]	R-Value [h.sf.F/Btu]	<input type="checkbox"/>
In Zone: AHU-1												
1	Pr0Zo1Wa1	Metal siding/2x4@24"+R1 1Batt/5/8"Gyp	14.80	10.00	1	148.0	East	0.0920	1.072	19.38	10.9	<input type="checkbox"/>
2	Pr0Zo1Wa1	Metal siding/2x4@24"+R1 1Batt/5/8"Gyp	14.60	10.00	1	146.0	South	0.0920	1.072	19.38	10.9	<input type="checkbox"/>
3	Pr0Zo1Wa1	Metal siding/2x4@24"+R1 1Batt/5/8"Gyp	28.50	10.00	1	285.0	East	0.0920	1.072	19.38	10.9	<input type="checkbox"/>

4	Pr0Zo1Wa1	Metal siding/2x4@24"+R1 1Batt/5/8"Gyp	48.10	10.00	1	481.0	North	0.0920	1.072	19.38	10.9	<input type="checkbox"/>
5	Pr0Zo1Wa1	Metal siding/2x4@24"+R1 1Batt/5/8"Gyp	12.80	10.00	1	128.0	West	0.0920	1.072	19.38	10.9	<input type="checkbox"/>
In Zone: MS-1												
1	Pr0Zo1Wa1	Metal siding/2x4@24"+R1 1Batt/5/8"Gyp	20.70	10.00	1	207.0	North	0.0920	1.072	19.38	10.9	<input type="checkbox"/>
2	Pr0Zo1Wa1	Metal siding/2x4@24"+R1 1Batt/5/8"Gyp	26.70	10.00	1	267.0	West	0.0920	1.072	19.38	10.9	<input type="checkbox"/>
3	Pr0Zo1Wa1	Metal siding/2x4@24"+R1 1Batt/5/8"Gyp	26.70	10.00	1	267.0	South	0.0920	1.072	19.38	10.9	<input type="checkbox"/>
In Zone: MS-2												
1	Pr0Zo1Wa1	Metal siding/2x4@24"+R1 1Batt/5/8"Gyp	13.40	10.00	1	134.0	North	0.0920	1.072	19.38	10.9	<input type="checkbox"/>
2	Pr0Zo1Wa1	Metal siding/2x4@24"+R1 1Batt/5/8"Gyp	68.00	10.00	1	680.0	East	0.0920	1.072	19.38	10.9	<input type="checkbox"/>
3	Pr0Zo1Wa1	Metal siding/2x4@24"+R1 1Batt/5/8"Gyp	6.80	10.00	1	68.0	South	0.0920	1.072	19.38	10.9	<input type="checkbox"/>

Windows

No	Description	Orientation	Shaded	U [Btu/hr sf F]	SHGC	Vis.Tra	W [ft]	H (Effec) [ft]	Multi plier	Total Area [sf]	
In Zone: AHU-1											
In Wall: 1E Exercise Room											
1	Pr0Zo1Wa3Wi1	East	No	0.8500	0.49	0.76	5.70	4.80	3	82.1	<input type="checkbox"/>
2	Pr0Zo1Wa3Wi1	East	No	0.8500	0.49	0.76	5.70	1.20	3	20.5	<input type="checkbox"/>
In Wall: 1N Exercise Room											
1	Pr0Zo1Wa3Wi1	North	No	0.8500	0.49	0.76	5.70	4.80	4	109.4	<input type="checkbox"/>
2	Pr0Zo1Wa3Wi1	North	No	0.8500	0.49	0.76	5.70	1.20	4	27.4	<input type="checkbox"/>
In Wall: 1S Exercise Wall											

1	Pr0Zo1Wa2Wi1	South	No	0.8500	0.49	0.76	1.80	5.20	2	18.7	<input type="checkbox"/>
In Wall: 1W Exercise Room											
2	Pr0Zo1Wa3Wi1	West	No	0.8500	0.49	0.76	5.70	1.20	3	20.5	<input type="checkbox"/>
3	Pr0Zo1Wa2Wi1	West	No	0.8500	0.49	0.76	1.80	5.20	2	18.7	<input type="checkbox"/>
In Zone: MS-1											
In Wall: 1N Aerobics Room											
2	Pr0Zo1Wa3Wi1	North	No	0.8500	0.49	0.76	5.70	1.20	1	6.8	<input type="checkbox"/>
3	Pr0Zo1Wa2Wi1	North	No	0.8500	0.49	0.76	1.80	5.20	1	9.4	<input type="checkbox"/>
In Wall: 1S Aerobics Room											
1	Pr0Zo1Wa3Wi1	South	No	0.8500	0.49	0.76	5.70	1.20	1	6.8	<input type="checkbox"/>
In Wall: 1W Aerobics Room											
2	Pr0Zo1Wa3Wi1	West	No	0.8500	0.49	0.76	5.70	1.20	2	13.7	<input type="checkbox"/>
In Zone: MS-2											
In Wall: 1N Tennis Wall											
1	Pr0Zo1Wa3Wi1	North	No	0.8500	0.49	0.76	5.00	4.70	2	47.0	<input type="checkbox"/>

Doors

No	Description	Type	Shaded?	Width [ft]	H (Effec) [ft]	Multi plier	Area [sf]	Cond. [Btu/hr. sf. F]	Dens. [lb/cf]	Heat Cap. [Btu/sf. F]	R-Value [h.sf.F/Btu]	
In Zone:												
In Wall:												
<input type="checkbox"/>												

Roofs

No	Description	Type	Width [ft]	H (Effec) [ft]	Multi plier	Area [sf]	Tilt [deg]	Cond. [Btu/hr. Sf. F]	Heat Cap [Btu/sf. F]	Dens. [lb/cf]	R-Value [h.sf.F/Btu]	
In Zone: AHU-1												
1	Pr0Zo1Rf1	Mtl Bldg Roof/R-19 Batt	184.80	10.00	1	1848.0	0.00	0.0492	1.34	9.49	20.3	<input type="checkbox"/>
In Zone: MS-1												
1	Pr0Zo2Rf1	Mtl Bldg Roof/R-19 Batt	55.90	10.00	1	559.0	0.00	0.0492	1.34	9.49	20.3	<input type="checkbox"/>
In Zone: MS-2												

1	Pr0Zo2Rf1	Mtl Bldg Roof/R-19 Batt	9.10	10.00	1	91.0	0.00	0.0492	1.34	9.49	20.3	<input type="checkbox"/>
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Skylights

No	Description	Type	U [Btu/hr sf F]	SHGC	Vis.Trans	W [ft]	H (Effec) [ft]	Multiplier	Area [Sf]	Total Area [Sf]	
In Zone:											
In Roof:											

Floors

No	Description	Type	Width [ft]	H (Effec) [ft]	Multi plier	Area [sf]	Cond. [Btu/hr. sf. F]	Heat Cap. [Btu/sf. F]	Dens. [lb/cf]	R-Value [h.sf.F/Btu]	
In Zone: AHU-1											
1	Pr0Zo1F11	1 ft. soil, concrete floor, carpet and rubber pad	184.80	10.00	1	1848.0	0.2681	34.00	113.33	3.73	<input type="checkbox"/>
In Zone: MS-1											
1	Pr0Zo1F11	1 ft. soil, concrete floor, carpet and rubber pad	55.90	10.00	1	559.0	0.2681	34.00	113.33	3.73	<input type="checkbox"/>
In Zone: MS-2											
1	Pr0Zo1F11	1 ft. soil, concrete floor, carpet and rubber pad	9.10	10.00	1	91.0	0.2681	34.00	113.33	3.73	<input type="checkbox"/>

Systems

AHU-1		System 1			Constant Volume Air Cooled Split System < 65000 Btu/hr				No. Of Units 1		
Component	Category	Capacity	Efficiency	IPLV							
1	Cooling System	55900.00	16.50	8.00	<input type="checkbox"/>						

2	Heating System	34130.00	1.00	<input type="checkbox"/>
3	Air Handling System -Supply	2000.00	0.35	<input type="checkbox"/>
4	Air Handling System - Return	1792.00	0.35	<input type="checkbox"/>
5	Air Distribution System (Sup)		6.00	<input type="checkbox"/>
6	Air Distribution System (Ret)		6.00	<input type="checkbox"/>

MS-1	System 2	Constant Volume Air Cooled Split System < 65000 Btu/hr	No. Of Units 1
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Component	Category	Capacity	Efficiency	IPLV	
1	Cooling System	17200.00	19.20	8.00	<input type="checkbox"/>
2	Air Handling System -Supply	533.00	0.35		<input type="checkbox"/>
3	Air Handling System - Return	533.00	0.35		<input type="checkbox"/>

MS-2	System 2	Constant Volume Air Cooled Split System < 65000 Btu/hr	No. Of Units 1
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Component	Category	Capacity	Efficiency	IPLV	
1	Cooling System	12000.00	20.50	8.00	<input type="checkbox"/>
2	Air Handling System -Supply	399.00	0.35		<input type="checkbox"/>
3	Air Handling System - Return	399.00	0.35		<input type="checkbox"/>

Plant						
Equipment	Category	Size	Inst.No	Eff.	IPLV	
						<input type="checkbox"/>

Water Heaters					
W-Heater Description	CapacityCap.Unit	I/P Rt.	Efficiency	Loss	
1 Electric water heater	10 [Gal]	5 [kW]	0.9600 [Ef]	[Btu/h]	<input type="checkbox"/>

Ext-Lighting

Description	Category	No. of Luminaires	Watts per Luminaire	Area/Len/No. of units [sf/ft/No]	Control Type	Wattage [W]
<input type="checkbox"/>						

Piping

No	Type	Operating Temperature [F]	Insulation Conductivity [Btu-in/h.sf.F]	Nomonal pipe Diameter [in]	Insulation Thickness [in]	Is Runout?
<input type="checkbox"/>						

Fenestration Used

Name	Glass Type	No. of Panes	Glass Conductance [Btu/h.sf.F]	SHGC	VLT
Glass	User Defined	1	0.8500	0.4900	0.7600
<input type="checkbox"/>					

Materials Used

Mat No	Acronym	Description	Only R-Value Used	RValue [h.sf.F/Btu]	Thickness [ft]	Conductivity [Btu/h.ft.F]	Density [lb/cf]	SpecificHeat
187	Mat187	GYP OR PLAS BOARD, 1/2IN	No	0.4533	0.0417	0.0920	50.00	0.2000
178	Mat178	CARPET W/RUBBER PAD	Yes	1.2300				
265	Mat265	Soil, 1 ft	No	2.0000	1.0000	0.5000	100.00	0.2000
48	Mat148	6 in. Heavyweight concrete	No	0.5000	0.5000	1.0000	140.00	0.2000
23	Mat123	6 in. Insulation	No	20.0000	0.5000	0.0250	5.70	0.2000

4	Matl4	Steel siding	No	0.0002	0.0050	26.0000	480.00	0.1000	<input type="checkbox"/>
271	Matl271	2x4@24" oc + R11 Batt	No	10.4179	0.2917	0.0280	7.11	0.2000	<input type="checkbox"/>
94	Matl94	BUILT-UP ROOFING, 3/8IN	No	0.3366	0.0313	0.0930	70.00	0.3500	<input type="checkbox"/>

Constructs Used

No	Name	Simple Construct	Massless Construct	Conductance [Btu/h.sf.F]	Heat Capacity [Btu/sf.F]	Density [lb/cf]	RValue [h.sf.F/Btu]	
1055	Metal siding/2x4@24"+R11Batt/5/8"Gyp	No	No	0.09	1.07	19.38	10.9	<input type="checkbox"/>
	Layer	Material No.	Material	Thickness [ft]	Framing Factor			
	1	4	Steel siding	0.0050	0.000			<input type="checkbox"/>
	2	271	2x4@24" oc + R11 Batt	0.2917	0.000			<input type="checkbox"/>
	3	187	GYP OR PLAS BOARD,1/2IN	0.0417	0.000			<input type="checkbox"/>
No	Name	Simple Construct	Massless Construct	Conductance [Btu/h.sf.F]	Heat Capacity [Btu/sf.F]	Density [lb/cf]	RValue [h.sf.F/Btu]	
1056	Mtl Bldg Roof/R-19 Batt	No	No	0.05	1.34	9.49	20.3	<input type="checkbox"/>
	Layer	Material No.	Material	Thickness [ft]	Framing Factor			
	1	94	BUILT-UP ROOFING, 3/8IN	0.0313	0.000			<input type="checkbox"/>
	2	23	6 in. Insulation	0.5000	0.000			<input type="checkbox"/>

No	Name	Simple Construct	Massless Construct	Conductance [Btu/h.sf.F]	Heat Capacity [Btu/sf.F]	Density [lb/cf]	RValue [h.sf.F/Btu]	
1057	1 ft. soil, concrete floor, carpet and rubber pad	No	No	0.27	34.00	113.33	3.7	<input type="checkbox"/>
	Layer	Material No.	Material	Thickness [ft]	Framing Factor			
	1	265	Soil, 1 ft	1.0000	0.000			<input type="checkbox"/>
	2	48	6 in. Heavyweight concrete	0.5000	0.000			<input type="checkbox"/>
	3	178	CARPET W/RUBBER PAD		0.000			<input type="checkbox"/>

PROJECT # 16104

**WOODFIELD HUNT CLUB
BOCA RATON, FL**

CONTENTS:

LOAD CALCULATIONS FOR THE FOLLOWING AHU'S MS'S:

AHU-1
MS-1
MS-2

DATE:

07/21/2016

PREPARED BY:



**700 W. HILLSBORO BLVD, BLDG. #1-204
DEERFIELD BEACH, FL 33441**

Air System Sizing Summary for AHU-1

Project Name: 16104_Woodfield Hunt Club 16-04-28
 Prepared by: FAE Consulting

07/21/2016
 03:32PM

Air System Information

Air System Name AHU-1	Number of zones 1
Equipment Class SPLT AHU	Floor Area 1861.0 ft ²
Air System Type SZCAV	Location West Palm Beach, Florida

Sizing Calculation Information

Zone and Space Sizing Method:

Zone CFM Sum of space airflow rates	Calculation Months Jan to Dec
Space CFM Individual peak space loads	Sizing Data Calculated

Central Cooling Coil Sizing Data

Total coil load 4.1 Tons	Load occurs at Jul 1500
Total coil load 49.3 MBH	OA DB / WB 91.0 / 78.0 °F
Sensible coil load 37.9 MBH	Entering DB / WB 78.2 / 64.9 °F
Coil CFM at Jul 1500 1491 CFM	Leaving DB / WB 54.7 / 53.5 °F
Max block CFM 1491 CFM	Coil ADP 52.1 °F
Sum of peak zone CFM 1491 CFM	Bypass Factor 0.100
Sensible heat ratio 0.768	Resulting RH46 %
ft ² /Ton 452.6	Design supply temp. 53.5 °F
BTU/(hr-ft ²) 26.5	Zone T-stat Check 1 of 1 OK
Water flow @ 10.0 °F rise N/A	Max zone temperature deviation 0.0 °F

Central Heating Coil Sizing Data

Max coil load 22.5 MBH	Load occurs at Des Htg
Coil CFM at Des Htg 1491 CFM	BTU/(hr-ft ²) 12.1
Max coil CFM 1491 CFM	Ent. DB / Lvg DB 65.8 / 79.8 °F
Water flow @ 20.0 °F drop N/A	

Supply Fan Sizing Data

Actual max CFM 1491 CFM	Fan motor BHP 0.29 BHP
Standard CFM 1490 CFM	Fan motor kW 0.23 kW
Actual max CFM/ft ² 0.80 CFM/ft ²	Fan static 0.70 in wg

Outdoor Ventilation Air Data

Design airflow CFM 207 CFM	CFM/person 25.94 CFM/person
CFM/ft ² 0.11 CFM/ft ²	

Zone Sizing Summary for AHU-1

Project Name: 16104_Woodfield Hunt Club 16-04-28
 Prepared by: FAE Consulting

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Air System Information

Air System Name AHU-1	Number of zones 1
Equipment Class SPLT AHU	Floor Area 1861.0 ft ²
Air System Type SZCAV	Location West Palm Beach, Florida

Sizing Calculation Information

Zone and Space Sizing Method:

Zone CFM Sum of space airflow rates	Calculation Months Jan to Dec
Space CFM Individual peak space loads	Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (MBH)	Design Air Flow (CFM)	Minimum Air Flow (CFM)	Time of Peak Load	Maximum Heating Load (MBH)	Zone Floor Area (ft ²)	Zone CFM/ft ²
Zone 1	34.5	1491	1491	Jul 1500	17.9	1861.0	0.80

Zone Terminal Sizing Data

No Zone Terminal Sizing Data required for this system.

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft ²)	Space CFM/ft ²
Zone 1							
103 New Vestibule	1	0.6	Jul 2000	25	0.3	50.0	0.51
105 Fitness Room	1	29.6	Jul 1500	1274	16.1	1480.0	0.86
107 New Vestibule	1	0.5	Jul 1400	21	0.1	69.0	0.31
108 New Unisex RR1	1	1.1	Jul 1400	49	0.6	66.0	0.74
109 New Unisex RR 2	1	1.2	Jul 1400	50	0.6	66.0	0.76
110 New Equip Closet	1	0.8	Jul 1400	36	0.1	117.0	0.31
111 AHU Closet	1	0.8	Jul 1400	35	0.0	13.0	2.69

Ventilation Sizing Summary for AHU-1

Project Name: 16104_Woodfield Hunt Club 16-04-28
 Prepared by: FAE Consulting

07/21/2016
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1. Summary

Ventilation Sizing Method **Sum of Space OA Airflows**
 Design Ventilation Airflow Rate **207** CFM

2. Space Ventilation Analysis Table

Zone Name / Space Name	Mult.	Floor Area (ft²)	Maximum Occupants	Maximum Supply Air (CFM)	Required Outdoor Air (CFM/person)	Required Outdoor Air (CFM/ft²)	Required Outdoor Air (CFM)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (CFM)
Zone 1									
103 New Vestibule	1	50.0	0.0	25.4	0.00	0.12	0.0	0.0	6.0
105 Fitness Room	1	1480.0	8.0	1274.4	0.00	0.12	0.0	0.0	177.6
107 New Vestibule	1	69.0	0.0	21.4	0.00	0.12	0.0	0.0	8.3
108 New Unisex RR1	1	66.0	0.0	48.6	0.00	0.00	0.0	0.0	0.0
109 New Unisex RR 2	1	66.0	0.0	50.0	0.00	0.00	0.0	0.0	0.0
110 New Equip Closet	1	117.0	0.0	36.3	0.00	0.12	0.0	0.0	14.0
111 AHU Closet	1	13.0	0.0	34.9	0.00	0.12	0.0	0.0	1.6
Totals (incl. Space Multipliers)				1490.9					207.5

Air System Design Load Summary for AHU-1

Project Name: 16104_Woodfield Hunt Club 16-04-28
 Prepared by: FAE Consulting

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	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 91.0 °F / 78.0 °F			HEATING OA DB / WB 43.0 °F / 36.1 °F		
ZONE LOADS	Details	Sensible (BTU/hr)	Latent (BTU/hr)	Details	Sensible (BTU/hr)	Latent (BTU/hr)
Window & Skylight Solar Loads		4674	-		-	-
Wall Transmission	1161 ft²	5109	-	1161 ft²	7065	-
Roof Transmission	1861 ft²	3062	-	1861 ft²	1580	-
Window Transmission	276 ft²	3506	-	276 ft²	6933	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	1861 ft²	0	-	1861 ft²	1433	-
Partitions	0 ft²	0	-	0 ft²	0	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	2792 W	9524	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	1500 W	5118	-	0	0	-
People	8	1840	960	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	1600	-	0	0
Safety Factor	5% / 5%	1642	128	5%	851	0
>> Total Zone Loads	-	34475	2688	-	17863	0
Zone Conditioning	-	33804	2688	-	17371	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Return Fan Load	1491 CFM	0	-	1491 CFM	0	-
Ventilation Load	207 CFM	3318	8760	207 CFM	5936	0
Supply Fan Load	1491 CFM	774	-	1491 CFM	-774	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	37896	11448	-	22533	0
Central Cooling Coil	-	37896	11449	-	0	0
Central Heating Coil	-	0	-	-	22533	-
>> Total Conditioning	-	37896	11449	-	22533	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Air System Sizing Summary for MS-1

Project Name: 16104_Woodfield Hunt Club 16-04-28
 Prepared by: FAE Consulting

07/21/2016
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Air System Information

Air System Name MS-1	Number of zones 1
Equipment Class SPLT AHU	Floor Area 559.0 ft ²
Air System Type SZCAV	Location West Palm Beach, Florida

Sizing Calculation Information

Zone and Space Sizing Method:

Zone CFM Sum of space airflow rates	Calculation Months Jan to Dec
Space CFM Individual peak space loads	Sizing Data Calculated

Central Cooling Coil Sizing Data

Total coil load 1.1 Tons	Load occurs at Aug 1700
Total coil load 13.7 MBH	OA DB / WB 89.7 / 77.7 °F
Sensible coil load 10.2 MBH	Entering DB / WB 78.5 / 65.3 °F
Coil CFM at Aug 1700 398 CFM	Leaving DB / WB 54.8 / 53.7 °F
Max block CFM 398 CFM	Coil ADP 52.2 °F
Sum of peak zone CFM 398 CFM	Bypass Factor 0.100
Sensible heat ratio 0.743	Resulting RH46 %
ft ² /Ton 490.6	Design supply temp. 53.5 °F
BTU/(hr-ft ²) 24.5	Zone T-stat Check 1 of 1 OK
Water flow @ 10.0 °F rise N/A	Max zone temperature deviation 0.0 °F

Central Heating Coil Sizing Data

Max coil load 7.8 MBH	Load occurs at Des Htg
Coil CFM at Des Htg 398 CFM	BTU/(hr-ft ²) 14.0
Max coil CFM 398 CFM	Ent. DB / Lvg DB 65.0 / 83.2 °F
Water flow @ 20.0 °F drop N/A	

Supply Fan Sizing Data

Actual max CFM 398 CFM	Fan motor BHP 0.08 BHP
Standard CFM 398 CFM	Fan motor kW 0.06 kW
Actual max CFM/ft ² 0.71 CFM/ft ²	Fan static 0.70 in wg

Outdoor Ventilation Air Data

Design airflow CFM 67 CFM	CFM/person 22.36 CFM/person
CFM/ft ² 0.12 CFM/ft ²	

Zone Sizing Summary for MS-1

Project Name: 16104_Woodfield Hunt Club 16-04-28
 Prepared by: FAE Consulting

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 03:32PM

Air System Information

Air System Name MS-1	Number of zones 1
Equipment Class SPLT AHU	Floor Area 559.0 ft ²
Air System Type SZCAV	Location West Palm Beach, Florida

Sizing Calculation Information

Zone and Space Sizing Method:

Zone CFM Sum of space airflow rates	Calculation Months Jan to Dec
Space CFM Individual peak space loads	Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (MBH)	Design Air Flow (CFM)	Minimum Air Flow (CFM)	Time of Peak Load	Maximum Heating Load (MBH)	Zone Floor Area (ft ²)	Zone CFM/ft ²
Zone 1	9.2	398	398	Aug 1700	6.2	559.0	0.71

Zone Terminal Sizing Data

No Zone Terminal Sizing Data required for this system.

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft ²)	Space CFM/ft ²
Zone 1							
104 New Aerobic Room	1	9.2	Aug 1700	398	6.2	559.0	0.71

Ventilation Sizing Summary for MS-1

Project Name: 16104_Woodfield Hunt Club 16-04-28
 Prepared by: FAE Consulting

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1. Summary

Ventilation Sizing Method **Sum of Space OA Airflows**
 Design Ventilation Airflow Rate **67** CFM

2. Space Ventilation Analysis Table

Zone Name / Space Name	Mult.	Floor Area (ft ²)	Maximum Occupants	Maximum Supply Air (CFM)	Required Outdoor Air (CFM/person)	Required Outdoor Air (CFM/ft ²)	Required Outdoor Air (CFM)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (CFM)
Zone 1									
104 New Aerobic Room	1	559.0	3.0	398.1	0.00	0.12	0.0	0.0	67.1
Totals (incl. Space Multipliers)				398.1					67.1

Air System Design Load Summary for MS-1

Project Name: 16104_Woodfield Hunt Club 16-04-28
 Prepared by: FAE Consulting

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	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 91.0 °F / 78.0 °F			HEATING OA DB / WB 43.0 °F / 36.1 °F		
ZONE LOADS	Details	Sensible (BTU/hr)	Latent (BTU/hr)	Details	Sensible (BTU/hr)	Latent (BTU/hr)
Window & Skylight Solar Loads	37 ft²	729	-	37 ft²	-	-
Wall Transmission	644 ft²	2311	-	644 ft²	3922	-
Roof Transmission	559 ft²	920	-	559 ft²	475	-
Window Transmission	37 ft²	464	-	37 ft²	918	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	559 ft²	0	-	559 ft²	616	-
Partitions	0 ft²	0	-	0 ft²	0	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	839 W	2861	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	100 W	341	-	0	0	-
People	3	690	360	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	300	-	0	0
Safety Factor	5% / 5%	416	33	5%	297	0
>> Total Zone Loads	-	8731	693	-	6227	0
Zone Conditioning	-	8149	693	-	6113	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Return Fan Load	398 CFM	0	-	398 CFM	0	-
Ventilation Load	67 CFM	1057	2583	67 CFM	1918	0
Supply Fan Load	398 CFM	207	-	398 CFM	-207	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	9413	3276	-	7825	0
Central Cooling Coil	-	9413	3276	-	0	0
Central Heating Coil	-	0	-	-	7825	-
>> Total Conditioning	-	9413	3276	-	7825	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Air System Sizing Summary for MS-2

Project Name: 16104_Woodfield Hunt Club 16-04-28
 Prepared by: FAE Consulting

07/21/2016
 03:32PM

Air System Information

Air System Name MS-2	Number of zones 1
Equipment Class SPLT AHU	Floor Area 91.0 ft ²
Air System Type SZCAV	Location West Palm Beach, Florida

Sizing Calculation Information

Zone and Space Sizing Method:

Zone CFM Sum of space airflow rates	Calculation Months Jan to Dec
Space CFM Individual peak space loads	Sizing Data Calculated

Central Cooling Coil Sizing Data

Total coil load 0.4 Tons	Load occurs at Jun 1700
Total coil load 4.8 MBH	OA DB / WB 88.7 / 77.7 °F
Sensible coil load 4.1 MBH	Entering DB / WB 77.3 / 63.9 °F
Coil CFM at Jun 1700 177 CFM	Leaving DB / WB 55.9 / 54.7 °F
Max block CFM 177 CFM	Coil ADP 53.5 °F
Sum of peak zone CFM 177 CFM	Bypass Factor 0.100
Sensible heat ratio 0.858	Resulting RH47 %
ft ² /Ton 229.1	Design supply temp. 53.5 °F
BTU/(hr-ft ²) 52.4	Zone T-stat Check 0 of 1 OK
Water flow @ 10.0 °F rise N/A	Max zone temperature deviation 0.0 °F

Central Heating Coil Sizing Data

Max coil load 3.4 MBH	Load occurs at Des Htg
Coil CFM at Des Htg 177 CFM	BTU/(hr-ft ²) 37.5
Max coil CFM 177 CFM	Ent. DB / Lvg DB 67.9 / 85.8 °F
Water flow @ 20.0 °F drop N/A	

Supply Fan Sizing Data

Actual max CFM 177 CFM	Fan motor BHP 0.03 BHP
Standard CFM 177 CFM	Fan motor kW 0.03 kW
Actual max CFM/ft ² 1.95 CFM/ft ²	Fan static 0.70 in wg

Outdoor Ventilation Air Data

Design airflow CFM 11 CFM	CFM/person 10.92 CFM/person
CFM/ft ² 0.12 CFM/ft ²	

Zone Sizing Summary for MS-2

Project Name: 16104_Woodfield Hunt Club 16-04-28
 Prepared by: FAE Consulting

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 03:32PM

Air System Information

Air System Name MS-2	Number of zones 1
Equipment Class SPLT AHU	Floor Area 91.0 ft ²
Air System Type SZCAV	Location West Palm Beach, Florida

Sizing Calculation Information

Zone and Space Sizing Method:

Zone CFM Sum of space airflow rates	Calculation Months Jan to Dec
Space CFM Individual peak space loads	Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (MBH)	Design Air Flow (CFM)	Minimum Air Flow (CFM)	Time of Peak Load	Maximum Heating Load (MBH)	Zone Floor Area (ft ²)	Zone CFM/ft ²
Zone 1	4.1	177	177	Jun 1700	3.2	91.0	1.95

Zone Terminal Sizing Data

No Zone Terminal Sizing Data required for this system.

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft ²)	Space CFM/ft ²
Zone 1							
Tennis Building Office	1	4.1	Jun 1700	177	3.2	91.0	1.95

Ventilation Sizing Summary for MS-2

Project Name: 16104_Woodfield Hunt Club 16-04-28
 Prepared by: FAE Consulting

07/21/2016
 03:32PM

1. Summary

Ventilation Sizing Method **Sum of Space OA Airflows**
 Design Ventilation Airflow Rate **11** CFM

2. Space Ventilation Analysis Table

Zone Name / Space Name	Mult.	Floor Area (ft²)	Maximum Occupants	Maximum Supply Air (CFM)	Required Outdoor Air (CFM/person)	Required Outdoor Air (CFM/ft²)	Required Outdoor Air (CFM)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (CFM)
Zone 1									
Tennis Building Office	1	91.0	1.0	177.1	0.00	0.12	0.0	0.0	10.9
Totals (incl. Space Multipliers)				177.1					10.9

Air System Design Load Summary for MS-2

Project Name: 16104_Woodfield Hunt Club 16-04-28
 Prepared by: FAE Consulting

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	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 91.0 °F / 78.0 °F			HEATING OA DB / WB 43.0 °F / 36.1 °F		
ZONE LOADS	Details	Sensible (BTU/hr)	Latent (BTU/hr)	Details	Sensible (BTU/hr)	Latent (BTU/hr)
Window & Skylight Solar Loads	47 ft²	565	-	47 ft²	-	-
Wall Transmission	223 ft²	973	-	223 ft²	1357	-
Roof Transmission	91 ft²	150	-	91 ft²	77	-
Window Transmission	47 ft²	597	-	47 ft²	1180	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	91 ft²	0	-	91 ft²	139	-
Partitions	134 ft²	158	-	134 ft²	326	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	114 W	388	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	200 W	682	-	0	0	-
People	1	245	205	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	188	10	5%	154	0
>> Total Zone Loads	-	3947	215	-	3234	0
Zone Conditioning	-	3755	215	-	3195	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Return Fan Load	177 CFM	0	-	177 CFM	0	-
Ventilation Load	11 CFM	173	443	11 CFM	313	0
Supply Fan Load	177 CFM	92	-	177 CFM	-92	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	4020	658	-	3416	0
Central Cooling Coil	-	4020	658	-	0	0
Central Heating Coil	-	0	-	-	3416	-
>> Total Conditioning	-	4020	658	-	3416	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		