Had set Tad F.D. $2719 clet# 4102 Bldg. #4 Type-V -Occ. Type Name- Business Occup. #39 Code Element = B

Columbia County New Building Permit Application

For Office Use Only Application # 1906-63 Date Received MA By 6/17 Permit # 38424

Zoning Official JC/KH Date 7-9-19 Flood Zone X Land Use Comm Zoning CHI

FEMA Map # N/A Elevation N/A MFE 162.50 River N/A Plans Examiner T.C. Date 7-9-19

Comments SDP 18-06 Elevation letter at slab minimum 162.50' Front 20' Sides 15', Rear 15'

☐ NOC ☐ EH ☐ Deed or PA ☑ Site Plan ☑ State Road Info ☑ Well letter ☑ 911 Sheet ☐ Parent Parcel #

☐ Dev Permit # ☐ In Floodway ☐ Letter of Auth. from Contractor ☐ F W Comp. letter

☐ Owner Builder Disclosure Statement ☐ Land Owner Affidavit ☐ Ellisville Water ☑ App Fee Paid ☐ Sub VF Form

Septic Permit No. 19-0417 OR City Water ☑ Fax

Applicant (Who will sign/pickup the permit) Isaiah Cully Phone 386-867-0086

Address 818 W Duval Lake City FL 32055

Owners Name Morrell's Legacy, LLC Phone 386-365-7690

911 Address 457 Deputy J Davis, Lake City FL

Contractors Name Isaiah Cully Phone 386-867-0086

Address 818 W Duval Lake City FL 32055

Contractor Email Isaiahcully4@gmail.com ***Include to get updates on this job.

Fee Simple Owner Name & Address

Bonding Co. Name & Address

Architect/Engineer Name & Address Nicholas P Geisler, 1758 NW Brown Rd, 32055 Lake City

Mortgage Lenders Name & Address

Circle the correct power company ☐ FL Power & Light ☑ Clay Elec. ☐ Suwannee Valley Elec. ☐ Duke Energy

Property ID Number 34-3S-16-02475-001 Estimated Construction Cost 210,000

Subdivision Name Building #4 Lot Block Unit Phase

Driving Directions from a Major Road 90 W, (L) CR-252, (R) Deputy J Davis LN, (R) into Morrell's building in back.

Construction of Warehouse BLDG #4 X Commercial OR Residential

Proposed Use/Occupancy Lease space Warehouse Number of Existing Dwellings on Property ?

Is the Building Fire Sprinkled? NO If Yes, blueprints included Or Explain

Circle Proposed ☐ Culvert Permit or ☐ Culvert Waiver or ☐ D.O.T. Permit or ☑ Have an Existing Drive

Actual Distance of Structure from Property Lines - Front 300+- Side 415' Side 565' Rear 15'

Number of Stories 1 Heated Floor Area 6000 Total Floor Area 9000 Acreage 14.81

Zoning Applications applied for (Site & Development Plan, Special Exception, etc.)

LA Spoke by Cully RE: EH 7.23.19

Columbia County Building Permit Application

CODE: Florida Building Code 2014 and the 2011 National Electrical Code.

Application is hereby made to obtain a permit to do work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work be performed to meet the standards of all laws regulating construction in this jurisdiction.

TIME LIMITATIONS OF APPLICATION : An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless pursued in good faith or a permit has been issued.

TIME LIMITATIONS OF PERMITS: Every permit issued shall become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time work is commenced. A valid permit receives an approved inspection every 180 days. Work shall be considered not suspended, abandoned or invalid when the permit has received an approved inspection within 180 days of the previous approved inspection.

FLORIDA'S CONSTRUCTION LIEN LAW: Protect Yourself and Your Investment: According to Florida Law, those who work on your property or provide materials, and are not paid-in-full, have a right to enforce their claim for payment against your property. This claim is known as a construction lien. If your contractor fails to pay subcontractors or material suppliers or neglects to make other legally required payments, the people who are owed money may look to your property for payment, even if you have paid your contractor in full. This means if a lien is filed against your property, it could be sold against your will to pay for labor, materials or other services which your contractor may have failed to pay.

NOTICE OF RESPONSIBILITY TO CONTRACTOR AND AGENT: ***YOU ARE HEREBY NOTIFIED*** as the recipient of a building permit from Columbia County, Florida, you will be held responsible to the County for any damage to sidewalks and/or road curbs and gutters, concrete features and structures, together with damage to drainage facilities, removal of sod, major changes to lot grades that result in ponding of water, or other damage to roadway and other public infrastructure facilities caused by you or your contractor, subcontractors, agents or representatives in the construction and/or improvement of the building and lot for which this permit is issued. No certificate of occupancy will be issued until all corrective work to these public infrastructures and facilities has been corrected.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

OWNERS CERTIFICATION: I CERTIFY THAT ALL THE FOREGOING INFORMATION IS ACCURATE AND THAT ALL WORK WILL BE DONE IN COMPLIANCE WITH ALL APPLICABLE LAWS REGULATING CONSTRUCTION AND ZONING.

NOTICE TO OWNER: There are some properties that may have deed restrictions recorded upon them. These restrictions may limit or prohibit the work applied for in your building permit. You must verify if your property is encumbered by any restrictions or face possible litigation and or fines.

David Morrell — **Print Owners Name**

D Morrell — **Owners Signature**

****Property owners must sign here before any permit will be issued.**

****If this is an Owner Builder Permit Application then, ONLY the owner can sign the building permit when it is issued.**

CONTRACTORS AFFIDAVIT: By my signature I understand and agree that I have informed and provided this written statement to the owner of all the above written responsibilities in Columbia County for obtaining this Building Permit including all application and permit time limitations.

Contractor's Signature

Contractor's License Number CBC 1259655

Columbia County Competency Card Number 1179

Affirmed under penalty of perjury to by the Contractor and subscribed before me this 17th **day of** June **20**19.

Personally known____ **or Produced Identification**_____

State of Florida Notary Signature (For the Contractor)

SEAL:

LAURIE HODSON
MY COMMISSION # FF 976102
EXPIRES: July 14, 2020
Bonded Thru Troy Fain-Insurance

SUBCONTRACTOR VERIFICATION

APPLICATION/PERMIT # 1906-63 JOB NAME Morrell

THIS FORM MUST BE SUBMITTED BEFORE A PERMIT WILL BE ISSUED

Columbia County issues combination permits. One permit will cover all trades doing work at the permitted site. It is REQUIRED that we have records of the subcontractors who actually did the trade specific work under the general contractors permit.

NOTE: *It shall be the responsibility of the general contractor to make sure that all of the subcontractors are licensed with the Columbia County Building Department.*

Use website to confirm licenses: http://www.columbiacountyfla.com/PermitSearch/ContractorSearch.aspx

NOTE: If this should change prior to completion of the project, it is your responsibility to have a corrected form submitted to our office, before that work has begun.

Violations will result in stop work orders and/or fines.

ELECTRICAL ☑ CC# 871	Print Name Dennis Conklin Signature Dennis Conklin Company Name: D&S Electric License #: 13003800 Phone #: 386 397-5731	Need ☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE
MECHANICAL/ A/C ☑ CC# 802	Print Name Clint Wilson Signature Company Name: Wilson Heat & Air License #: CAC057886 Phone #: 386 496-9000	Need ☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE
PLUMBING/ GAS ☑ CC# 715	Print Name Cole Bass Signature Company Name: Bass Plumbing License #: CFC1427145 Phone #: 352 623-0509	Need ☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE
ROOFING ☑ CC# 494	Print Name Caleb Laughlin Signature Company Name: Precision Exteriors License #: CCC 1327714 Phone #: 386-867-1439	Need ☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE
SHEET METAL ☐ CC#	Print Name Signature Company Name: License #: Phone #:	Need ☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE
FIRE SYSTEM/ SPRINKLER ☐ CC#	Print Name Signature Company Name: License#: Phone #:	Need ☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE
SOLAR ☐ CC#	Print Name Signature Company Name: License #: Phone #:	Need ☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE
STATE SPECIALTY ☐ CC#	Print Name Signature Company Name: License #: Phone #:	Need ☐ Lic ☐ Liab ☐ W/C ☐ EX ☐ DE

TE OF FLORIDA
ARTMENT OF HEALTH
SITE SEWAGE TREATMENT AND DISPOSAL
YSTEM
APPLICATION FOR CONSTRUCTION PERMIT

PERMIT NO. 19-0447
DATE PAID: 5-2-19
FEE PAID: 485.00
RECEIPT #: 425463

APPLICATION FOR:
[X] New System [ ] Existing System [ ] Holding Tank [ ] Innovative
[ ] Repair [ ] Abandonment [ ] Temporary [ ] _____

APPLICANT: Morrell's Legacy LLC

AGENT: ROCKY FORD, A & B CONSTRUCTION

MAILING ADDRESS: 546 SW Dortch Street, FT. WHITE, FL, 32038 TELEPHONE: 386-497-2311

TO BE COMPLETED BY APPLICANT OR APPLICANT'S AUTHORIZED AGENT. SYSTEMS MUST BE CONSTRUCTED BY A PERSON LICENSED PURSUANT TO 489.105(3)(m) OR 489.552, FLORIDA STATUTES. IT IS THE APPLICANT'S RESPONSIBILITY TO PROVIDE DOCUMENTATION OF THE DATE THE LOT WAS CREATED OR PLATTED (MM/DD/YY) IF REQUESTING CONSIDERATION OF STATUTORY GRANDFATHER PROVISIONS.

PROPERTY INFORMATION

LOT: NA BLOCK: NA SUB: NA PLATTED: _____

PROPERTY ID #: 34-3S-16-02475-001 ZONING: _____ I/M OR EQUIVALENT: [Y / N]

PROPERTY SIZE: 14.81 ACRES WATER SUPPLY: [ ] PRIVATE PUBLIC [X]<=2000GPD [ ]>2000GPD

IS SEWER AVAILABLE AS PER 381.0065, FS? [Y / (N)] DISTANCE TO SEWER: N/A FT

PROPERTY ADDRESS: 467 sw Deputy J Davis Lake Lake City

DIRECTIONS TO PROPERTY: 90 West Left on 252 Right on Deputy J Davis Lane, to address on Right.

BUILDING INFORMATION [X] RESIDENTIAL [X] COMMERCIAL

Unit No	Type of Establishment	No. of Bedrooms	Building Area Sqft	Commercial/Institutional System Design Table 1, Chapter 64E-6, FAC
1	metal building w/ Bathroom & Kitchen	0	9000	4 loading bays = 400
2				5 employees 25 gpd = 475 gpd
3				

[ ] Floor/Equipment Drains [ ] Other (Specify) _____

SIGNATURE: Rocky D Ford (EH 5/22/19) DATE: 12/19/2018

DH 4015, 08/09 (Obsoletes previous editions which may not be used)
Incorporated 64E-6.001, FAC

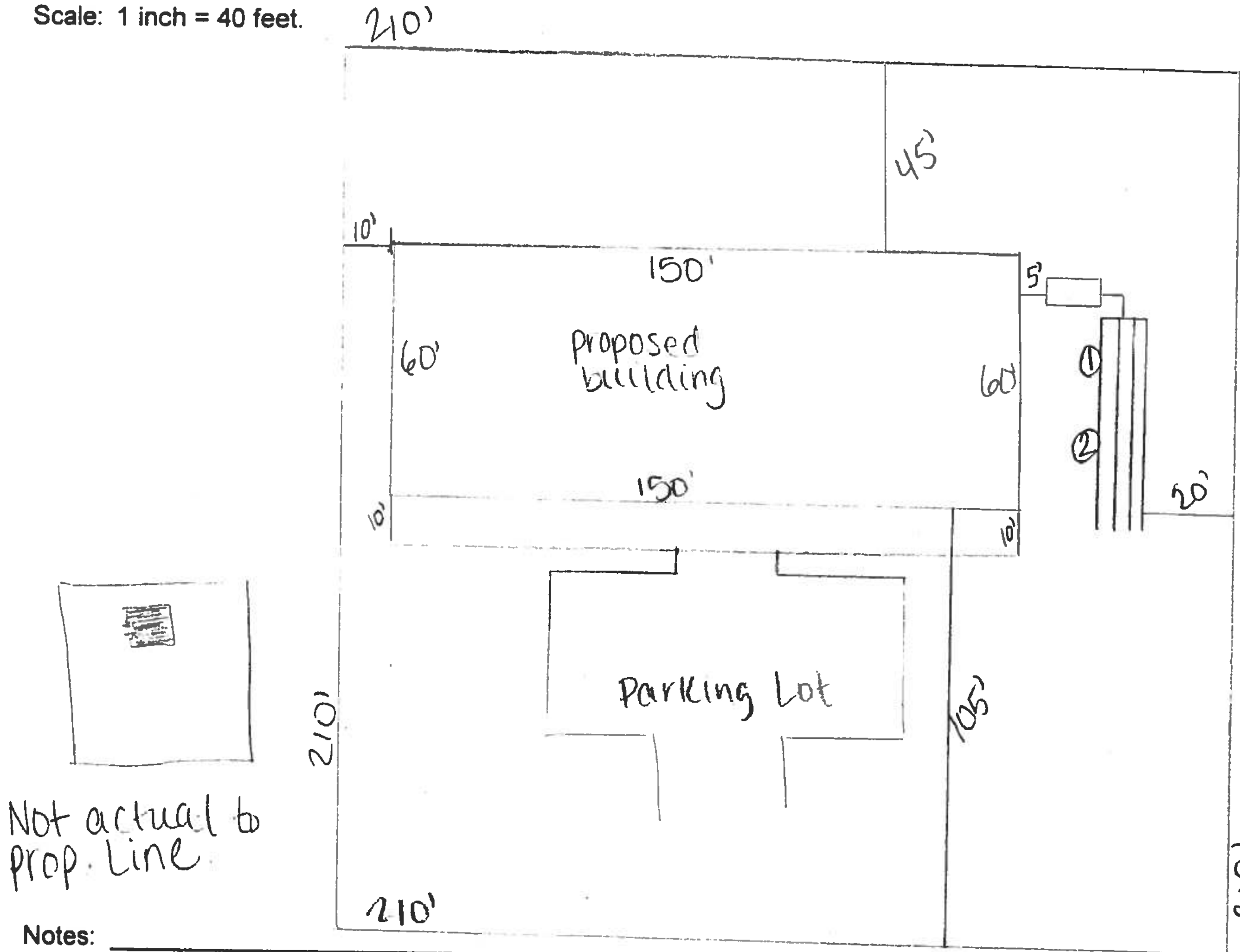
STATE OF FLORIDA
DEPARTMENT OF HEALTH
APPLICATION FOR ONSITE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permit Application Number 19-0417

Morrell's Legacy LLC

PART II - SITEPLAN

Scale: 1 inch = 40 feet.



Notes: 1 acre of 14.81

Site Plan submitted by: [signature] MASTER CONTRACTOR

Plan Approved X Not Approved _____ Date 6/5/19

By [signature] ESA Columbia County Health Department

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT

COLUMBIA COUNTY FIRE RESCUE
Life Safety Services
P.O. BOX 1529 Lake City, Florida 32056
Office (386) 758-2120 Fax (386) 754-7064

Fire Inspector
Chief Jeffery Crawford

20 June 2019

TO: Troy Crews
Columbia County Building and Zoning

FROM: Chief Jeffery Crawford
Fire Inspector #136416

RE: New construction for Morrell

A plan review was performed on the proposed new construction of building for Morrell, located at 461 SW Deputy J David Ln., Lake City FL 32054. This building was classified under Chapter 38 New Business, of the Florida Fire Prevention Code, 2012 Fifth Edition.
I recommend Approval of the building with the following conditions:
Pending:

- Light Weight Truss Marking
    - Florida Statue, Section 633.027, (2008) requires the owner of any commercial, industrial, or multi-unit residential structure of three units or more constructed of light-frame trusses, to install a symbol adopted by the rule of the State Fire Marshal's Office. This rule establishes the dimensions, color, and location of the symbol to be applied to every commercial, industrial, and multi-unit residential structure of three units or more constructed of light-frame trusses.

- Emergency Lighting/Exit signs
    - NFPA 101 Life Safety Code, Chapter 42.2.9 emergency lighting shall be provided in normally occupied storage occupancies in accordance with section 7.9, except for

spaces occupied only during daylight hours with natural illumination in accordance with 42.2.8.2.

- Fire Extinguishers – 1 ABC Fire extinguisher per exit door

- Access Box(es)
  - NFPA 1:18.2.2.1 states, The AHJ shall have the authority to require an access box(es) to be installed in an accessible location where access to or within a structure or area is difficult because of security. The access box(es) shall be of an approved type listed in accordance with UL1037.

  Knox Boxes are now a requirement for all new construction

- Electrical Disconnect
  - NFPA 1:11.1.7 states, "means shall be provided for the fire department to disconnect the electrical service to a building, structure or facility when the electrical is covered under the scope of NFPA70."
  - NFPA 101:7.2.1.5.1 states, "Doors shall be arranged to be opened readily from egress side whenever building is occupied."

Sincerely,

District No. 1 - Ronald Williams
District No. 2 - Rusty DePratter
District No. 3 - Bucky Nash
District No. 4 - Everett Phillips
District No. 5 - Tim Murphy

August 24, 2018

VIA ELECTRONIC MAIL

David Morrell
Morrell's, Inc.
212 SW Cottage Glen
Lake City, Fl 32024

Re: Site and Development Plan 18 06 – Morrell's (Tax Parcel 02475-001)
Planning and Zoning Board Determination Letter

Dear Mr. Morrell,

At the August 23, 2018 Planning and Zoning Board ("Board") hearing, the Board approved your application for a Site and Development Plan for the addition of ±27,000 square feet of floor area for a "Warehouse" as permitted in Section 4.15.2(8) of the County's Land Development Regulations ("LDRs") in accordance with Section 14.13 of the County's LDRs.

Attached is a copy of the Board's Resolution approving SDP 18 06.

If you have any questions, please do not hesitate to contact me at bstubbs@columbiacountyfla.com or (386) 754-7119.

Sincerely,

Brandon M. Stubbs
County Planner/LDR Admin.

7. Manner of stormwater management will not adversely affect the provisions for stormwater management on adjacent and nearby properties and overall public stormwater management capacities;
8. Provision for sanitary sewers is adequate in relationship to overall sanitary sewer availability and capacities;
9. Utilities, with reference to hook-in locations and availability and capacity for the uses projected are adequate;
10. Recreation facilities and open spaces, with attention to the size, location, and development of the areas as to adequacy, effect on privacy of adjacent and nearby properties and uses within the proposed development, and relationship to community open spaces and recreational facilities are adequate;
11. General amenities and convenience, with particular reference to appearance and general layout of the proposed development will be compatible and harmonious with properties in the general area and will not be in conflict with other development in the area as to cause substantial depreciation of property values; and
12. Said site and development plan conforms to all other standards imposed by the Land Development Regulations.

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING AND ZONING BOARD OF COLUMBIA COUNTY, FLORIDA, THAT:

Section 1. Pursuant to an application, SDP 18-06, an application by David Morrell, agent for H. Wayne Morrell Living Trust, U/T/D 08/14/2006, owner, for site and development plan approval for the addition of three buildings totaling ±27,000 square foot for a Warehouse use located in the Commercial, Highway Interchange ("CHI") Zone District in accordance with a site plan dated July 31, 2018, subject to conditions listed in exhibit "A", and submitted as part of an application dated July 31, 2018 to be located on property described, as follows:

COMMENCE at the Northwest corner of the Southeast ¼ of the Southwest ¼ of Section 34, Township 3 South, Range 16 East, Columbia County, Florida (as established by Bennett R. Wattles, PLS) and run S.05°46'26"W. along the West line of said Southeast ¼ of the Southwest ¼ (as established by Bennett R. Wattles, PLS), a distance of 22.58 feet to the POINT OF BEGINNING; thence N.88°11'00"E. 1148.46 feet to the Northwest corner of a parcel of land described in Official Records Book No. 511, Page 606 of the Public Records of Columbia County, Florida; thence S.05°45'31"W. along the West line of said parcel of land 324.32 feet; thence S.05°09'00"E still along said West line 330.58 feet to o point on the Northerly Right-of-Way line of County Road No. 252; thence S.63°07'59"W. along said Northerly Right-of-Way line 240.19 feet to the Point of Curve concave to the Southeast having a radius of 1959.86 feet and a central angle of 04°15'50", said curve also having a Chord bearing of S.61°00'04"W. and a Chord distance of 145.82 feet; thence Southwesterly along the chord of said curve, being also said Northerly Right-of-Way line 145.85 feet; thence N.32°40'23"W. 143.97 feet; thence N.20°47'20"W. 168.91 feet; thence S.70°19'20"W. 210.45 feet; thence N.18°29'32"W. 217.19 feet; thence N. 89°20'17"W. 436.50 feet to a point on the West line of the Southeast ¼ of the Southwest ¼ (as established by Bennett R. Wattles, PLS); thence N.05°46'26"E. along said West line 377.42 feet to the POINT OF BEGINNING.

CONATINING 14.81 ACRES, MORE OR LESS.

Tax Parcel Number 34-3s-16-02475-001

Section 2. The Planning and Zoning Board, hereby approves the above referenced site and development plan subject to any conditions and safeguards, if any, hereinafter attached in Exhibit "A".

CITY OF LAKE CITY
Florida's Gateway Est. 1859

July 17, 2019

Morrell's Legacy, LLC
Attn: David Morrell
212 SW Cottage Glen
Lake City, FL 32024

RE: Service Availability Letter

To Whom It May Concern,

Thank you for your inquiry regarding the availability of city utilities. The City of Lake City has potable water available to tap into at 307 SW Morrells Ct., Parcel 34-3S-16-02475-001.

This availability response does not represent the City of Lake City's commitment for or reservation of capacity. In accordance with the City of Lake City's policies and procedures, commitment to serve is made only upon the City of Lake City's approval of your application for service and receipt of your payment for all applicable fees.

If you have any questions, please feel free to contact me at (386) 719-5786 during our normal business hours of 8:00 am to 4:30 pm, Monday through Friday. I will be happy to assist you.

Sincerely,

Shasta Pelham
Utility Service Coordinator

Brian Scott
Director of Distribution and Collections

Detail by Entity Name

Florida Limited Liability Company
MORRELL'S LEGACY, LLC

Filing Information

Document Number	L18000011713
FEI/EIN Number	82-4052862
Date Filed	01/12/2018
State	FL
Status	ACTIVE

Principal Address

212 SW COTTAGE GLEN
LAKE CITY, FL 32024

Mailing Address

212 SW COTTAGE GLEN
LAKE CITY, FL 32024

Registered Agent Name & Address

O'CONNOR LAW FIRM
2240 BELLEAIR ROAD
SUITE 115
CLEARWATER, FL 33764

Authorized Person(s) Detail

Name & Address

Title MGR

MORRELL, DAVID W
212 SW COTTAGE GLEN
LAKE CITY, FL 32024

Title MGR

BARWICK, VONADA
212 SW COTTAGE GLEN
LAKE CITY, FL 32024

Title MGR

PARRISH, GWENDOLYN M
212 SW COTTAGE GLEN

Columbia County Property Appraiser

Jeff Hampton | Lake City, Florida | 386-758-1083

PARCEL: 34-3S-16-02475-001 | STORE/OFFI (001117) | 14.81 AC

BEG AT NW COR OF SE1/4 OF SW1/4, RUN E 1148.46 FT, SW 324.32 FT, SE 330.58 FT TO N R/W OF CR-252, SW ALONG R/W 386.04 FT, NW 143.97 FT, NW 168.91 FT,

Owner:	**MORRELL'S LEGACY LLC** 212 SW COTTAGE GLEN LAKE CITY, FL 32024				
Site:	457 DEPUTY J DAVIS LN, LAKE CITY				
Sales Info	1/17/2018	$100	I (U)		
	1/17/2018	$100	I (U)		
	2/28/2017	$100	I (U)		

2018 Certified Values

Mkt Lnd	$147,372	Appraised	$941,449
Ag Lnd	$0	Assessed	$941,449
Bldg	$772,609	Exempt	$0
XFOB	$21,468		**county:**$941,449
Just	$941,449	Total Taxable	**city:**$941,449
			other:$941,449
			school:$941,449

NOTES:

Columbia County, FL

Florida Building Code, Sixth Edition (2017) - Energy Conservation

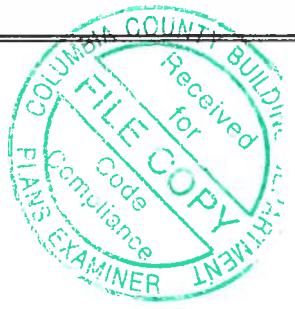
EnergyGauge Summit® Fla/Com-2017, Effective Date: Dec 31, 2017
IECC 2015 - Total Building Performance Compliance Option

Check List

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

- ☑ This Checklist
- ☑ The full compliance report generated by the software that contains the project summary, compliance summary, certifications and detailed component compliance reports.
- ☑ The compliance report must include the full input report generated by the software as contigous part of the compliance report.
- ☑ Boxes appropriately checked in the Mandatory Section of the complaince report.

WARNING: INPUT REPORT NOT GENERATED.
To include input report in final submission, go to the Project Form, Settings Tab and check the box - "Append Input Report to Compliance Output Report"
Then rerun your calculation



PROJECT SUMMARY

Short Desc:	Morrells	**Description:**	Morrells Furniture & Mattres
Owner:	Morrells Furniture & Mattresses		
Address1:		**City:**	Lake City
Address2:		**State:**	FL
		Zip:	32025
Type:	Retail	**Class:**	New Finished building
Jurisdiction:	LAKE CITY, COLUMBIA COUNTY, FL (221200)		
Conditioned Area:	5763 SF	**Conditioned & UnConditioned Area:**	5763 SF
No of Stories:	1	**Area entered from Plans**	5763 SF
Permit No:	0	**Max Tonnage**	4.8
		If different, write in:	5

Compliance Summary

Component	Design	Criteria	Result
Gross Energy Cost (in $)	6,620.0	6,951.0	**PASSED**
LIGHTING CONTROLS			**PASSES**
EXTERNAL LIGHTING			**PASSES**
HVAC SYSTEM			**PASSES**
PLANT			**No Entry**
WATER HEATING SYSTEMS			**PASSES**
PIPING SYSTEMS			**PASSES**
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: Ronald Miller Building Official: _____

Date: 5/23/2019 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:	Nicholas Paul Geisler	Reg No: AR0007005
Electrical Designer:	Nicholas Paul Geisler	Reg No: AR0007005
Lighting Designer:	Nicholas Paul Geisler	Reg No: AR0007005
Mechanical Designer:	Nicholas Paul Geisler	Reg No: AR0007005
Plumbing Designer:	Nicholas Paul Geisler	Reg No: AR0007005

(*) 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.

Ronald Miller
Certified Energy Rater No. 1494

Project: Morrells
Title: Morrells Furniture & Mattresses
Type: Retail
(WEA File: FL_JACKSONVILLE_INTL_ARPT.tm3)

Building End Uses

	1) Proposed	2) Baseline
Total	*432.00*	*531.60*
	$6,620	*$8,177*
ELECTRICITY(MBtu/kWh/$)	432.00 126585 *$6,620*	531.60 155757 *$8,177*
AREA LIGHTS	150.50 44093 *$2,306*	158.40 46425 *$2,437*
MISC EQUIPMT	88.20 25833 *$1,351*	88.20 25833 *$1,356*
PUMPS & MISC	0.00 14 *$1*	0.10 18 *$1*
SPACE COOL	126.90 37178 *$1,944*	157.30 46080 *$2,419*
SPACE HEAT	4.00 1177 *$62*	7.60 2230 *$117*
VENT FANS	62.40 18290 *$957*	120.00 35171 *$1,846*

Credits Applied: None
Passing Criteria = 6951
Design (including any credits) = 6620
Passing requires Proposed Building cost to be at most 85% of Baseline cost. This Proposed Building is at 81%

PASSES

Project: Morrells
Title: Morrells Furniture & Mattresses
Type: Retail
(WEA File: FL_JACKSONVILLE_INTL_ARPT.tm3)

External Lighting Compliance

Description	Category	Tradable?	Allowance (W/Unit)	Area or Length or No. of Units (Sqft or ft)	ELPA (W)	CLP (W)
Ext Light 1	Walk way less than 10 feet wide	Yes	0.80	120.0	96	200

Tradable Surfaces: 200 (W) Allowance for Tradable: 846 (W) **PASSES**
All External Lighting: 200 (W)
Complicance check includes a excess/Base allowance of 750.00(W)

Project: Morrells
Title: Morrells Furniture & Mattresses
Type: Retail
(WEA File: FL_JACKSONVILLE_INTL_ARPT.tm3)

Lighting Controls Compliance

Acronym	Ashrae ID	Description	Area (sq.ft)	Design CP	Min CP	Compliance
Warehouse	25,001	Sales Area	4,616	2	2	**PASSES**
Packaging	17	Office - Enclosed	289	1	1	**PASSES**
Tinting	17	Office - Enclosed	289	1	1	**PASSES**
Corridor	5	Corridor	94	1	1	**PASSES**
Handicap Restroor	6	Toilet and Washroom	57	1	1	**PASSES**
Breakroom	8	Food Service - Leisure Dining	117	1	1	**PASSES**
Conference	15	Conference/meeting (Multiple Functions)	301	1	1	**PASSES**

PASSES

Project: Morrells
Title: Morrells Furniture & Mattresses
Type: Retail
(WEA File: FL_JACKSONVILLE_INTL_ARPT.tm3)

System Report Compliance

RTU-1 **3 Ton DX System** **Constant Volume Air Cooled Split System < 65000 Btu/hr** **No. of Units 1**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Comp-liance
Cooling System	Air Conditioners Air Cooled Split System < 65000 Btu/h Cooling Capacity	34540	14.00	13.00	8.00		PASSES
Heating System	Electric Furnace	25598	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	1200	0.43	0.82			PASSES

RTU-2/3 **5 Ton DX System** **Constant Volume Air Cooled Split System < 65000 Btu/hr** **No. of Units 2**

Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Comp-liance
Cooling System	Air Conditioners Air Cooled Split System < 65000 Btu/h Cooling Capacity	57340	14.00	13.00	8.00		PASSES
Heating System	Electric Furnace	25598	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	2000	0.42	0.82			PASSES

PASSES

Plant Compliance

Description	Installed No	Size	Design Eff	Min Eff	Design IPLV	Min IPLV	Category	Comp liance

None

Project: Morrells
Title: Morrells Furniture & Mattresses
Type: Retail
(WEA File: FL_JACKSONVILLE_INTL_ARPT.tm3)

Water Heater Compliance

Description	Type	Category	Design Eff	Min Eff	Design Loss	Max Loss	Comp liance
Water Heater 1	Electric water heater	<= 12 [kW]	0.97	0.94			**PASSES**

PASSES

Project: Morrells
Title: Morrells Furniture & Mattresses
Type: Retail
(WEA File: FL_JACKSONVILLE_INTL_ARPT.tm3)

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]	Compl- iance
Domestic and Service Hot Water Systems	0.75	False	110.00	0.28	1.00	0.50	**PASSES**

PASSES

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	Exempt
1. To be checked by Designer or Engineer						
Insulation	C303.2	Envelope	Below-grade wall insulation installed per manufacturer's instructions.	☐	☑	☐
Insulation	C303.2	Envelope	Slab edge insulation installed per manufacturer's instructions.	☐	☑	☐
Insulation	C303.2	Envelope	Above-grade wall insulation installed per manufacturer's instructions.	☑	☐	☐
Insulation	C402.3	Envelope	High-albedo roofs satisfy one of the following: 3-year-aged solar reflectance >= 0.55 and thermal emittance >= 0.75 or 3-year-aged solar reflectance index >= 64.0.	☐	☑	☐
Fenestration	C402.4.4	Envelope	U-factor of opaque doors associated with the building thermal envelope meets requirements.	☑	☐	☐
SYSTEM_SPECIFIC	C403.2.12.1	Mechanical	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	☑	☐	☐
SYSTEM_SPECIFIC	C403.2.12.2	Mechanical	HVAC fan motors not oversized beyond allowable limits.	☑	☐	☐
SYSTEM_SPECIFIC	C403.2.3(8) Table	Mechanical	Heat Rejection Equipment: Minimum Efficiency Requirement meet those listed in Table C403.2.3(8)	☑	☐	☐
HVAC	C403.2.7	Mechanical	Exhaust air energy recovery on systems meeting Table C403.2.7(1) and C403.2.7(2).	☐	☑	☐
SYSTEM_SPECIFIC	C403.3	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.	☐	☑	☐
SYSTEM_SPECIFIC	C403.3.2	Mechanical	Economizer operation will not increase heating energy use during normal operation.	☐	☑	☐
SYSTEM_SPECIFIC	C403.3.4, C403.3.4.1, C403.3.4.2, C403.3.1	Mechanical	Water economizers provided where required, meet the requirements for design capacity, maximum pressure drop and integrated economizer control.	☐	☑	☐
SYSTEM_SPECIFIC	C403.4.2.1	Mechanical	Three-pipe hydronic systems using a common return for hot and chilled water are not used.	☐	☑	☐
SYSTEM_SPECIFIC	C403.4.2.3.1	Mechanical	Hydronic heat pump systems connected to a common water loop meet heat rejection and heat addition requirements.	☐	☑	☐
SYSTEM_SPECIFIC	C403.4.3.4	Mechanical	Open-circuit cooling towers having water cooled chiller systems and multiple or vairable speed condenser pumps, are designed so that tower cells can run in parallel with larger of flow crtieria.	☐	☑	☐
SYSTEM_SPECIFIC	C404.2	Mechanical	Service water heating equipment meets efficiency requirements.	☑	☐	☐
Wattage	C405.3	Interior Lighting	Exit signs do not exceed 5 watts per face.	☑	☐	☐
2. To be checked by Plan Reviewer						
Plan Review	C103.2	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.	☐	☐	☐

Plan Review	C103.2	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 st	☐	☐	☐
Plan Review	C103.2	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 manufact	☐	☐	☐
Plan Review	C103.2	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 shoul	☐	☐	☐
Plan Review	C103.2	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 shoul	☐	☐	☐
Insulation	C402.2.5	Envelope	Slab edge insulation depth/length. Slab insulation extending away from building is covered by pavement or >= 10 inches of soil.	☐	☐	☐
Insulation	C402.2.6	Project	Radiant heating systems panels insulated to >=R-3.5 on face opposite space being heated.	☐	☐	☐
HVAC	C402.2.6	Mechanical	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	☐	☐	☐
Insulation	C402.2.6	Envelope	Radiant panels and associated components, designed for heat transfer from the panel surfaces to the occupants or indoor space are insulated with a minimum of R-3.5.	☐	☐	☐
Air Leakage	C402.5.7	Envelope	Vestibules are installed on all building entrances. Doors have self-closing devices.	☐	☐	☐
SYSTEM_SPECIFIC	C403.2.12.3	Mechanical	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	☐	☐	☐
HVAC	C403.2.13	Mechanical	Unenclosed spaces that are heated use only radiant heat.	☐	☐	☐
HVAC	C403.2.4.2	Mechanical	Each zone equipped with setback controls using automatic time clock or programmable control system.	☐	☐	☐
SYSTEM_SPECIFIC	C403.2.4.4	Mechanical	Zone isolation devices and controls installed where applicable.	☐	☐	☐
SYSTEM_SPECIFIC	C403.2.4.7	Mechanical	Fault detection and diagnostics installed with air-cooled unitary DX units having economizers.	☐	☐	☐
SYSTEM_SPECIFIC	C403.2.5	Mechanical	Hot water boilers supplying heat via one- or two-pipe systems include outdoor setback control.	☐	☐	☐
HVAC	C403.2.6.1	Mechanical	Demand control ventilation provided for spaces >500 ft2 and >25 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.	☐	☐	☐
SYSTEM_SPECIFIC	C403.4.1.1	Mechanical	Hydronic and multizone HVAC system controls areVAV fans driven by mechanical or electrical variable speed drive per Table C403.4.1.1.	☐	☐	☐
SYSTEM_SPECIFIC	C403.4.1.3	Mechanical	Reset static pressure setpoint for DDC controlled VAV boxes reporting to central controller based on the zones requiring the most pressure.	☐	☐	☐
SYSTEM_SPECIFIC	C403.4.2	Mechanical	Temperature reset by representative building loads in pumping systems for chiller and boiler systems >500,000 Btu/h.	☐	☐	☐

SYSTEM_SPECIFIC	C403.4.2.3.2.1	Mechanical	Closed-circuit cooling tower within heat pump loop have either automatic bypass valve or lower leakage positive closure dampers. Open-circuit tower within heat pump loop have automatic valve to bypass all heat pump water flow around the tower. Open- or cl	☐	☐	☐
SYSTEM_SPECIFIC	C403.4.2.4	Mechanical	Hydronic systems greater than 500,000 Btu/h designed for variable fluid flow.	☐	☐	☐
SYSTEM_SPECIFIC	C403.4.2.5	Mechanical	System turndown requirement met through multiple single-input boilers, one or more modulating boilers, or a combination of single-input and modulating boilers. Boiler input between 1.0 MBtu/h and 5 MBtu/h has 3:1 turndown ratio, boiler input between 5.0	☐	☐	☐
SYSTEM_SPECIFIC	C403.4.2.6	Mechanical	Chilled water plants with multiple chillers have capability to reduce flow automatically through the chiller plant when a chiller is shut down. Boiler plants with multiple boilers have the capability to reduce flow automatically through the boiler plant	☐	☐	☐
SYSTEM_SPECIFIC	C403.4.3, C403.4.3.2	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.	☐	☐	☐
SYSTEM_SPECIFIC	C403.4.4.5	Mechanical	Multiple zone HVAC systems have supply air temperature reset controls.	☐	☐	☐
SYSTEM_SPECIFIC	C403.4.4.6	Mechanical	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	☐	☐	☐
SYSTEM_SPECIFIC	C404.2.1	Mechanical	Gas-fired water-heating equipment installed in new buildings: where a singular piece of water-heating equipment >= 1,000 kBtu/h serves the entire building, thermal efficiency >= 90 Et. Where multiple pieces of water-heating equipment serve the building wi	☐	☐	☐
SYSTEM_SPECIFIC	C404.4	Mechanical	All piping insulated in accordance with section details and Table C403.2.10.	☐	☐	☐
SYSTEM_SPECIFIC	C404.5, C404.5.1, C404.5.2	Mechanical	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐	☐	☐
SYSTEM_SPECIFIC	C404.6.3	Mechanical	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐	☐	☐
SYSTEM_SPECIFIC	C404.7	Mechanical	Water distribution system that pumps water from a heated-water supply pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving	☐	☐	☐
Wattage	C405.5.1	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.	☐	☐	☐
Plan Review	C405.6	Project	Group R-2 dwelling units have separate electrical meters.	☐	☐	☐
Plan Review	C406	Project	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐	☐	☐
SYSTEM_SPECIFIC	C408.2.2.2	Mechanical	HVAC hydronic heating and cooling coils have means to balance and have pressure test connections.	☐	☐	☐
SYSTEM_SPECIFIC	C408.2.2.2	Mechanical	HVAC hydronic heating and cooling coils have means to balance and have pressure test connections.	☐	☐	☐

3. To be checked by Inspector

Insulation	C303.1	Envelope	Roof insulation installed per manufacturerâ€™s instructions. Blown or poured loose-fill insulation is installed only where the roof slope is <=3 in 12.	☐	☐	☐
Insulation	C303.1	Envelope	Building envelope insulation is labeled with R-value or insulation certificate providing R-value and other relevant data.	☐	☐	☐
Fenestration	C303.1.3	Envelope	Fenestration products rated in accordance with NFRC.	☐	☐	☐
Fenestration	C303.1.3	Envelope	Fenestration products are certified as to performance labels or certificates provided.	☐	☐	☐
Insulation	C303.2, C402.2.4	Envelope	Floor insulation installed per manufacturer's instructions. Cavity or structural slab insulation installed in permanent contact with underside of decking or structural slabs.	☐	☐	☐
Insulation	C303.2.1	Envelope	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.	☐	☐	☐
Insulation	C303.2.1	Envelope	Exterior insulation is protected from damage with a protective material. Verification for exposed foundation insulation may need to occur during Foundation Inspection.	☐	☐	☐
Insulation	C402.1.3	Envelope	Non-swinging opaque doors have R-4.75 insulation.	☐	☐	☐
Insulation	C402.2.2	Envelope	Skylight curbs are insulated to the level of roofs with insulation above deck or R-5.	☐	☐	☐
Insulation	C402.2.2	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.	☐	☐	☐
Air Leakage	C402.5	Envelope	Building envelope contains a continuous air barrier that has been tested and deemed to limit air leakage <= 0.40 cfm/ft2.	☐	☐	☐
Air Leakage	C402.5.1	Envelope	The building envelope contains a continuous air barrier that is sealed in an approved manner and either constructed or tested in an approved manner. Air barrier penetrations are sealed in an approved manner.	☐	☐	☐
Air Leakage	C402.5.1.1	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.	☐	☐	☐
Air Leakage	C402.5.1.2.1	Envelope	The building envelope contains a continuous air barrier that is sealed in an approved manner and material permeability <= 0.004 cfm/ft2. Air barrier penetrations are sealed in an approved manner.	☐	☐	☐
Air Leakage	C402.5.1.2.2	Envelope	The building envelope contains a continuous air barrier that is sealed in an approved manner and average assembly air leakage <= 0.04 cfm/ft2. Air barrier penetrations are sealed in an approved manner.	☐	☐	☐
Air Leakage	C402.5.2, C402.5.4	Envelope	Factory-built fenestration and doors are labeled as meeting air leakage requirements.	☐	☐	☐
Air Leakage	C402.5.3	Envelope	Where open combustion air ducts provide combustion air to open combustion fuel burning appliances, the appliances and combustion air opening are located outside the building thermal envelope or enclosed in a room, isolated from inside the thermal envelope	☐	☐	☐
Air Leakage	C402.5.5, C403.2.4.3	Envelope	Stair and elevator shaft vents have motorized dampers that automatically close.	☐	☐	☐
Air Leakage	C402.5.5, C403.2.4.3	Envelope	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.	☐	☐	☐
Air Leakage	C402.5.6	Envelope	Weatherseals installed on all loading dock cargo doors.	☐	☐	☐

Air Leakage	C402.5.8	Envelope	Recessed luminaires in thermal envelope to limit infiltration and be IC rated and labeled. Seal between interior finish and luminaire housing.	☐	☐	☐
HVAC	C403.2.1	Mechanical	HVAC systems and equipment design loads calculated in accordance with ANSI/ASHRAE/ACCA Standard 183 or by an approved equivalent computational procedure	☐	☐	☐
SYSTEM_SPECIFIC	C403.2.10	Mechanical	HVAC piping insulation thickness. Where piping is installed in or under a slab, verification may need to occur during Foundation Inspection.	☐	☐	☐
HVAC	C403.2.3	Mechanical	HVAC equipment efficiency verified.	☐	☐	☐
SYSTEM_SPECIFIC	C403.2.3	Mechanical	PTAC and PTHP with sleeves 16 in. by 42 in. labeled for replacement only as per Footnote b to Table C403.2.3(3).	☐	☐	☐
SYSTEM_SPECIFIC	C403.2.4.1	Mechanical	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐	☐	☐
SYSTEM_SPECIFIC	C403.2.4.1.1	Mechanical	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	☐	☐	☐
HVAC	C403.2.4.1.2	Mechanical	Thermostatic controls have a 5 Â°F deadband.	☐	☐	☐
HVAC	C403.2.4.1.2	Mechanical	Thermostatic controls have a 5 Â°F deadband.	☐	☐	☐
HVAC	C403.2.4.1.3	Mechanical	Temperature controls have setpoint overlap restrictions.	☐	☐	☐
HVAC	C403.2.4.2.1, C403.2.4.2.2	Mechanical	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	☐	☐	☐
SYSTEM_SPECIFIC	C403.2.4.2.3	Mechanical	Systems include optimum start controls.	☐	☐	☐
HVAC	C403.2.4.5, C403.2.4.6	Mechanical	Snow/ice melting system sensors for future connection to controls. Freeze protection systems have automatic controls installed.	☐	☐	☐
HVAC	C403.2.6.2	Mechanical	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	☐	☐	☐
HVAC	C403.2.9	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.	☐	☐	☐
SYSTEM_SPECIFIC	C403.2.9.1.3	Mechanical	Ductwork operating >3 in. water column requires air leakage testing.	☐	☐	☐
SYSTEM_SPECIFIC	C403.4.1.2	Mechanical	VAV fans have static pressure sensors located so controller setpoint <=1.2 w.c..	☐	☐	☐
SYSTEM_SPECIFIC	C403.4.2.2	Mechanical	Two-pipe hydronic systems using a common distribution system have controls to allow a deadband >=15ºF, allow operation in one mode for at least 4 hrs before changeover, and have rest controls to limit heating and cooling supply temperature to <=30 ºF.	☐	☐	☐
SYSTEM_SPECIFIC	C403.4.2.3.3	Mechanical	Two-position automatic valve interlocked to shut off water flow when hydronic heat pump with pumping system >10 hp is off.	☐	☐	☐
SYSTEM_SPECIFIC	C403.4.4.5, C403.4.4.5.1-4	Mechanical	Zone controls can limit simultaneous heating and cooling and sequence heating and cooling to each zone.	☐	☐	☐
SYSTEM_SPECIFIC	C403.4.5	Mechanical	Condenser heat recovery system that can heat water to 85ºF or provide 60% of peak heat rejection is installed for preheating of service hot water.	☐	☐	☐
SYSTEM_SPECIFIC	C403.4.6	Mechanical	Hot gas bypass limited to: <=240 kBtu/h - 50% capacity, >240 kBtu/h - 25% capacity	☐	☐	☐
SYSTEM_SPECIFIC	C404.3	Mechanical	Heat traps installed on non-circulating storage water tanks.	☐	☐	☐

SYSTEM_SPECIFIC	C404.3	Mechanical	Heat traps installed on supply and discharge piping of non-circulating systems.	☐	☐	☐
SYSTEM_SPECIFIC	C404.3	Mechanical	Heat traps installed on supply and discharge piping of non-circulating systems.	☐	☐	☐
SYSTEM_SPECIFIC	C404.6.1	Mechanical	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank. System return pipe is a dedicated return pipe or a cold water supply pipe.	☐	☐	☐
SYSTEM_SPECIFIC	C404.6.1, C404.6.2	Mechanical	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	☐	☐	☐
SYSTEM_SPECIFIC	C404.9.1	Mechanical	Pool heaters are equipped with on/off switch and no continuously burning pilot light.	☐	☐	☐
SYSTEM_SPECIFIC	C404.9.2	Mechanical	Time switches are installed on all pool heaters and pumps.	☐	☐	☐
SYSTEM_SPECIFIC	C404.9.2	Mechanical	Time switches are installed on all pool heaters and pumps.	☐	☐	☐
SYSTEM_SPECIFIC	C404.9.3	Mechanical	Vapor retardant pool covers are provided for heated pools and permanently installed spas.	☐	☐	☐
Controls	C405.2.1	Interior Lighting	Lighting controls installed to uniformly reduce the lighting load by at least 50%.	☐	☐	☐
Controls	C405.2.1	Interior Lighting	Occupancy sensors installed in required spaces.	☐	☐	☐
Controls	C405.2.1, C405.2.2.3	Interior Lighting	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	☐	☐	☐
Controls	C405.2.2.1	Interior Lighting	Automatic controls to shut off all building lighting installed in all buildings.	☐	☐	☐
Controls	C405.2.3	Interior Lighting	Daylight zones provided with individual controls that control the lights independent of general area lighting.	☐	☐	☐
Controls	C405.2.3, C405.2.3.1, C405.2.3.2	Interior Lighting	Primary sidelighted areas are equipped with required lighting controls.	☐	☐	☐
Controls	C405.2.3, C405.2.3.1, C405.2.3.3	Interior Lighting	Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls.	☐	☐	☐
Controls	C405.2.4	Interior Lighting	Separate lighting control devices for specific uses installed per approved lighting plans.	☐	☐	☐
Wattage	C405.2.4	Interior Lighting	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐	☐	☐
Controls	C405.2.5	Exterior Lighting	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	☐	☐	☐
Wattage	C405.4.1	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.	☐	☐	☐
Mandatory Additional	C406.4	Project	Enhanced digital lighting controls efficiency package: Interior lighting has following enhanced lighting controls in accordance with Section C405.2.2: Luminaires capable of continuous dimming and being addressed individually, <= 8 luminaires controlled in	☐	☐	☐
Mandatory Additional	C406.6	Project	Dedicate outdoor air system efficiency package: Buildings with hydronic and/or multiple-zone HVAC systems are equipped with an independent ventilation system designed to provide >= 100-percent outdoor air to each individual occupied space, as specified by	☐	☐	☐

Mandatory Additional	C406.7, C406.7.1	Project	Enhanced Service Water Heat System efficiency package. One of the following SWH system enhancements must satisfy 60 percent of hot water requirements, or 100 percent if the building otherwise complies with heat recovery per Section C403.4.5: Waste heat re	☐	☐	☐
HVAC	C408.2.2.1	Mechanical	Air outlets and zone terminal devices have means for air balancing.	☐	☐	☐
HVAC	C408.2.2.1	Mechanical	Air outlets and zone terminal devices have means for air balancing.	☐	☐	☐
Testing	C408.2.3.2	Mechanical	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	☐	☐	☐

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

Post Construction	C303.3, C408.2.5.2	Interior Lighting	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐	☐	☐
Post Construction	C303.3, C408.2.5.3	Mechanical	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐	☐	☐
Fenestration	C402.4.2.2	Envelope	Skylights in office, storage, automotive service, manufacturing, non-refrigerated warehouse, retail store, and distribution/sorting area have a measured haze value > 90 percent unless designed to exclude direct sunlight.	☐	☐	☐
Post Construction	C408.2.1	Mechanical	Commissioning plan developed by registered design professional or approved agency.	☐	☐	☐
Post Construction	C408.2.3.1	Mechanical	HVAC equipment has been tested to ensure proper operation.	☐	☐	☐
Post Construction	C408.2.3.3	Mechanical	Economizers have been tested to ensure proper operation.	☐	☐	☐
Post Construction	C408.2.4	Mechanical	Preliminary commissioning report completed and certified by registered design professional or approved agency.	☐	☐	☐
Post Construction	C408.2.5.1	Mechanical	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐	☐	☐
Post Construction	C408.2.5.1	Interior Lighting	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐	☐	☐
Post Construction	C408.2.5.3	Mechanical	An air and/or hydronic system balancing report is provided for HVAC systems.	☐	☐	☐
Post Construction	C408.2.5.4	Mechanical	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	☐	☐	☐
Post Construction	C408.3	Interior Lighting	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐	☐	☐

EnergyGauge Summit® v6.00

INPUT DATA REPORT

Project Information

Project Name: Morrells

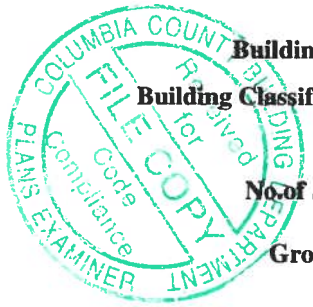
Project Title: Morrells Furniture & Mattresses

Address:

State: FL

Zip: 32025

Owner: Morrells Furniture & Mattresses



Orientation: 0 Deg Clockwise. Walls & Windows will be rotated accordingly

Building Type: Retail

Building Classification: New Finished building

No.of Stories: 1

GrossArea: 5763 SF

Zones

No	Acronym	Description	Type	Area [sf]	Multiplier	Total Area [sf]	
1	Morrells	Zone 1	CONDITIONED	5763.0	1	5763.0	☐

Spaces

No	Acronym	Description	Type	Depth [ft]	Width [ft]	Height [ft]	Multiplier	Total Area [sf]	Total Volume [cf]

In Zone:	**Morrells**									
1	Warehouse	Zo0Sp1	Sales Area	1.00	4616.00	12.00	1	4616.0	55392.0	☐
2	Packaging	Zo0Sp2	Office - Enclosed	1.00	289.00	12.00	1	289.0	3468.0	☐
3	Tinting	Zo0Sp2	Office - Enclosed	1.00	289.00	12.00	1	289.0	3468.0	☐
4	Corridor	Zo0Sp2	Corridor	1.00	94.00	12.00	1	94.0	1128.0	☐
5	Handicap Rest	Zo0Sp2	Toilet and Washroom	1.00	57.00	12.00	1	57.0	684.0	☐
6	Breakroom	Zo0Sp2	Food Service - Leisure Dining	1.00	117.00	12.00	1	117.0	1404.0	☐
7	Conference	Zo0Sp2	Conference/meeting (Multiple Functions)	1.00	301.00	12.00	1	301.0	3612.0	☐

Lighting

	No	Type	Category	No. of Luminaires	Watts per Luminaire	Power [W]	Control Type	No.of Ctrl pts	
In Zone:	**Morrells**								
In Space:	**Warehouse**								
	1	Recessed Fluorescent - No vent	General Lighting	110	64	7040	Occupancy sensor without Daylighting	2	☐
	2	LED	Exit Sign	1	12	12	Security (continuous)	0	☐
	3	LED	General Lighting	6	6	36	Security (continuous)	0	☐
In Space:	**Packaging**								
	1	Recessed Fluorescent - No vent	General Lighting	4	64	256	Occupancy sensor without Daylighting	1	☐
In Space:	**Tinting**								
	1	Recessed Fluorescent - No vent	General Lighting	4	64	256	Occupancy sensor without Daylighting	1	☐
In Space:	**Corridor**								
	1	LED	General Lighting	4	12	48	Occupancy sensor without Daylighting	1	☐
	2	LED	Exit Sign	1	12	12	Security (continuous)	0	☐
In Space:	**Handicap Restroom**								
	1	LED	General Lighting	4	12	48	Occupancy sensor without Daylighting	1	☐

	2	LED	General Lighting	1	6	6	Security (continuous)	0	☐
In Space:	**Breakroom**								
	1	Recessed Fluorescent - No vent	General Lighting	2	64	128	Occupancy sensor without Daylighting	1	☐
In Space:	**Conference**								
	1	Recessed Fluorescent - No vent	General Lighting	5	64	320	Occupancy sensor without Daylighting	1	☐

Walls (Walls will be rotated clockwise by building rotation value)

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]	
In Zone:	**Morrells**											
1	Pr0Zo1Wa1	8"CMU/3/4"ISO BTWN24"oc/5/8 Gyp	100.00	12.00	1	1200.0	East	0.2642	9.696	62.72	3.8	☐
2	Pr0Zo1Wa1	8"CMU/3/4"ISO BTWN24"oc/5/8 Gyp	60.00	12.00	1	720.0	North	0.2642	9.696	62.72	3.8	☐
3	Pr0Zo1Wa1	8"CMU/3/4"ISO BTWN24"oc/5/8 Gyp	100.00	12.00	1	1200.0	West	0.2642	9.696	62.72	3.8	☐

Windows (Windows will be rotated clockwise by building rotation value)

No	Description	Orientation	Shaded	U [Btu/hr sf F]	SHGC	Vis.Tra	W [ft]	H (Effec) [ft]	Multi plier	Total Area [sf]	
In Zone:	**Morrells**										
In Wall:	**West**										
1	Pr0Zo1Wa3Wi1	West	No	1.2500	0.82	0.76	10.00	10.00	2	200.0	☐
2	Pr0Zo1Wa3Wi2	West	No	1.2500	0.82	0.76	3.00	6.67	1	20.0	☐

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: Morrells													
In Wall: East													
	1	Pr0Zo1Wa1Dr1	Solid core flush (2.25)	No	3.00	6.67	1	20.0	0.3504	0.00	0.00	2.85	☐

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: Morrells													
	1	Pr0Zo1Rf1	Mtl Bldg Roof/R-19 Batt	576.30	10.00	1	5763.0	0.00	0.0492	1.34	9.49	20.3	☐

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: Morrells												
	1	Pr0Zo1Fl1	1 ft. soil, concrete floor, carpet and rubber pad	576.30	10.00	1	5763.0	0.2681	34.00	113.33	3.73	☐

Systems

RTU-1 **3 Ton DX System** **Constant Volume Air Cooled Split System < 65000 Btu/hr** **No. Of Units 1**

Component	Category	Capacity	Efficiency	IPLV	
1	Cooling System	34540.00	14.00	8.00	☐
2	Heating System	25598.00	1.00		☐
3	Air Handling System -Supply	1200.00	0.43		☐

RTU-2/3 **5 Ton DX System** **Constant Volume Air Cooled Split System < 65000 Btu/hr** **No. Of Units 2**

Component	Category	Capacity	Efficiency	IPLV	
1	Cooling System	57340.00	14.00	8.00	☐
2	Heating System	25598.00	1.00		☐
3	Air Handling System -Supply	2000.00	0.42		☐

Plant

Equipment	Category	Size	Inst.No	Eff.	IPLV	
						☐

Water Heaters

W-Heater Description	CapacityCap.Unit	I/P Rt.	Efficiency	Loss	
1 Electric water heater	20 [Gal]	2 [kW]	0.9700 [Ef]	[Btu/h]	☐

Ext-Lighting

Description	Category	No. of Luminaires	Watts per Luminaire	Area/Len/No. of units [sf/ft/No]	Control Type	Wattage [W]

1	Ext Light 1	Walk way less than 10 feet wide	5	40	120.00	Astronomical Timer Co	200.00

Piping

No	Type	Operating Temperature [F]	Insulation Conductivity [Btu-in/h.sf.F]	Nomonal pipe Diameter [in]	Insulation Thickness [in]	Is Runout?
1	Domestic and Service Hot Water Systems	110.00	0.28	0.75	1.00	No

Fenestration Used

Name	Glass Type	No. of Panes	Glass Conductance [Btu/h.sf.F]	SHGC	VLT
ASHULSglClrAll Frm	User Defined	1	1.2500	0.8200	0.7600

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 [Btu/lb.F]
187	Matl187	GYP OR PLAS BOARD,1/2IN	No	0.4533	0.0417	0.0920	50.00	0.2000
178	Matl178	CARPET W/RUBBER PAD	Yes	1.2300				
265	Matl265	Soil, 1 ft	No	2.0000	1.0000	0.5000	100.00	0.2000
48	Matl48	6 in. Heavyweight concrete	No	0.5000	0.5000	1.0000	140.00	0.2000
105	Matl105	CONC BLK HW, 8IN, HOLLOW	No	1.1002	0.6667	0.6060	69.00	0.2000
269	Matl269	.75" ISO BTWN24" oc	No	2.2321	0.0625	0.0280	4.19	0.3000
23	Matl23	6 in. Insulation	No	20.0000	0.5000	0.0250	5.70	0.2000
279	Matl279	Solid core flush (2.25")	Yes	2.8537				

94	Matl94	BUILT-UP ROOFING, 3/8IN	No	0.3366	0.0313	0.0930	70.00	0.3500

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]
1014	8"CMU/3/4"ISO BTWN24"oc/5/8 Gyp	No	No	0.26	9.70	62.72	3.8

Layer	Material No.	Material	Thickness [ft]	Framing Factor
1	105	CONC BLK HW, 8IN, HOLLOW	0.6667	0.000
2	269	.75" ISO BTWN24" oc	0.0625	0.000
3	187	GYP OR PLAS BOARD,1/2IN	0.0417	0.000

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

Layer	Material No.	Material	Thickness [ft]	Framing Factor
1	94	BUILT-UP ROOFING, 3/8IN	0.0313	0.000
2	23	6 in. Insulation	0.5000	0.000

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

Layer	Material No.	Material	Thickness [ft]	Framing Factor
1	265	Soil, 1 ft	1.0000	0.000
2	48	6 in. Heavyweight concrete	0.5000	0.000
3	178	CARPET W/RUBBER PAD		0.000

No	Name	Simple Construct	Massless Construct	Conductance [Btu/h.sf.F]	Heat Capacity [Btu/sf.F]	Density [lb/cf]	RValue [h.sf.F/Btu]	
1058	Solid core flush (2.25)	No	Yes	0.35			2.9	☐

Layer	Material No.	Material	Thickness [ft]	Framing Factor	
1	279	Solid core flush (2.25")		0.000	☐

Morrells Furniture and Mattresses

Location	**Lake City FL**
Building owner	**Morrells Furniture and Matresses**
Program user	**Ron Miller**
Company	**Go Green Engineering LLC**
Comments	

By	**Go Green Engineering LLC**
Dataset name	**C:\PROJECTS\GREEN ENGINEERING SOLUTIONS\2019\MORRELL\MORRELL.TRC**

Calculation time	**07:38 PM on 04/13/2019**
TRACE® 700 version	**6.3.4**

Location	**Jacksonville, Florida**	
Latitude	**30.0**	**deg**
Longitude	**81.0**	**deg**
Time Zone	**5**	
Elevation	**24**	**ft**
Barometric pressure	**29.9**	**in. Hg**
Air density	**0.0760**	**lb/cu ft**
Air specific heat	**0.2444**	**Btu/lb·°F**
Density-specific heat product	**1.1144**	**Btu/h·cfm·°F**
Latent heat factor	**4,905.3**	**Btu·min/h·cu ft**
Enthalpy factor	**4.5588**	**lb·min/hr·cu ft**
Summer design dry bulb	**97.3**	**°F**
Summer design wet bulb	**76.5**	**°F**
Winter design dry bulb	**32.0**	**°F**
Summer clearness number	**0.95**	
Winter clearness number	**0.95**	
Summer ground reflectance	**0.20**	
Winter ground reflectance	**0.20**	
Carbon Dioxide Level	**400**	**ppm**
Design simulation period	**January - December**	
Cooling load methodology	**TETD-TA1**	
Heating load methodology	**UATD**	

System Checksums

By Go Green Engineering LLC

AHU-1 — **Constant Volume**

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 7 / 16
Outside Air: OADB/WB/HR: 94 / 77 / 117

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	4,873	4,873	13
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	0	0	0	0
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0.00	0.00	0.00	0.00
Infiltration	0		0	0
Sub Total ==>	0	4,873	4,873	13
Internal Loads				
Lights	7,829	1,957	9,787	26
People	10,000	0	10,000	26
Misc	6,799	0	6,799	18
Sub Total ==>	24,628	1,957	26,585	70
Ceiling Load	1,896	-1,896	0	0
Ventilation Load	0	0	6,738	18
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		0	0	0
Sup. Fan Heat			0	0
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	26,524	4,935	38,196	100.00

CLG SPACE PEAK

Mo/Hr: 6 / 16
OADB: 97

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	0	0
Partition/Door	0	0
Floor	0.00	0
Adjacent Floor	0.00	0.00
Infiltration	0	0
Sub Total ==>	0	0
Internal Loads		
Lights	7,829	36
People	5,000	23
Misc	6,799	32
Sub Total ==>	19,628	91
Ceiling Load	1,948	9
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Exhaust Heat		
OA Preheat Diff.		
RA Preheat Diff.		
Additional Reheat		
Underflr Sup Ht Pkup		
Supply Air Leakage		
Grand Total ==>	21,576	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 32

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-1,961	28.01
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	0	0	0.00
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0.00	0.00	0.00
Infiltration	0	0	0.00
Sub Total ==>	0	-1,961	28.01
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-544	0	0.00
Ventilation Load	0	-5,039	71.99
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		0	0.00
RA Preheat Diff.		0	0.00
Additional Reheat		0	0.00
Underflr Sup Ht Pkup		0	0.00
Supply Air Leakage		0	0.00
Grand Total ==>	-544	-7,000	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.0	70.5
Ra Plenum	80.2	68.5
Return	80.2	68.5
Ret/OA	81.9	64.0
Fn MtrTD	0.0	0.0
Fn BldTD	0.0	0.0
Fn Frict	0.0	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	968	968
Terminal	968	968
Main Fan	968	968
Sec Fan	0	0
Nom Vent	119	119
AHU Vent	119	119
Infil	0	0
MinStop/Rh	0	0
Return	849	849
Exhaust	0	0
Rm Exh	119	119
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	12.3	12.3
cfm/ft²	0.84	0.84
cfm/ton	304.15	
ft²/ton	360.35	
Btu/hr·ft²	33.30	-6.10
No. People	20	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	3.2	38.2	28.9	968	81.9	66.2	71.6	55.0	53.3	58.1
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	3.2	38.2								

AREAS

	Gross Total ft²	Glass ft²	Glass (%)
Floor	1,147		
Part	0		
Int Door	0		
ExFlr	0		
Roof	1,147	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-7.0	968	64.0	70.5
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-7.0			

Project Name: Morrells Furniture and Mattresses
Dataset Name: MORRELL.TRC

System Checksums

By Go Green Engineering LLC

AHU-2/3 — **Constant Volume**

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 16
Outside Air: OADB/WB/HR: 97 / 77 / 106

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	20,355	20,355	20
Glass Solar	254	0	254	0
Glass/Door Cond	1,065	0	1,065	1
Wall Cond	6,285	1,534	7,818	8
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0.00	0.00	0.00	0.00
Infiltration	0		0	0
Sub Total ==>	7,603	21,889	29,492	29
Internal Loads				
Lights	31,509	7,877	39,386	38
People	3,000	0	3,000	3
Misc	31,509	0	31,509	30
Sub Total ==>	66,018	7,877	73,895	71
Ceiling Load	7,957	-7,957	0	0
Ventilation Load	0	0	0	0
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		0	0	0
Sup. Fan Heat			0	0
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	81,578	21,810	103,387	100.00

CLG SPACE PEAK

Mo/Hr: 6 / 17
OADB: 96

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	209	0
Glass/Door Cond	1,027	1
Wall Cond	6,758	8
Partition/Door	0	0
Floor	0.00	0
Adjacent Floor	0.00	0.00
Infiltration	0	0
Sub Total ==>	7,994	10
Internal Loads		
Lights	31,509	39
People	1,500	2
Misc	31,509	39
Sub Total ==>	64,518	80
Ceiling Load	7,668	10
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	80,181	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 32

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-7,852	48.51
Glass Solar	0	0	0.00
Glass/Door Cond	-1,814	-1,814	11.21
Wall Cond	-5,157	-6,520	40.28
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0.00	0.00	0.00
Infiltration	0	0	0.00
Sub Total ==>	-6,971	-16,186	100.00
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-2,463	0	0.00
Ventilation Load	0	0	0.00
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		0	0.00
RA Preheat Diff.		0	0.00
Additional Reheat		0	0.00
Underflr Sup Ht Pkup		0	0.00
Supply Air Leakage		0	0.00
Grand Total ==>	-9,435	-16,186	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.0	72.4
Ra Plenum	80.4	68.3
Return	80.4	68.3
Ret/OA	80.4	68.3
Fn MtrTD	0.0	0.0
Fn BldTD	0.0	0.0
Fn Frict	0.0	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	3,598	3,598
Terminal	3,598	3,598
Main Fan	3,598	3,598
Sec Fan	0	0
Nom Vent	0	0
AHU Vent	0	0
Infil	0	0
MinStop/Rh	0	0
Return	3,598	3,598
Exhaust	0	0
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	0.0	0.0
cfm/ft²	0.78	0.78
cfm/ton	417.57	
ft²/ton	535.77	
Btu/hr·ft²	22.40	-3.51
No. People	6	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	8.6	103.4	101.9	3,598	80.4	61.3	50.4	55.0	51.1	49.6
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	8.6	103.4								

AREAS

	Gross Total ft²	Glass ft²	Glass (%)
Floor	4,616		
Part	0		
Int Door	0		
ExFlr	0		
Roof	4,616	0	0
Wall	2,664	20	1
Ext Door	200	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-16.2	3,598	68.3	72.4
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-16.2			

Project Name: Morrells Furniture and Mattresses
Dataset Name: MORRELL.TRC

Room Checksums

By Go Green Engineering LLC

Breakroom

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 7 / 16
Outside Air: OADB/WB/HR: 94 / 77 / 117

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	496	496	14
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	0	0	0	0
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0.00	0.00	0.00	0.00
Infiltration	0		0	0
Sub Total ==>	0	496	496	14
Internal Loads				
Lights	799	200	998	28
People	500	0	500	14
Misc	799	0	799	23
Sub Total ==>	2,097	200	2,297	65
Ceiling Load	193	-193	0	0
Ventilation Load	0	0	714	20
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		0	0	0
Sup. Fan Heat			0	0
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	2,290	503	3,507	100.00

CLG SPACE PEAK

Mo/Hr: 6 / 16
OADB: 97

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	0	0
Partition/Door	0	0
Floor	0.00	0
Adjacent Floor	0.00	0.00
Infiltration	0	0
Sub Total ==>	0	0
Internal Loads		
Lights	799	39
People	250	12
Misc	799	39
Sub Total ==>	1,847	90
Ceiling Load	199	10
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	2,046	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 32

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-200	28.71
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	0	0	0.00
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0.00	0.00	0.00
Infiltration	0	0	0.00
Sub Total ==>	0	-200	28.71
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-56	0	0.00
Ventilation Load	0	-508	72.92
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		0	0.00
RA Preheat Diff.		0	0.00
Additional Reheat		0	0.00
System Plenum Heat		11	-1.63
Underflr Sup Ht Pkup		0	0.00
Supply Air Leakage		0	0.00
Grand Total ==>	-56	-697	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.0	70.5
Ra Plenum	80.2	68.5
Return	80.2	68.5
Ret/OA	82.0	63.7
Fn MtrTD	0.0	0.0
Fn BldTD	0.0	0.0
Fn Frict	0.0	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	92	92
Terminal	92	92
Main Fan	92	92
Sec Fan	0	0
Nom Vent	12	12
AHU Vent	12	12
Infil	0	0
MinStop/Rh	0	0
Return	80	80
Exhaust	0	0
Rm Exh	12	12
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	13.1	13.1
cfm/ft²	0.78	0.78
cfm/ton	314.11	
ft²/ton	400.32	
Btu/hr·ft²	29.98	-5.96
No. People	1.0	8.5/1000 ft²

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.3	3.5	2.8	92	82.0	65.7	68.6	55.0	53.1	57.1
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.3	3.5								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	117		
Part	0		
Int Door	0		
ExFlr	0		
Roof	117	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.7	92	63.7	70.5
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-0.7			

Room Checksums

By Go Green Engineering LLC

Corridor

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 7 / 16
Outside Air: OADB/WB/HR: 94 / 77 / 117

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	399	399	25
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	0	0	0	0
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0.00	0.00	0.00	0.00
Infiltration	0		0	0
Sub Total ==>	0	399	399	25
Internal Loads				
Lights	642	160	802	51
People	0	0	0	0
Misc	0	0	0	0
Sub Total ==>	642	160	802	51
Ceiling Load	155	-155	0	0
Ventilation Load	0	0	375	24
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		0	0	0
Sup. Fan Heat			0	0
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	797	404	1,576	100.00

CLG SPACE PEAK

Mo/Hr: 6 / 16
OADB: 97

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	0	0
Partition/Door	0	0
Floor	0.00	0
Adjacent Floor	0.00	0.00
Infiltration	0	0
Sub Total ==>	0	0
Internal Loads		
Lights	642	80
People	0	0
Misc	0	0
Sub Total ==>	642	80
Ceiling Load	160	20
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Dehumid. Ov Sizing		
Ov/Undr Sizing	0	0
Exhaust Heat		
Sup. Fan Heat		
Ret. Fan Heat		
Duct Heat Pkup		
Underflr Sup Ht Pkup		
Supply Air Leakage		
Grand Total ==>	801	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 32

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-161	46.09
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	0	0	0.00
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0.00	0.00	0.00
Infiltration	0	0	0.00
Sub Total ==>	0	-161	46.09
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-45	0	0.00
Ventilation Load	0	-254	72.87
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		0	0.00
RA Preheat Diff.		0	0.00
Additional Reheat		0	0.00
System Plenum Heat		66	-18.97
Underflr Sup Ht Pkup		0	0.00
Supply Air Leakage		0	0.00
Grand Total ==>	-45	-349	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.0	71.1
Ra Plenum	80.2	68.5
Return	80.2	68.5
Ret/OA	82.4	62.4
Fn MtrTD	0.0	0.0
Fn BldTD	0.0	0.0
Fn Frict	0.0	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	36	36
Terminal	36	36
Main Fan	36	36
Sec Fan	0	0
Nom Vent	6	6
AHU Vent	6	6
Infil	0	0
MinStop/Rh	0	0
Return	30	30
Exhaust	0	0
Rm Exh	6	6
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	16.7	16.7
cfm/ft²	0.38	0.38
cfm/ton	273.82	
ft²/ton	715.87	
Btu/hr·ft²	16.76	-3.71
No. People	0.0	0.0/1000 ft²

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.1	1.6	1.3	36	82.4	65.5	67.1	55.0	50.7	48.3
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.1	1.6								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	94		
Part	0		
Int Door	0		
ExFlr	0		
Roof	94	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.4	36	62.4	71.1
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-0.4			

Room Checksums

By Go Green Engineering LLC

Handicap Restroom

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 16
Outside Air: OADB/WB/HR: 97 / 77 / 106

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	252	252	34
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	0	0	0	0
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0.00	0.00	0.00	0.00
Infiltration	0		0	0
Sub Total ==>	0	252	252	34
Internal Loads				
Lights	389	97	486	66
People	0	0	0	0
Misc	0	0	0	0
Sub Total ==>	389	97	486	66
Ceiling Load	97	-97	0	0
Ventilation Load	0	0	0	0
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		0	0	0
Sup. Fan Heat			0	0
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	486	252	738	100.00

CLG SPACE PEAK

Mo/Hr: 6 / 16
OADB: 97

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	0	0
Partition/Door	0	0
Floor	0.00	0
Adjacent Floor	0.00	0.00
Infiltration	0	0
Sub Total ==>	0	0
Internal Loads		
Lights	389	80
People	0	0
Misc	0	0
Sub Total ==>	389	80
Ceiling Load	97	20
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	486	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 32

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-97	153.66
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	0	0	0.00
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0.00	0.00	0.00
Infiltration	0	0	0.00
Sub Total ==>	0	-97	153.66
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-27	0	0.00
Ventilation Load	0	0	0.00
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		0	0.00
RA Preheat Diff.		0	0.00
Additional Reheat		0	0.00
System Plenum Heat		34	-53.66
Underflr Sup Ht Pkup		0	0.00
Supply Air Leakage		0	0.00
Grand Total ==>	-27	-63	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.0	71.1
Ra Plenum	80.4	68.5
Return	80.4	68.5
Ret/OA	80.4	68.5
Fn MtrTD	0.0	0.0
Fn BldTD	0.0	0.0
Fn Frict	0.0	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	22	22
Terminal	22	22
Main Fan	22	22
Sec Fan	0	0
Nom Vent	0	0
AHU Vent	0	0
Infil	0	0
MinStop/Rh	0	0
Return	22	22
Exhaust	0	0
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	0.0	0.0
cfm/ft²	0.38	0.38
cfm/ton	354.56	
ft²/ton	926.90	
Btu/hr·ft²	12.95	-1.11
No. People	0.0	0.0/1000 ft²

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.1	0.7	0.7	22	80.4	59.0	40.6	55.0	46.2	32.4
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.1	0.7								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	57		
Part	0		
Int Door	0		
ExFlr	0		
Roof	57	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-0.1	22	68.5	71.1
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-0.1			

Room Checksums

By Go Green Engineering LLC

Packaging

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 7 / 16
Outside Air: OADB/WB/HR: 94 / 77 / 117

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	1,225	1,225	15
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	0	0	0	0
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0.00	0.00	0.00	0.00
Infiltration	0		0	0
Sub Total ==>	0	1,225	1,225	15
Internal Loads				
Lights	1,973	493	2,466	30
People	1,000	0	1,000	12
Misc	1,973	0	1,973	24
Sub Total ==>	4,945	493	5,439	65
Ceiling Load	477	-477	0	0
Ventilation Load	0	0	1,683	20
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		0	0	0
Sup. Fan Heat			0	0
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	5,422	1,242	8,347	100.00

CLG SPACE PEAK

Mo/Hr: 6 / 16
OADB: 97

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	0	0
Partition/Door	0	0
Floor	0.00	0
Adjacent Floor	0.00	0.00
Infiltration	0	0
Sub Total ==>	0	0
Internal Loads		
Lights	1,973	40
People	500	10
Misc	1,973	40
Sub Total ==>	4,445	90
Ceiling Load	491	10
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Dehumid. Ov Sizing		
Ov/Undr Sizing	0	0
Exhaust Heat		
Sup. Fan Heat		
Ret. Fan Heat		
Duct Heat Pkup		
Underflr Sup Ht Pkup		
Supply Air Leakage		
Grand Total ==>	4,936	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 32

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-494	30.03
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	0	0	0.00
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0.00	0.00	0.00
Infiltration	0	0	0.00
Sub Total ==>	0	-494	30.03
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-137	0	0.00
Ventilation Load	0	-1,186	72.05
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		0	0.00
RA Preheat Diff.		0	0.00
Additional Reheat		0	0.00
System Plenum Heat		34	-2.07
Underflr Sup Ht Pkup		0	0.00
Supply Air Leakage		0	0.00
Grand Total ==>	-137	-1,646	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.0	70.6
Ra Plenum	80.2	68.5
Return	80.2	68.5
Ret/OA	81.9	63.9
Fn MtrTD	0.0	0.0
Fn BldTD	0.0	0.0
Fn Frict	0.0	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	221	221
Terminal	221	221
Main Fan	221	221
Sec Fan	0	0
Nom Vent	28	28
AHU Vent	28	28
Infil	0	0
MinStop/Rh	0	0
Return	193	193
Exhaust	0	0
Rm Exh	28	28
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	12.6	12.6
cfm/ft²	0.77	0.77
cfm/ton	318.40	
ft²/ton	415.46	
Btu/hr·ft²	28.88	-5.69
No. People	2.0	6.9/1000 ft²

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.7	8.4	6.7	221	81.9	65.4	67.6	55.0	53.0	56.7
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.7	8.4								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	289		
Part	0		
Int Door	0		
ExFlr	0		
Roof	289	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-1.7	221	63.9	70.6
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-1.7			

Room Checksums

By Go Green Engineering LLC

Tinting

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 7 / 16
Outside Air: OADB/WB/HR: 94 / 77 / 117

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	1,225	1,225	15
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	0	0	0	0
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0.00	0.00	0.00	0.00
Infiltration	0		0	0
Sub Total ==>	0	1,225	1,225	15
Internal Loads				
Lights	1,973	493	2,466	30
People	1,000	0	1,000	12
Misc	1,973	0	1,973	24
Sub Total ==>	4,945	493	5,439	65
Ceiling Load	477	-477	0	0
Ventilation Load	0	0	1,683	20
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		0	0	0
Sup. Fan Heat			0	0
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	5,422	1,242	8,347	100.00

CLG SPACE PEAK

Mo/Hr: 6 / 16
OADB: 97

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	0	0
Partition/Door	0	0
Floor	0.00	0
Adjacent Floor	0.00	0.00
Infiltration	0	0
Sub Total ==>	0	0
Internal Loads		
Lights	1,973	40
People	500	10
Misc	1,973	40
Sub Total ==>	4,445	90
Ceiling Load	491	10
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing	0	0
Grand Total ==>	4,936	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 32

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-494	30.03
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	0	0	0.00
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0.00	0.00	0.00
Infiltration	0	0	0.00
Sub Total ==>	0	-494	30.03
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-137	0	0.00
Ventilation Load	0	-1,186	72.05
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		0	0.00
RA Preheat Diff.		0	0.00
Additional Reheat		0	0.00
System Plenum Heat		34	-2.07
Underflr Sup Ht Pkup		0	0.00
Supply Air Leakage		0	0.00
Grand Total ==>	-137	-1,646	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.0	70.6
Ra Plenum	80.2	68.5
Return	80.2	68.5
Ret/OA	81.9	63.9
Fn MtrTD	0.0	0.0
Fn BldTD	0.0	0.0
Fn Frict	0.0	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	221	221
Terminal	221	221
Main Fan	221	221
Sec Fan	0	0
Nom Vent	28	28
AHU Vent	28	28
Infil	0	0
MinStop/Rh	0	0
Return	193	193
Exhaust	0	0
Rm Exh	28	28
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	12.6	12.6
cfm/ft²	0.77	0.77
cfm/ton	318.40	
ft²/ton	415.46	
Btu/hr·ft²	28.88	-5.69
No. People	2.0	6.9/1000 ft²

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	0.7	8.4	6.7	221	81.9	65.4	67.6	55.0	53.0	56.7
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.7	8.4								

AREAS

	Gross Total ft²	Glass ft²	Glass (%)
Floor	289		
Part	0		
Int Door	0		
ExFlr	0		
Roof	289	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-1.7	221	63.9	70.6
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-1.7			

Room Checksums

By Go Green Engineering LLC

Warehouse

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 6 / 16
Outside Air: OADB/WB/HR: 97 / 77 / 106

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	20,355	20,355	20
Glass Solar	254	0	254	0
Glass/Door Cond	1,065	0	1,065	1
Wall Cond	6,285	1,534	7,818	8
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0.00	0.00	0.00	0.00
Infiltration	0		0	0
Sub Total ==>	7,603	21,889	29,492	29
Internal Loads				
Lights	31,509	7,877	39,386	38
People	3,000	0	3,000	3
Misc	31,509	0	31,509	30
Sub Total ==>	66,018	7,877	73,895	71
Ceiling Load	7,957	-7,957	0	0
Ventilation Load	0	0	0	0
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		0	0	0
Sup. Fan Heat			0	0
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	81,578	21,810	103,387	100.00

CLG SPACE PEAK

Mo/Hr: 6 / 17
OADB: 96

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	209	0
Glass/Door Cond	1,027	1
Wall Cond	6,758	8
Partition/Door	0	0
Floor	0.00	0
Adjacent Floor	0.00	0.00
Infiltration	0	0
Sub Total ==>	7,994	10
Internal Loads		
Lights	31,509	39
People	1,500	2
Misc	31,509	39
Sub Total ==>	64,518	80
Ceiling Load	7,668	10
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Dehumid. Ov Sizing		
Ov/Undr Sizing	0	0
Exhaust Heat		
Sup. Fan Heat		
Ret. Fan Heat		
Duct Heat Pkup		
Underflr Sup Ht Pkup		
Supply Air Leakage		
Grand Total ==>	80,181	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 32

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-7,852	48.51
Glass Solar	0	0	0.00
Glass/Door Cond	-1,814	-1,814	11.21
Wall Cond	-5,157	-6,520	40.28
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0.00	0.00	0.00
Infiltration	0	0	0.00
Sub Total ==>	-6,971	-16,186	100.00
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-2,463	0	0.00
Ventilation Load	0	0	0.00
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		0	0.00
RA Preheat Diff.		0	0.00
Additional Reheat		0	0.00
System Plenum Heat		0	0.00
Underflr Sup Ht Pkup		0	0.00
Supply Air Leakage		0	0.00
Grand Total ==>	-9,435	-16,186	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.0	72.4
Ra Plenum	80.4	68.3
Return	80.4	68.3
Ret/OA	80.4	68.3
Fn MtrTD	0.0	0.0
Fn BldTD	0.0	0.0
Fn Frict	0.0	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	3,598	3,598
Terminal	3,598	3,598
Main Fan	3,598	3,598
Sec Fan	0	0
Nom Vent	0	0
AHU Vent	0	0
Infil	0	0
MinStop/Rh	0	0
Return	3,598	3,598
Exhaust	0	0
Rm Exh	0	0
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	0.0	0.0
cfm/ft²	0.78	0.78
cfm/ton	417.57	
ft²/ton	535.77	
Btu/hr·ft²	22.40	-3.51
No. People	6.0	1.3/1000 ft²

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter gr/lb	Leave DB °F	Leave WB °F	Leave gr/lb
Main Clg	8.6	103.4	101.9	3,598	80.4	61.3	50.4	55.0	51.1	49.6
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	8.6	103.4								

AREAS

	Gross Total ft²	Glass ft²	Glass (%)
Floor	4,616		
Part	0		
Int Door	0		
ExFlr	0		
Roof	4,616	0	0
Wall	2,664	20	1
Ext Door	200	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-16.2	3,598	68.3	72.4
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-16.2			

Room Checksums

By Go Green Engineering LLC

X

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 7 / 16
Outside Air: OADB/WB/HR: 94 / 77 / 117

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	1,276	1,276	8
Glass Solar	0	0	0	0
Glass/Door Cond	0	0	0	0
Wall Cond	0	0	0	0
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0.00	0.00	0.00	0.00
Infiltration	0		0	0
Sub Total ==>	0	1,276	1,276	8
Internal Loads				
Lights	2,055	514	2,568	16
People	7,500	0	7,500	48
Misc	2,055	0	2,055	13
Sub Total ==>	11,609	514	12,123	77
Ceiling Load	497	-497	0	0
Ventilation Load	0	0	2,282	15
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		0	0	0
Sup. Fan Heat			0	0
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	12,106	1,293	15,681	100.00

CLG SPACE PEAK

Mo/Hr: 6 / 16
OADB: 97

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	0	0
Glass/Door Cond	0	0
Wall Cond	0	0
Partition/Door	0	0
Floor	0.00	0
Adjacent Floor	0.00	0.00
Infiltration	0	0
Sub Total ==>	0	0
Internal Loads		
Lights	2,055	25
People	3,750	45
Misc	2,055	25
Sub Total ==>	7,859	94
Ceiling Load	511	6
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Exhaust Heat	0	0
Grand Total ==>	8,370	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 32

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-515	19.79
Glass Solar	0	0	0.00
Glass/Door Cond	0	0	0.00
Wall Cond	0	0	0.00
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0.00	0.00	0.00
Infiltration	0	0	0.00
Sub Total ==>	0	-515	19.79
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-143	0	0.00
Ventilation Load	0	-1,906	73.29
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		0	0.00
OA Preheat Diff.		0	0.00
RA Preheat Diff.		0	0.00
Additional Reheat		0	0.00
System Plenum Heat		-180	6.92
Underflr Sup Ht Pkup		0	0.00
Supply Air Leakage		0	0.00
Grand Total ==>	-143	-2,600	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.0	70.3
Ra Plenum	80.2	68.5
Return	80.2	68.5
Ret/OA	81.8	64.1
Fn MtrTD	0.0	0.0
Fn BldTD	0.0	0.0
Fn Frict	0.0	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	376	376
Terminal	376	376
Main Fan	376	376
Sec Fan	0	0
Nom Vent	45	45
AHU Vent	45	45
Infil	0	0
MinStop/Rh	0	0
Return	331	331
Exhaust	0	0
Rm Exh	45	45
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	12.0	12.0
cfm/ft²	1.25	1.25
cfm/ton	287.42	
ft²/ton	230.35	
Btu/hr·ft²	52.10	-8.64
No. People	15.0	49.8/1000 ft²

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter gr/lb	Leave DB °F	Leave WB °F	Leave gr/lb
Main Clg	1.3	15.7	10.6	376	81.8	67.7	79.1	55.0	54.4	62.4
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	1.3	15.7								

AREAS

	Gross Total ft²	Glass ft²	Glass (%)
Floor	301		
Part	0		
Int Door	0		
ExFlr	0		
Roof	301	0	0
Wall	0	0	0
Ext Door	0	0	0

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-2.6	376	64.1	70.3
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-2.6			

Project Name: Morrells Furniture and Mattresses
Dataset Name: MORRELL.TRC