## Florida Energy Efficiency Code For Building Construction

EnergyGauge Summit® Fla/Com-2010, Effective Date: March 15, 2012 -- Form 506-2010 Total Building Performance Method for Commercial Buildings

### PROJECT SUMMARY

Short Desc: Retail

Owner: Matress Firm

Jurisdiction: LAKE CITY, COLUMBIA COUNTY, FL (221200)

Address1: Lake City Place

Address2:

Type: Retail

Conditioned Area: 4347 SF

No of Stories: 1

Permit No:

Description: Lake City retail

City: Lake City

State: Florida

Zip: 32055

Class: New Finished building

Conditioned & UnConditioned Area: 4347 SF

Area entered from Plans 4347 SF

Max Tonnage 8.5

If different, write in:

- LOAD CALL ATTACHED.



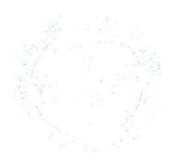


Engineering Business No. 9204

| Compliance                                   | Summary |          |              |
|--|---------|----------|--------------|
| Component                                    | Design  | Criteria | Result       |
| Gross Energy Cost (in \$)                    | 5,673.0 | 5,701.0  | PASSED       |
| LIGHTING CONTROLS                            |         |          | PASSES       |
| EXTERNAL LIGHTING                            |         |          | None Entered |
| HVAC SYSTEM                                  |         |          | PASSES       |
| PLANT  |         |          | None Entered |
| WATER HEATING SYSTEMS                        |         |          | PASSES       |
| PIPING SYSTEMS                               |         |          | None Entered |
| 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   |           | u u                       |
|--|-----------|---------------------------|
| I hereby certify that the plans and/specifications covered by this calculation Florida Energy Code  Prepared By: Garland Patterson, PE-#14175 Building |           |                           |
| Date: 1/28/14  | Date:     |                           |
| I certify that this building is in compliance with the FLorida Energy Efficience   | y Code    |                           |
| Owner Agent:   | Date:     |                           |
| If Required by Florida law, I hereby certify (*) that the system design is in c Efficiency Code  | ompliand  | e with the Florida Energy |
| Architect: Joseph Oliveri  | Reg No:   | 0002921                   |
| Electrical Designer: William Ritola  | Reg No:   | 59480                     |
| Lighting Designer: William Ritola  | Reg No:   | 59480                     |
| Mechanical Designer: Garland Patterson   | Reg No:   | 14175                     |
| Plumbing Designer: Garland Patterson   | Reg No:   | 14175                     |
| (*) Signature is required where Florida Law requires design to be perform professionals.   | ed by reg | istered design            |

Project: Retail Title: Lake City retail

Type: Retail

(WEA File: FL\_JACKSONVILLE\_INTL\_ARPT.tm3)

| Building | End | Uses |
|----------|-----|------|
|----------|-----|------|

|                          | 1) Proposed | 2) Baseline |
|--------------------------|-------------|-------------|
|                          | 370.10      | 462.40      |
|                          | \$5,673     | \$7,127     |
| ELECTRICITY(MBtu/kWh/\$) | 370.10      | 462.40      |
|                          | 108469      | 135485      |
|                          | \$5,673     | \$7,127     |
| AREA LIGHTS              | 128.40      | 136.20      |
|                          | 37621       | 39921       |
|                          | \$1,968     | \$2,100     |
| MISC EQUIPMT             | 63.60       | 63.60       |
|                          | 18642       | 18642       |
|                          | \$975       | \$981       |
| PUMPS & MISC             | 0.00        | 0.10        |
|                          | 3           | 21          |
|                          | \$0         | \$1         |
| SPACE COOL               | 134.60      | 138.60      |
|                          | 39451       | 40603       |
|                          | \$2,063     | \$2,136     |
| SPACE HEAT               | 0.40        | 11.30       |
|                          | 113         | 3312        |
|                          | \$6         | \$174       |
| VENT FANS                | 43.10       | 112.60      |
|                          | 12639       | 32986       |
|                          | \$661       | \$1,735     |

Passing Criteria = 5701

Design (including any credits) = 5673

Passing requires Proposed Building cost to be at most 80% of

Baseline cost. This Proposed Building is at 79.6%

EnergyGauge Summit® Fla/Com-2010. Section 506.4 Compliant Software. Effective Date: March 15, 2012

1/28/2014

|             | Exter    | nal Lighting Compliance   |
|-------------|----------|---|
| Description | Category | Tradable? Allowance Area or Length ELPA (W/Unit) or No. of Units (W) (Sqft or ft) |
| 0 = 0 = ad  |          | None  |

Project: Retail

Title: Lake City retail Type: Retail

(WEA File: FL\_JACKSONVILLE\_INTL\_ARPT.tm3)

|           | Lighting Cont         | rols Compliance |              |           |                 |
|-----------|-----------------------|-----------------|--------------|-----------|-----------------|
| Acronym   | Ashrae Description ID | Area<br>(sq.ft) | Design<br>CP | Min<br>CP | Compli-<br>ance |
| Pr0Zo1Sp1 | 25,001 Sales Area     | 4,347           | 4            | 2         | PASSES          |
| 059L X    | Proceedings and and   |                 | PAS          | SES       |                 |

Project: Retail

Title: Lake City retail

Type: Retail

(WEA File: FL\_JACKSONVILLE\_INTL\_ARPT.tm3)

# **System Report Compliance**

Pr0Sy1

System 1

Constant Volume Packaged

No. of Units

System

| Component                     | Category                                  | Capacity | Design<br>Eff | Eff<br>Criteria | Design<br>IPLV | IPLV<br>Criteria | Comp-<br>liance |
|-------------------------------|---|----------|---------------|-----------------|----------------|------------------|-----------------|
| Cooling System                | Air Conditioners Air Cooled               |          | 11.30         | 11.20           | 11.40          | 11.40            | PASSES          |
|                               | 65000 to 135000 Btu/h                     |          |               |                 |                |                  |                 |
| Heating System                | Cooling Capacity Electric Furnace         |          | 1.00          | 1.00            |                |                  | PASSES          |
| Heating System                | 2   |          | 0.30          | 0.82            |                |                  | PASSES          |
| Air Handling                  | Air Handler (Supply) -<br>Constant Volume |          | 0.50          | 0.02            |                |                  | 1110000         |
| System -Supply                |   |          | 0.30          | 0.82            |                |                  | PASSES          |
| Air Handling                  | Air Handler (Return) -                    |          | 0.50          | 0.02            |                |                  | INDODE          |
| System - Return               | Constant Volume                           |          | 6.00          | 4.20            |                |                  | PASSES          |
| Air Distribution              | ADS System (Sup)                          |          | 0.00          | 4.20            |                |                  | 1110000         |
| System (Sup) Air Distribution | ADS System (Ret)                          |          | 6.00          |                 |                |                  | PASSES          |
| System (Ret)                  | ADS System (Ret)                          |          | 5.00          |                 |                |                  |                 |

Pr0Sy2

System 2

Constant Volume Packaged

No. of Units

System

| Component                                  | Category   | Capacity | Design<br>Eff | Eff<br>Criteria | Design<br>IPLV | IPLV<br>Criteria | Comp-<br>liance |
|--|--|----------|---------------|-----------------|----------------|------------------|-----------------|
| Cooling System                             | Air Conditioners Air Cooled<br>65000 to 135000 Btu/h<br>Cooling Capacity |          | 11.30         | 11.20           | 11.40          | 11.40            | PASSES          |
| Heating System                             | Electric Furnace   |          | 1.00          | 1.00            |                |                  | PASSES          |
| Air Handling                               | Air Handler (Supply) -<br>Constant Volume                                |          | 0.30          | 0.82            |                |                  | PASSES          |
| System -Supply<br>Air Handling             | Air Handler (Return) -   |          | 0.30          | 0.82            |                |                  | PASSES          |
| System - Return<br>Air Distribution        | Constant Volume<br>ADS System (Sup)                                      |          | 6.00          | 4.20            |                |                  | PASSES          |
| System (Sup) Air Distribution System (Ret) | ADS System (Ret)   |          | 6.00          |                 |                |                  | PASSES          |

PASSES

|   |                       | Plant Comp                | liance                  |                        |                         |         |
|---|-----------------------|---------------------------|-------------------------|------------------------|-------------------------|---------|
| Description   | Installed Size<br>No  | Design Min<br>Eff Eff     | Design Min<br>IPLV IPLV | Category               |                         | Comp    |
| re get dige   |                       |                           | 7 ·                     |                        | None                    |         |
| Project: Retail Title: Lake City retail Type: Retail (WEA File: FL_JACE | SONVILLE_INTL         | ARPT.tm3)<br>ter Heater C | ompliance               |                        |                         |         |
| Description   | Туре                  | Category                  | Design N                | Min Design<br>Eff Loss | Max Comp<br>Loss liance |         |
| Water Heater 1  | Electric water heater | <= 12 [kW]                | 0.95                    | 0.94                   | PASSES                  |         |
| , i   |                       |                           |                         |                        | PASSES                  |         |
|   |                       | Piping Sy                 | stem Complia            | ince                   |                         |         |
| Category  |                       | e Dia Is (                | perating Ins Con-       | d Ins                  | Req Ins Com             | pliance |

None

Project: Retail

Title: Lake City retail

Type: Retail

(WEA File: FL\_JACKSONVILLE\_INTL\_ARPT.tm3)

### Other Required Compliance

| Category               | Section                             | Requirement (write N/A in box if not applicable)   | Check     |
|------------------------|-------------------------------------|--|-----------|
| Report                 | 506.4.2                             | Input Report Print-Out from EnergyGauge FlaCom attached  | V,        |
| Operations Manual      | 303.3.1,<br>503.2.9.3,<br>505.7.4.2 | Operations manual provided to owner  | 回         |
| Windows & Doors        | 502.3.2                             | Glazed swinging entrance & revolving doors: max. 1.0 cfm/ft <sup>2</sup> ; all other products: 0.3 cfm/ft <sup>2</sup>   | 回         |
| Joints/Cracks          | 502.3.3                             | To be caulked, gasketed, weather-stripped or otherwise sealed  |           |
| Dropped Ceiling Cavity | 502.3                               | Vented: seal & insulated ceiling. Unvented seal & insulate roof & side walls   |           |
| HVAC Efficiency        | 503.2.3                             | Minimum efficiencies: Tables 503.2.3(1)-(8)  | $\square$ |
| HVAC Controls          | 503.2.4                             | Zone controls prevent reheat (exceptions); separate thermostatic control per zone;   | Ø,        |
| Ventilation            | 503.2.5                             | Outdoor air supply & exhaust ducts shall have dampers that automatically shut when systems or spaces served are not in use. Exhaust air energy recovery required for cooling systems (Exceptions). | g         |
| ADS                    | 503.2.7.5                           | Duct sizing and Design have been performed   | 7         |
| HVAC Ducts             | 503.2.7                             | Air ducts, fittings, mechanical equipment & plenum chambers shall<br>be mechanically attached, sealed, insulated & installed per Table<br>503.2.7.2. Fan power limitations.                        |           |
| Balancing              | 503.2.9.1                           | HVAC distribution system(s) tested & balanced. Report in construction documents.   | 回         |
| Piping Insulation      | 503.2.8                             | HAC and service hot water. In accordance with Table 503.2.8.   |           |
| Water Heaters          | 504                                 | Performance requirements in accordance with Table 504.2. Heat trap required.   | <b>□</b>  |
| Swimming Pools         | 504.7                               | Vapor-retardant or liquid cover or other means proven to reduce<br>heat loss on heated pools; Time switch (exceptions); readily<br>accessible on/off switch.                                       | W/A       |
| Motors                 | 505.7.5                             | Motor efficiency criteria have been met  | V/        |
| Lighting Controls      | 505.2, 502.3                        | Automatic control required for interior lighting in buildings >5,000 s.f.; Space control; Exterior photo sensor; Tandom wiring with 1 or 3 linear fluorescent lamps>30W                            | 豆         |

| EnergyGauge Summit® v4.10 |  |
|---------------------------|--|
| INPUT DATA REPORT         |  |

# Project Information

Project Name: Retail

Orientation: North

Project Title: Lake City retail

Address: Lake City Place

State: Florida

Zip: 32055

Building Type: Retail

Building Classification: New Finished building

No.of Stories: 1

GrossArca: 4347

SF

Owner: Matress Firm

|                |                        |             |             | Zones         | = _           | N <sub>2</sub> = | 10    | a  | 10 10 10 10 10 10 10 10 10 10 10 10 10 1 |  |
|----------------|------------------------|-------------|-------------|---------------|---------------|------------------|-------|--|--|--|
| N <sub>o</sub> | No Acronym             | Description | Type        | 1000          | 1             | Area<br>[sf]     | 1     | Multiplier                                 | Total Area<br>[sf]                       |  |
| -              | 1 Pr0Zo1               | Zone 1      | CONDITIONED | 18)           |               | 4347.0           |       | -  | 4347.0                                   |  |
|                |                        |             |             | Spaces        |               |                  |       |  |  |  |
|                | No Acronym Description | Description | Type        | Depth<br>[ft] | Width<br>[ft] | Height<br>[ft]   | Multi | Height Multi Total Area<br>[ft] plier [sf] | Total Volume<br>[cf]                     |  |

|                    | riozoi spi                                  | space  |                  |  |                      | 20.00                  | 00.01                                   |                               |                                |                    |                         |     |
|--------------------|---|--|------------------|--|----------------------|------------------------|---|-------------------------------|--------------------------------|--------------------|-------------------------|-----|
|                    |   |  |                  | تَ                                       | Lighting             |                        |   |                               |                                |                    |                         |     |
|                    | No  | Type   | Category         | Lum                                      | No. of<br>Luminaires | Watts per<br>Luminaire | Power<br>[W]                            | Control Type                  | l Type                         | Ž                  | No.of<br>Ctrl pts       |     |
| In Zone:<br>In S   | in Space: Pr0Zo1 In Space: Pr0Zo1Sp1 I Recc | ssed Fluorescent -                           | General Lighting | ±  | -                    | 6644                   | 6644                                    | Central control               | ontrol                         | 0                  | 3                       | , п |
|                    | 2   | scent  | General Lighting |  | -                    | 320                    | 320                                     | Central control               | ontrol                         |                    | _                       | П   |
|                    |   |  |                  | >  | Walls                |                        |   |                               |                                |                    |                         |     |
| No De              | Description                                 | Туре   | Width H<br>[ft]  | Width H (Effec) Multi<br> ft  [ft] plier |                      | Area Di<br>[sf]        | DirectionConductance<br>[Btu/hr. sf. F] | Conductance<br>Btu/hr. sf. F] | Heat<br>Capacity<br>[Btu/sf.F] | Dens.<br>[Ib/cf] [ | R-Value<br>[h.sf.F/Btu] | _   |
| In Zone:<br>1 Pr0; | one: Pr0Zo1<br>Pr0Zo1Wa1                    |  | O 63.00<br>8     | 10.00                                    | _                    | 630.0                  | North                                   | 0.2642                        | 969.6                          | 62.72              | 3.8                     |     |
| 2 Pr0              | Pr0Zo1Wa2                                   | Gyp<br>8"CMU/3/4"ISO<br>BTWN24"oc/5/8        | 0 63.00          | 10.00                                    | -                    | 630.0                  | South                                   | 0.2642                        | 969.6                          | 62.72              | 3.8                     |     |
| 3 Pr0              | Pr0Zo1Wa3                                   | Gyp<br>8"CMU/3/4"ISO<br>BTWN24"oc/5/8        | 00.69 O          | 10.00                                    | _                    | 0.069                  | East                                    | 0.2642                        | 969.6                          | 62.72              | 3.8                     |     |
| 4 Pro              | Pr0Zo1Wa4                                   | Gyp<br>8"CMU/3/4"ISO<br>BTWN24"oc/5/8<br>Gyp | 00.69 0          | 10.00                                    | _                    | 0.069                  | West                                    | 0.2642                        | 969.6                          | 62.72              | 3.8                     |     |

| Windows   |   |
|---|---|
| No Description Type Shaded U SHGC Vis.Tra W H (Effec) M [ft] p  | Multi Total Area<br>plier [sf]                              |
| In Zone: Pr0Zo1 In Wall: Pr0Zo1Wa2  1 Pr0Zo1Wa2Wil User Defined No 0.6800 0.65 0.76 4.00 8.00   | 10 320.0  |
| Doors   |   |
| No Description Type Shaded? Width H (Effec) Multi Area Cond. Dens. Heat Cap. [ft] [ft] plier [sf] [Btu/hr. sf. F] [lb/cf] [Btu/sf. F] | Dens. Heat Cap. R-Value<br>[lb/cf] [Btu/sf. F] [h.sf.F/Btu] |
| In Zone: Pr0Zo1<br>In Wall: Pr0Zo1Wa2<br>1 Pr0Zo1Wa2Dr1 Solid core flush No 3.00 7.00 2 21.0 0.7600 16                                | 16.00 0.75 1.32   |
| Roofs   | 5.11  |
| No Description Type Width H (Effec) Multi Area Tilt Cond. Hea [ft] [ft] plier [sf] [deg] [Btu/hr. Sf. F] [Btu                         | Heat Cap Dens. R-Value<br>[Btu/sf. F] [lb/cf] [h.sf.F/Btu]  |
| In Zone: Pr0Zo1<br>1 Pr0Zo1Rf1 Built-up Gravel/2" 63.00 69.00 1 4347.0 0.00 0.0499 L.<br>ISO/Mtl Deck                                 | 1.49 9.50 20.1  |
| Skylights   |   |
| No Description Type U SHGC Vis.Trans W H (Effec) Multiplier [ft] [ft] [ft]  | plier Area Total Area<br>[Sf] [Sf]                          |
| In Zone:<br>In Roof:  |   |

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|                | 2                             |   |               | Floors                        |         |                  |                                 |   |                  |                         |   |
|----------------|-------------------------------|---|---------------|-------------------------------|---------|------------------|---------------------------------|---|------------------|-------------------------|---|
| o <sub>N</sub> | Description                   | Type  | Width<br>[ft] | H (Effec) Multi<br> ft  plier |         | Area<br> sf   Bt | Cond.                           | Cond. Heat Cap. Dens.<br> Btu/hr. sf. F   Btu/sf. F   lb/cf | Dens.<br>[lb/cf] | R-Value<br>[h.sf.F/Btu] |   |
| In Zone: Pro   | Pr0Zo1<br>Pr0Zo1F11           | Concrete floor,<br>carpet and rubber<br>pad | 63.00         | 00.69                         | -       | 4347.0           | 0.5987                          | 9.33  | 140.00           | 1.67                    |   |
|                |                               |   |               | Systems                       | us      |                  |                                 |   |                  |                         | - |
| Pr0Sy1         | System 1                      | n 1   |               | Const                         | ant Vol | ume Pac          | Constant Volume Packaged System | stem  | No.              | No. Of Units 1          |   |
| Component      | t Category                    |   |               | Capacity                      |         | Efficiency       | ney                             | IPLV  |                  |                         |   |
| -              | Cooling System                |   |               | 102000.00                     | 0       | 11.30            | 0                               | 11.40   |                  |                         |   |
| 2              | Heating System                |   |               | 25598.00                      | 0       | 1.00             | 0                               |   |                  |                         |   |
| Э              | Air Handling System -Supply   | em -Supply                                  |               | 3000.00                       |         | 0.30             | 0                               |   |                  |                         |   |
| 4              | Air Handling System - Return  | em - Return                                 |               | 2700.00                       |         | 0.30             | 0                               |   |                  |                         |   |
| 2              | Air Distribution System (Sup) | ystem (Sup)                                 |               |                               |         | 6.00             | 0                               |   |                  |                         |   |
| 9              | Air Distribution System (Ret) | ystem (Ret)                                 | -             |                               |         | 90.9             | 0                               |   |                  |                         |   |
| Pr0Sy2         | System 2                      | 1.2   |               | Const                         | ant Vol | ume Pac          | Constant Volume Packaged System | stem  | No.              | No. Of Units 1          |   |
| Component      | Category                      |   |               | Capacity                      |         | Efficiency       | ıcy                             | IPLV  |                  |                         |   |
| -              | Cooling System                |   |               | 90000000                      |         | 11.30            | 0                               | 11.40   |                  |                         |   |
| 2              | Heating System                |   |               | 25598.00                      | 0       | 1.00             | _                               |   |                  |                         |   |
| ю              | Air Handling System -Supply   | em -Supply                                  |               | 3000.00                       |         | 0.30             | _                               |   |                  |                         |   |
| 4              | Air Handling System - Return  | em - Return                                 |               | 2700.00                       |         | 0.30             | •                               |   |                  |                         |   |
| Ś              | Air Distribution System (Sup) | ystem (Sup)                                 |               |                               |         | 00.9             | -                               |   |                  |                         |   |
| 9              | Air Distribution System (Ret) | ystem (Ret)                                 |               |                               |         | 00.9             | _                               |   |                  |                         |   |
|                |                               |   |               |                               |         |                  |                                 |   |                  |                         |   |

|                         |                  | Plant         |              |         |   |
|-------------------------|------------------|---------------|--------------|---------|---|
| Equipment               | Category         | Size          | Inst.No Eff. | IPLV    | ŀ |
|                         | 100 - 11         |               |              |         |   |
|                         | Wat              | Water Heaters |              |         |   |
| W-Heater Description    | CapacityCap.Unit | I/P Rt.       | Efficiency   | Loss    |   |
| 1 Electric water heater | 20 [Gal]         | 2 [kW]        | 0.9500 [Ef]  | [Btu/h] |   |

|             |          | Ext-Lighting                    | hting  |   |  |             |  |
|-------------|----------|---------------------------------|--|---|--|-------------|--|
| Description | Category | No. of<br>Luminaires            | No. of Watts per<br>Luminaires Luminaire       | Watts per Area/Len/No. of units Control Type [sf/ft/No] | Control Type                               | Wattage [W] |  |
|             |          |                                 |  |   |  |             |  |
|             |          | Piping                          | 5.0  |   |  | 130         |  |
| No Type     |          | Operating<br>Temperature<br>[F] | Insulation<br>Conductivity<br>[ Btu-in/h.sf.F] | Nomonal pipe<br>y Diameter<br>F] [in]                   | Insulation Is Runout?<br>Thickness<br>[in] | Is Runout?  |  |
|             |          |                                 |  |   |  |             |  |

|           |              |                 | Fenestr                              | Fenestration Used |        |  |
|-----------|--------------|-----------------|--------------------------------------|-------------------|--------|--|
| Name      | Glass Type   | No. of<br>Panes | Glass<br>Conductance<br>[Btu/h.sf.F] | SHGC              | VLT    |  |
| ApLbWnd11 | User Defined | -               | 0.6800                               | 0.6500            | 0.7600 |  |

```
01-28-14
Company Name:
                                                                                                          Page 1
Block Load v1.0
*************
                                   Zone Name: LAKE CITY RETAIL
City Name : JACKSONVILLE, FLORIDA Weight - wall. 30 (lb/sqft) Roof: 40
                                                                         Bldg: 30
Color - Wall: LIGHT
Roof: LIGHT
Elevation (ft): 24
Indoor -Summer: 74 F 50 RH
            -Winter: 75 F
 _______
TEMP TOTAL TONS RSH TONS CFM

1. JAN at 8 A.M. 62.8 11.32 10.81 6,206

2. FEB at 9 A.M. 67.2 14.02 12.89 7,401

3. APR at 10 A.M. 77.8 14.91 12.53 7,195

4. MAY at 2 P.M. 91.0 14.25 10.78 6,190

5. JUN at 5 P.M. 93.0 14.60 10.62 6,098

6. AUG at 5 P.M. 94.0 14.67 10.69 6,138

7. NOV at 11 A.M. 75.4 15.88 13.69 7,860

Heating Load (Btuh) = 90,491 w/Infil. = 90,491 Airflow 2,350 cfm
 ORIENTATION OF BUILDING N S E W RF
TRANSMISSION FACTORS 0.14 0.14 0.14 0.15
 Glass Fac.:1.13 Lights Fluorescent? Y Shade Fac.:1.00 Floors: 1
Length: 64 Width: 69 Height: 10 Vent Air Percent: 9
Number of people = 22 Sensible people load = 5,410
Total lights = 6,624 Lighting load = 28,260
Other electrical = 11,040 Other electrical = 37,680
Area of N glass = 420 North glass solar = 3,211
Area of S glass = 420 South glass solar = 67,447
Area of E glass = 360 East glass solar = 20,598
Area of W glass = 0 West glass solar = 0
Total glass area = 1,200 Total glass solar = 91,256
Total glass trans. = 1,898
Area of N wall = 220 N wall load = -148
Area of S wall = 220 S wall load = 311
Area of E wall = 330 E wall load = 380
Area of W wall area = 1,460 Total wall trans. = 164
Area of roof = 4,416 Roof load = -414
Safety factor = 0% Safety load = 0
Supply fan hp = 1.13 Fan heat gain (DT) = 3,450
Vent latent load = 17,173
People latent load = 4,526
 FLORIDA, INC.

Street South • Suite B

Horbor, Florida 34695

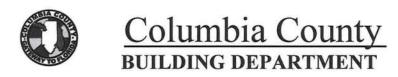
Harbor, Florida 34695

ering Business No. 9204
                                                                                                                           MDCI
405 2nd
Safety Engineerin
 People latent load = 4,526
Total cfm-std air= 7,860 Total latent load = 21,699
 Room sensible = 164,275 Room latent = 4,526
 Plenum return exhaust credit = 0
 --> GRAND TOTAL LOAD = 190,513 Btu/hr or 15.88 tons <--
                  Load run for # 7. NOV at 11 A.M.
 Ventilation load = 35,752 Roof heating load = 10,157

Glass heat load = 62,376 Wall heating load = 9,402

Infiltration load= 0 Warm-up load = 0

Slab heating load= 8,556 Heat load with vent = 126,243
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Revised 3/15/12

MINIMUM PLAN REQUIREMENTS AND CHECKLIST FOR THE 2010 FLORIDA BUILDING CODE, FLORIDA PLUMBING CODE, FLORIDA MECHINICAL CODE, FLORIDA FUEL AND GAS CODE 2010 EFFECTIVE 15 MARCH 2012 AND 2008 NATIONAL ELECTRICAL

### ALL REQUIREMENTS ARE SUBJECT TO CHANGE

COMMERCIAL MINIMUM PLAN REQUIREMENTS AND CHECKLIST

ALL BUILDING PLANS MUST INDICATE COMPLIANCE WITH THE CURRENT FLORIDA BUILDING CODES. ALL PLANS OR DRAWING SHALL PROVIDED CALCULATIONS AND DETAILS THAT HAVE THE SEAL AND SIGNATURE OF A CERTIFIED ARCHITECT OR ENGINEER REGISTERED IN THE STATE OF FLORIDA, OR ALTERNATE METHODOLOGIES, APPROVED BY THE STATE OF FLORIDA BUILDING COMMISSION.

# FOR DESIGN PURPOSES THE FOLLOWING BASIC WIND SPEEDS ARE PER FLORIDA BUILDING CODE FIGURE 1609-A THROUGH 1609-C ULTIMATE DESIGN WIND SPEEDS FOR RISK CATEGORY AND BUILDINGS AND OTHER STRUCTURES

|   | GENERAL REQUIREMENTS:   | Each C | s to Incl<br>Box sha<br>ircled a<br>pplicabl | all be |
|---|---|--------|--|--------|
| 1 | All drawings must be clear, concise and drawn to scale, details that are not used shall be marked void.   | YES    | NO   | N/A    |
| 2 | If the design professional is an architect or engineer legally registered under the laws of this state regulating the practice of architecture as provided for in Chapter 481, Florida Statutes, Part I, or engineering as provided for in Chapter 471, Florida Statutes, then he or she shall affix his or her official seal to said drawings, specifications and accompanying data, as required by Florida Statute. | YES    | NO   | N/A    |
| 3 | The design professional signature shall be affixed to the plans   | VES)   | NO   | N/A    |
| 4 | Two (2) complete sets of plans with the architecture or engineer signature and the date the affix embossed official seal was placed on the plans  | YES    | NO   | N/A    |

Two (2) complete sets of plans containing the following information:

|    |   |         |                              | Buildi   | ng Site Pla  | an Requir     | rements       |  |  |            | Each<br>C |       |              |
|----|---|---------|------------------------------|--|--------------|---------------|---------------|--|--|------------|-----------|-------|--------------|
| 4  | Parking.                                  | inclu   | ling provis                  | sion Florida   | Building C   | Code Access   | sibility Cod  | e  |  |            | Yes       | No    | N/A          |
| 5  | Fire acc                                  | ess, sh | owing all                    | drive way v  | which will b | e accessible  | e for emerge  | ency vehic   | les  |            | (Yes)     | No    | N/A          |
| 6  | Driving                                   | turnin/ | g radius of                  | parking lo   | ts           |               |               |  |  |            | Yes       | No    | N/A          |
| 7  | Vehicle                                   | loadin  | g include t                  | ruck dock l  | oading or r  | ail site load | ling          |  |  |            | Yes       | No    | NA           |
| 8  | Nearest                                   | or nur  | nber of ons                  | site Fire hyd  | drant/water  | supply/pos    | t indicator v | alve (PIV)   |  |            | (Yes)     | No    | N/A          |
| 9  |   |         |                              | r proposed<br>med proper   |              | rom each st   | ructure and   | property b   | oundaries, S   | how all    | Tes       | No    | N/A          |
| 10 | Location<br>drain fie                     |         | ecific tank                  | s(above or   | under grow   | n ,water lin  | es and sewe   | er lines and   | septic tank  | and        | Yes       | No    | N/A          |
| 11 | All struc                                 | ctures  | exterior vie                 | ews include  | finished fle | oor elevatio  | n             |  |  |            | Yes       | No    | N/A          |
| 12 |   |         | and the second second second | A PARTY OF THE PAR | ablished gra |               |               |  |  |            | (Yes)     | No    | N/A          |
|    | Occupar<br>group us<br>circle al<br>uses: | ncy     | Group<br>A                   | Group<br>B   | Group<br>E   | Group F       | Group<br>H    | Group<br>I   | Group<br>M   | Group<br>R | Grou      | р     | Group<br>U D |
| 13 |   | Specia  | l occupano                   | y requirem   | ents.        |               | _             | -  |  |            | Yes       | No    | N/A          |
| 14 |   |         |                              |  |              | e for each r  | room of use   | area)  |  |            | Yes       | No    |              |
| 15 |   |         | occupanci                    |  |              | - 3           |               |  |  |            | Yes       | No    | N/A          |
| 13 |   | REQU    | IRED SEP                     | PARATION   | OF OCCU      | PANCIES       | IN HOURS      | S FBC TAI  | 3LE 707.3.9  |            | Yes       | No    | N/A          |
|    |   |         |                              |  |              |               |               | And in case of the last of the | The proof of the Parket of the |            | - town Cl | DC CC |              |
| 16 |   | Minim   | um type o                    | f permittee  | i construct  | ion by cou    | e for occup   | ancy use t   | arcie the cor  | ISTRUCTIO  | n type ri | DC OU | 14           |

|           | Fire-resistant construction requirements shall be shown, include the following comp | onents |    |           |
|-----------|---|--------|----|-----------|
| 18        | Fire-resistant separations  | Yes    | No | W/A       |
| 19        | Fire-resistant protection for type of construction                                  | Yes    | No | (NIA)     |
| 20        | Protection of openings and penetrations of rated walls                              | Yes    | No | N/A       |
| 21        | Protection of corridors and penetrations of rated walls                             | Yes    | No | N/A       |
| 22        | Fire blocking and draftstopping and calculated fire resistance                      | Yes    | No | N/A       |
| W Rate of | Fire suppression systems shall be shown include:                                    |        |    |           |
| 23        | Early warning smoke evacuation systems Schematic fire sprinklers Standpipes         | Yes    | No | N/A       |
| 24        | Standpipes  | Yes    | No | N/A       |
| 25        | Pre-engineered systems  | Yes    | No | NIA       |
| 26        | Riser diagram   | Yes    | No | (N/A)     |
|           | Life safety systems shall be shown include the following requirements:              |        |    | A MEETING |
| 27        | Occupant load and egress capacities   | Yes    | No | N/A       |
| 28        | Early warning   | Yes    | No | NIA       |
| 29        | Smoke control   | Yes    | No | (N/A)     |
| 30        | Stair pressurization  | Yes    | No | NVA       |
| 31        | Systems schematic   | Yes    | No | ONA       |
|           | Occupancy load/egress requirements shall be shown include:                          |        |    |           |
| 32        | Occupancy load  | Yes    | No | N/A       |
| 33        | Gross occupancy load  | Yes    | No | N/A       |
| 34        | Net occupancy load  | Yes    | No | N/A       |
| 35        | Means of egress   | Yes    | No | N/A       |
| 36        | Exit access   | Yes    | No | N/A       |
| 37        | Exit discharge  | Yes    | No | N/A       |
| 38        | Stairs construction/geometry and protection   | Yes    | No | N/A       |
| 39        | Doors   | des    | No | N/A       |
| 40        | Emergency lighting and exit signs   | Mes    | No | N/A       |
| 41        | Specific occupancy requirements   | Yes    | No | NZA       |
| 42        | Construction requirements   | (es)   | No | N/A       |
| 43        | Horizontal exits/exit passageways   | Yes    | No | N/A       |

Items to Include-Each Box shall be Circled as Applicable

|    |   | Appn       | cabic    |   |
|----|---|------------|----------|---|
| 40 | Structural requirements shall be shown include:   |            | STATE OF |   |
| 44 | Soil conditions/analysis  | Yes        | No       | WA  |
| 45 | Termite protection  | Yes        | No       | N/A                                       |
| 46 | Design loads  | (CO)       | No       | N/A                                       |
| 47 | Wind requirements   | (Fes)      | No       | N/A                                       |
| 48 | Building envelope   | (A.S.)     | No       | N/A                                       |
| 49 | Structural calculations (if required)   | Ves        | No       | N/A                                       |
| 50 | Foundation For structures with foundation which establish new electrical utility companies service connection a Concrete Encased Electrode will be required within the foundation to serve as an grounding electrode system.  Per the National Electrical Code article 250.52.3 | Yes        | No       | N/A                                       |
| 51 | Wall systems  | (Yes)      | No       | N/A                                       |
| 52 | Floor systems   | (Yes)      | No       | N/A                                       |
| 53 | Roof systems  | (Ves)      | No       | N/A                                       |
| 54 | Threshold inspection plan   | Yes        | No       | (N/A)                                     |
| 55 | Stair systems   | Yes        | No       | NIA                                       |
|    | Materials shall be shown include the following  |            |          | N. C. |
| 56 | Wood  | Yes        | No       | N/A                                       |
| 57 | Steel   | Yes        | No       | N/A                                       |
| 58 | Aluminum  | Yes        | No       | N/A                                       |
| 59 | Concrete  | (Yes)      | No       | N/A                                       |
| 60 | Plastic   | Yes        | No       | NA  |
| 61 | Glass   | (Yes)      | No       | N/A                                       |
| 62 | Masonry   | Yes        | No       | N/A                                       |
| 63 | Gypsum board and plaster  | Yes        | No       | N/A                                       |
| 64 | Insulating (mechanical)   | Ves        | No       | N/A                                       |
| 65 | Roofing   | (Yes)      | No       | N/A                                       |
| 66 | Insulation  | Yes        | No       | N/A                                       |
| 00 | Accessibility requirements shall be shown include the following   |            |          | STORES OF                                 |
| 67 | Site requirements   | (Yes)      | No       | N/A                                       |
| 68 | Accessible route  | Yes        | No       | N/A                                       |
| 69 | Vertical accessibility  | Yes        | No       | N/A                                       |
| 70 | Toilet and bathing facilities   | Yes        | No       | N/A                                       |
| 71 | Drinking fountains  | Yes        | No       | N/A                                       |
| 72 | Equipment   | Yes        | No       | N/A                                       |
| 73 | Special occupancy requirements  | Yes        | No       | N/A                                       |
| 74 | Fair housing requirements   | Yes        | No       | N/A                                       |
| /4 | Interior requirements shall include the following   | 103        | 110      |   |
| 75 | Review required by the Columbia County Fire Department Items 75 <sup>Th</sup> 80  Interior finishes (flame spread/smoke development)  | Yes        | No       | N/A                                       |
| 76 |   | Ves        | No       | N/A                                       |
| 76 | Light and ventilation Sanitation  | (Yes)      | No       | N/A                                       |
| 11 | Special systems   |            | 110      | Marine Service                            |
| 78 | Elevators Special systems   | Yes        | No       | NA  |
| 79 | Escalators  | Yes        | No       | (N/A                                      |
|    | Lifts   | Yes        | No       | WA.                                       |
| 80 |   | 105        | 1 140    |   |
| 01 | Swimming pools  | Vac        | No       | NA  |
| 81 | Barrier requirements  | Yes<br>Yes | No       | NA NA                                     |
| 82 | Spas and Wading pools   |            |          |   |
| 83 | Access required per Florida Building Code 424.1.2.5.6   | Yes        | No       | 0   |

|  | Wiring Services For structures with foundation which establish new electrical utility companies service connection a Concrete Encased Electrode will be required within the foundation to serve as an grounding electrode system.  Per the National Electrical Code article 250.52.3  Feeders and branch circuits Overcurrent protection Grounding Wiring methods and materials GFCIs Equipment | (a)<br>(b)<br>(c)<br>(d)<br>(d)<br>(d)                             | No<br>No<br>No<br>No | N/A<br>N/A |
|--|---|--|----------------------|------------|
| 36<br>37<br>38<br>39<br>90<br>91<br>92<br>93<br>94 | Services For structures with foundation which establish new electrical utility companies service connection a Concrete Encased Electrode will be required within the foundation to serve as an grounding electrode system.  Per the National Electrical Code article 250.52.3  Feeders and branch circuits  Overcurrent protection  Grounding  Wiring methods and materials  GFCIs  Equipment   | Yes<br>Yes<br>Yes<br>Yes   | No<br>No<br>No       | N/A        |
| 66<br>67<br>88<br>99<br>90<br>91<br>92<br>93<br>94 | companies service connection a Concrete Encased Electrode will be required within the foundation to serve as an grounding electrode system.  Per the National Electrical Code article 250.52.3  Feeders and branch circuits  Overcurrent protection  Grounding  Wiring methods and materials  GFCIs  Equipment  | (Yes)<br>(Yes)<br>(Yes)  | No<br>No             | N/A        |
| 36<br>37<br>38<br>39<br>90<br>91<br>92<br>93<br>94 | within the foundation to serve as an grounding electrode system.  Per the National Electrical Code article 250.52.3  Feeders and branch circuits  Overcurrent protection  Grounding  Wiring methods and materials  GFCIs  Equipment   | (G)<br>(F)<br>(F)  | No                   |            |
| 6<br>7<br>8<br>9<br>0<br>1<br>2<br>3<br>4<br>5     | Per the National Electrical Code article 250.52.3  Feeders and branch circuits  Overcurrent protection  Grounding  Wiring methods and materials  GFCIs  Equipment   | (G)<br>(F)<br>(F)  | No                   |            |
| 88 9 00 01 1 02 03 04 05                           | Feeders and branch circuits Overcurrent protection Grounding Wiring methods and materials GFCIs Equipment   | (G)<br>(F)<br>(F)  | No                   |            |
| 37<br>38<br>39<br>90<br>91<br>92<br>93<br>94       | Overcurrent protection Grounding Wiring methods and materials GFCIs Equipment   | (G)<br>(F)<br>(F)  | No                   |            |
| 88<br>99<br>00<br>01<br>12<br>22<br>33<br>04       | Grounding Wiring methods and materials GFCIs Equipment  | (Yes)  |                      | NT/ A      |
| 39<br>00<br>01<br>02<br>03<br>04<br>05             | Wiring methods and materials GFCIs Equipment  | Yes  | No                   | N/A        |
| 00<br>01<br>02<br>03<br>04                         | GFCIs<br>Equipment  |  | 110                  | N/A        |
| 01<br>02<br>03<br>04<br>05                         | Equipment   | Nes  | No                   | N/A        |
| 92<br>93<br>94<br>95                               |   |  | No                   | N/A        |
| 93<br>94<br>95                                     |   | Yes  | No                   | N/A        |
| 94<br>95   | Special occupancies   | Yes  | No                   | WA         |
| 95   | Emergency systems   | Yes  | No                   | N/A        |
|  | Communication systems   | Yes  | No                   | N/A        |
| 96   | Low voltage   | Œe3  | No                   | N/A        |
| -  | Load calculations   | <b>©</b>   | No                   | N/A        |
| -  | Plumbing  | 160  | N.                   | NT/A       |
| $\overline{}$                                      | Minimum plumbing facilities   | (Yes)  | No                   | N/A<br>N/A |
|  | Fixture requirements  |  | No                   | N/A<br>N/A |
|  | Water supply piping   | <b>6</b>   | No                   |            |
|  | Sanitary drainage   | Yes  | No                   | N/A<br>N/A |
| 101  | Water heaters   | Yes  | No                   | N/A<br>N/A |
| 102  | Vents   | Yes  | No                   |            |
| 103  | Roof drainage   | Yes  | No                   | N/A        |
|  | Back flow prevention  | Yes  | No                   | N/A        |
| 105  | Irrigation  | Yes  | No                   |            |
|  | Location of water supply line   | (Yes)  | No                   | N/A        |
|  | Grease traps  | Yes  | No                   | N/A        |
|  | Environmental requirements  | Yes  | No                   | N/A        |
| 109  | Plumbing riser  Mechanical  | res  | No                   | I N/A      |
| 110  | Energy calculations   | (Ces)  | No                   | N/A        |
| 111  | Review required by the Columbia County Fire Department Items 111 <sup>Th</sup> 114  | Yes  | No                   | (N/A       |
|  | Exhaust systems   |  |                      |            |
| 112  | Clothes dryer exhaust   | Yes  | No                   | N/A        |
| 113  | Kitchen equipment exhaust   | Yes  | No                   | NIA        |
| 114  | Specialty exhaust systems   | Yes  | No                   | (N/A)      |
|  | Equipment location  |  |                      | BEE !      |
| 115  | Make-up air   | Yes  | No                   | N/A        |
| 116  | Roof-mounted equipment  | (Yes)  | No                   | N/A        |
| 117  | Duct systems  | Yes  | No                   | N/A        |
| 118  | Ventilation   | Yes  | No                   | N/A        |
|  | Laboratory  | Yes  | No                   | N/A        |
| 120  | Combustion air  | Yes  | No                   | NIA        |
| 121  | Chimneys, fireplaces and vents  | Yes  | No                   | N/A        |
| 122  | Appliances  | (es)   | No                   | N/A        |
|  | Boilers   | Yes  | No                   | M/A        |
| 124  | Refrigeration   | Yes  | No                   | NA         |
| 125  | Bathroom ventilation  | (Yes)  | No                   | N/A        |
|  |   | Items to Include-<br>Each Box shall be<br>Circled as<br>Applicable |                      |            |
|  | Gas   |  |                      | (          |
| 126  | Review required by the Columbia County Fire Department Items 126 <sup>Th</sup> 134  | Yes  | No                   | (N+A)      |
| 120  | Gas piping  |  |                      |            |

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| 145 | Flood<br>Management | A CERTIFIED FINISHED FLOOR ELEVATIONS WILL BE REQUIRED ON ANY PROJECT WHERE THE BASE FLOOD ELEVATION (100 YEAR FLOOD) HAS BEEN ESTABLISHED.                                 | Yes | No |     |
|-----|---------------------|---|-----|----|-----|
| 146 | 911 Address         | An application for a 911address must be applied for and received through the Columbia County Emergency Management Office of 911 Addressing Department (386) 758-1125 Ext. 3 | Yes | No | N/A |

Pursuant to Chapter one (administration) section R101.2.1 of the Florida Building Code: Section 105.3.2 **Time limitation 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 such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.

Pursuant to Chapter one (administration) section R101.2.1 of the Florida Building Code: Section 105.4.1 **Permit intent.** A permit issued shall be constructed to be a license to proceed with the work and not as authority to violate, cancel, alter or set aside any of the provisions of the technical codes, nor shall issuance of a permit prevent the building official from thereafter requiring a correction of errors in plans, construction or violations of this code. Every permit issued shall become invalid unless the work authorized by such permit is commenced within six months after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of six months after the time the work is commenced.

Section 105.4.1.1: If work has commenced and the permit is revoked, becomes null and void, or expires because of lack of progress or abandonment, a new permit covering the proposed construction shall be obtained before proceeding with the work.

Section 105.4.1.2: If a new permit is not obtained within 180 days from the date the initial permit became null and void, the building official is authorized to require that any work which has been commenced or completed be removed from the building site. Alternately, a new permit may be issued on application, providing the work in place and required to complete the structure meets all applicable regulations in effect at the time the initial permit became null and void and any regulations which may have become effective between the date of expiration and the date if issuance of the new permit.

Section 105.4.1.3: Work shall be considered to be in active progress when the permit has received an approved inspection within 180 days. This provision shall not be applicable in case of civil commotion or strike or when the building work is halted due directly to judicial injunction, order or similar process.

Section 105.4.1.4: The fee for renewal reissuance and extension of a permit shall be set forth by the administrative authority.

When the submitted application is approved for permitting the applicant will be notified by phone as to the date and time a building permit will be prepared and issued by the Columbia County Building & Zoning Department.

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