

# Columbia County Building Permit Application

For Office Use Only Application # 0605-19 Date Received 5-5-06 By LH Permit # 24538  
 Application Approved by - Zoning Official BLK Date 07.05.06 Plans Examiner OKJTH Date 5-20-06  
 Flood Zone X Development Permit N/A Zoning A-3 Land Use Plan Map Category A-3  
 Comments Accession Use Bld  
NOT FOR Private Road

Applicants Name CASTAGNA CONSTRUCTION INC Phone 386 755-6867  
 Address 521 NW Old Mill Rd LAKE CITY FLA 32055  
 Owners Name WILLIAM C DANNBECKER Phone 386 755-6867  
 911 Address 355 SW Aviation Drive Lake City FL 32024  
 Contractors Name JERRY CASTAGNA Phone 386-755-6867  
 Address 521 NW Old Mill Rd LAKE CITY FLA 32055  
 Fee Simple Owner Name & Address WILLIAM C & JERAM D DANNBECKER  
 Bonding Co. Name & Address N/A  
 Architect/Engineer Name & Address GREGORY S BARFIELD 5149 WELL PURVIS RD ADEL GA 31620  
 Mortgage Lenders Name & Address N/A

Property ID Number 22-55-17-09322-012 Estimated Cost of Construction 75,000.00  
 Subdivision Name LOT 12 LAKE CITY AIR PARK Lot 22 Block      Unit      Phase       
 Driving Directions 441 SOUTH TR on SW AVIATION DRIVE Lot on Right

Type of Construction metal building Number of Existing Dwellings on Property None  
 Total Acreage 4.5 Lot Size      Do you need a - Culvert Permit or Culvert Waiver or Have an Existing  
 Actual Distance of Structure from Property Lines - Front 175' Side 100' Side 500' Rear 75'  
 Total Building Height 24.75' Number of Stories 1 Heated Floor Area None Roof Pitch 3/12

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 all laws regulating construction in this jurisdiction.

OWNERS AFFIDAVIT: I hereby certify that all the foregoing information is accurate and all work will be done in compliance with all applicable laws and regulating construction and zoning.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

Jerry Castagna  
 Owner Builder or Agent (Including Contractor)

STATE OF FLORIDA  
 COUNTY OF COLUMBIA

Sworn to (or affirmed) and subscribed before me  
 this      day of      20      
 Personally known      or Produced Identification     

Jerry Castagna  
 Contractor Signature  
 Contractors License Number CBC 047842  
 Competency Card Number       
 NOTARY STATE SEAL Melinda Pettyjohn  
 Commission # DD367867  
 Expires November 1, 2008  
 Bonded Troy Pain - Insurance, Inc. 800-385-7019  
Melinda Pettyjohn  
 Notary Signature

# Application for Onsite Sewage Disposal System Construction Permit. Part II Site Plan

Permit Application Number: 06-0453N

**ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH UNIT**

DANNECKER/CR 05-3406

Lake City Airpark, Lot 12

Vacant

670'

North

TBM in 6" post

Very slight slope

Well

Apartment

100'

Site 2

100'

Waterline

200'

Sewer line

Site 1

8-line drainfield

Parking pad

House

Vacant

Occupied  
>75' to well

Driveway

230' road  
Swale at road

210'

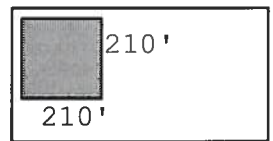
350'

210'

670'

210'

350'



Vacant

1 inch = 50 feet

Site Plan Submitted By Paul L. [Signature] Date 3/7/06  
 Plan Approved ☒ Not Approved ☐ Date 5/19/06

By [Signature] [Signature] CPHU

Notes: \_\_\_\_\_

# UNIVERSAL

## ENGINEERING SCIENCES

**Consultants In: Geotechnical Engineering •  
Environmental Sciences • Construction Materials Testing**

**4475 S.W. 35th Terrace • Gainesville, Florida 32608 • (352) 372-3392**

# REPORT ON IN-PLACE DENSITY TESTS

Permit # 00024638

CLIENT: CASTAGNA

PROJECT: LAKE CITY AIR PARK LOT # 12  
355 SW AVIATION DRIVE LAKE CITY FL 32909

AREA TESTED: Full V. PROP. PAD - Ext. FOUND

COURSE: F-16 DEPTH OF TEST: 0-1"

TYPE OF TEST: ASTM-D-2922 DATE TESTED: 6-23-06

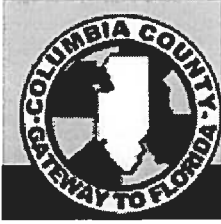
NOTE: The below tests DO/DO NOT meet the minimum 95 % compaction requirements of maximum density.

REMARKS: \_\_\_\_\_

[illegible]

TECH. T.G. R.S.

24538



From: The Columbia County Building & Zoning Department  
Plan Review  
135 NE Hernando Av.  
P.O. Box 1529  
Lake City Florida 32056-1529

Reference to a building permit application Number: **0605-19**

Contractor Jerry Castagna Owner William & Jean Dannecker Lot 12 Lake City  
Airpark Subdivision.

On the date of May 5, 2006 application 0605-19 and plans for construction of a storage/aircraft hanger structure were reviewed and the following information or alteration to the plans will be required to continue processing this application. If you should have any question please contact the above address, or contact phone number (386) 758-1163 or fax any information to (386) 754-7088.

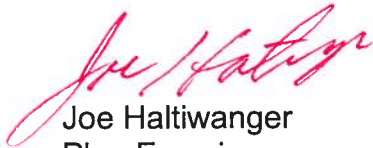
**Please include application number 0605-19 when making reference to this application.**

1. The FBC-2004 section 312 which defines utility and miscellaneous group U Aircraft hangars, accessory to a one- or two-family residence and also requires the following condition be complied with in sections 412.3.1 residential aircraft hangars An accessory building less than 2,000 square feet (186 m2) and 20 feet (6096 mm) in height, constructed on a one- or two-family residential property

where aircraft are stored. Such use will be considered as a residential accessory use incidental to the dwelling.

2. Egress sections 412.3.3.A hangar shall provide two means of egress. One of the doors into the dwelling shall be considered as meeting only one of the two means of egress.
3. Smoke detection 412.3.4 Smoke alarms shall be provided within the hangar in accordance with Section 907.2.21. A minimum of one listed smoke alarm shall be installed within a residential aircraft hangar as defined in Section 412.3.1 and shall be interconnected into the residential smoke alarm or other sounding device to provide an alarm that will be audible in all sleeping areas of the dwelling.
4. *Please show a floor plan design which will bring this proposed structure in compliance with the above FBC-2004 requirements.*
5. Please provide a copy of a signed released site plan from the Columbia County Environmental Health Department.
6. Please submit a recorded (with the Columbia County Clerk Office) notice of commencement before any inspections can be preformed by the Columbia County Building Department.

Thank you,



Joe Haltiwanger  
Plan Examiner  
Columbia County Building Department

# Columbia County Property Appraiser

DB Last Updated: 2/10/2006

Parcel: 22-5S-17-09322-012

## 2006 Proposed Values

Tax Record

Property Card

Interactive GIS Map

Print

### Owner & Property Info

Search Result: 1 of 1

|                        |                                                                                             |
|------------------------|---------------------------------------------------------------------------------------------|
| <b>Owner's Name</b>    | DANNECKER WILLIAM C & JEAN D                                                                |
| <b>Site Address</b>    |                                                                                             |
| <b>Mailing Address</b> | 6054 SW 52ND TERR<br>PALM CITY, FL 34990                                                    |
| <b>Brief Legal</b>     | LOT 12 LAKE CITY AIRPARK S/D. ORB 667-332,<br>752-354, 764-533 792-1635, 802-163, 812-1257, |

|                         |                 |
|-------------------------|-----------------|
| <b>Use Desc. (code)</b> | VACANT (000000) |
| <b>Neighborhood</b>     | 22517.02        |
| <b>Tax District</b>     | 3               |
| <b>UD Codes</b>         | MKTA02          |
| <b>Market Area</b>      | 02              |
| <b>Total Land Area</b>  | 0.000 ACRES     |

### Property & Assessment Values

|                              |          |             |
|------------------------------|----------|-------------|
| <b>Mkt Land Value</b>        | cnt: (1) | \$59,000.00 |
| <b>Ag Land Value</b>         | cnt: (0) | \$0.00      |
| <b>Building Value</b>        | cnt: (0) | \$0.00      |
| <b>XFOB Value</b>            | cnt: (0) | \$0.00      |
| <b>Total Appraised Value</b> |          | \$59,000.00 |

|                            |             |
|----------------------------|-------------|
| <b>Just Value</b>          | \$59,000.00 |
| <b>Class Value</b>         | \$0.00      |
| <b>Assessed Value</b>      | \$59,000.00 |
| <b>Exempt Value</b>        | \$0.00      |
| <b>Total Taxable Value</b> | \$59,000.00 |

### Sales History

| Sale Date  | Book/Page | Inst. Type | Sale VImp | Sale Qual | Sale RCode | Sale Price  |
|------------|-----------|------------|-----------|-----------|------------|-------------|
| 2/18/2005  | 1039/1478 | WD         | V         | Q         |            | \$77,000.00 |
| 6/30/2004  | 1020/429  | WD         | V         | Q         |            | \$50,000.00 |
| 10/25/1995 | 812/1257  | WD         | V         | Q         |            | \$20,000.00 |

### Building Characteristics

| Bldg Item | Bldg Desc | Year Blt | Ext. Walls | Heated S.F. | Actual S.F. | Bldg Value |
|-----------|-----------|----------|------------|-------------|-------------|------------|
| NONE      |           |          |            |             |             |            |

### Extra Features & Out Buildings

| Code | Desc | Year Blt | Value | Units | Dims | Condition (% Good) |
|------|------|----------|-------|-------|------|--------------------|
| NONE |      |          |       |       |      |                    |

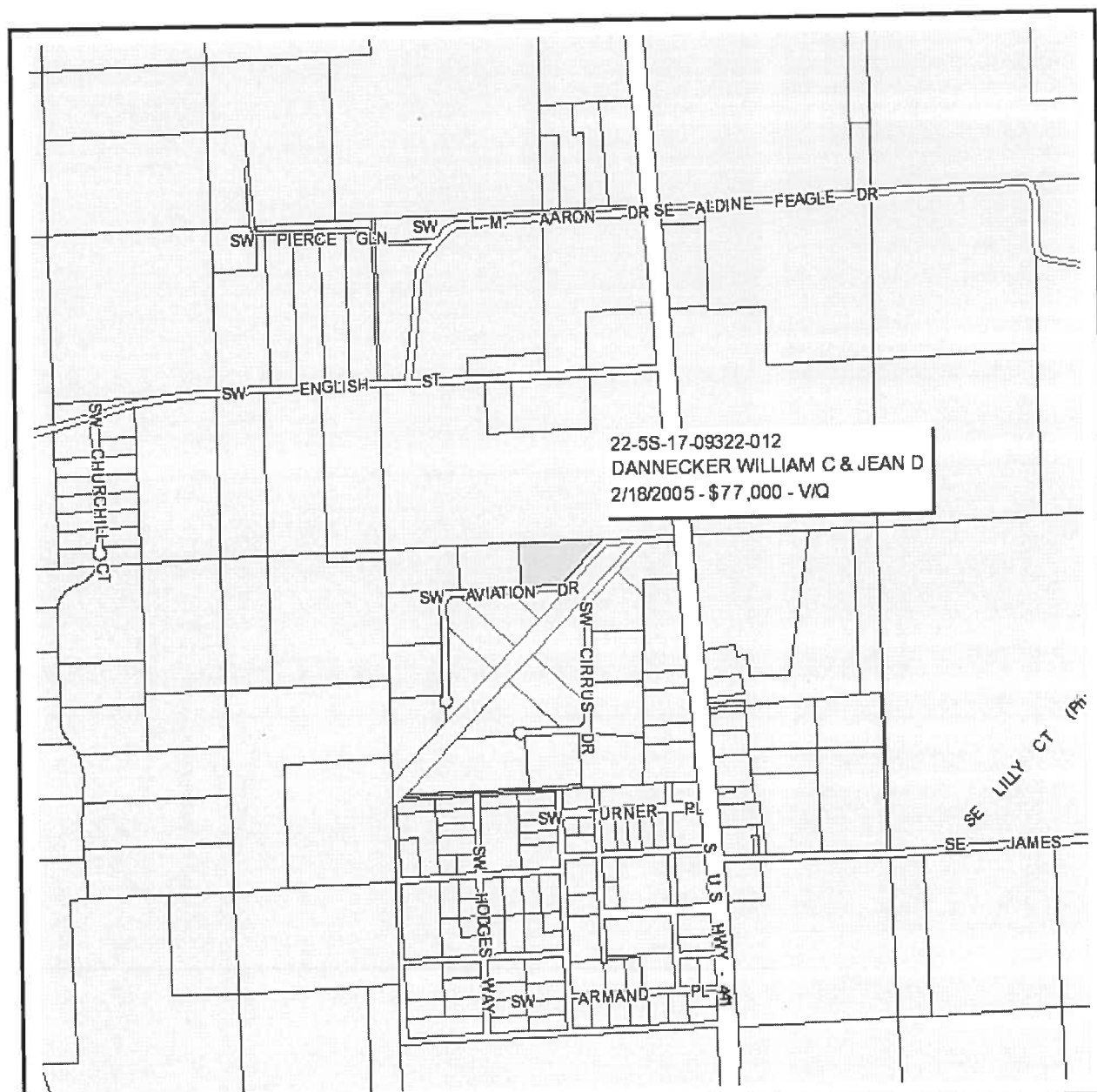
### Land Breakdown

| Lnd Code | Desc          | Units               | Adjustments         | Eff Rate    | Lnd Value   |
|----------|---------------|---------------------|---------------------|-------------|-------------|
| 000000   | VAC RES (MKT) | 1.000 LT - (.000AC) | 1.00/1.00/1.00/1.00 | \$59,000.00 | \$59,000.00 |

Columbia County Property Appraiser

DB Last Updated: 2/10/2006

1 of 1



22-5S-17-09322-012  
DANNECKER WILLIAM C & JEAN D  
2/18/2005 - \$77,000 - V/Q

### Columbia County Property Appraiser

J. Doyle Crews, CFA - Lake City, Florida - 386-758-1083

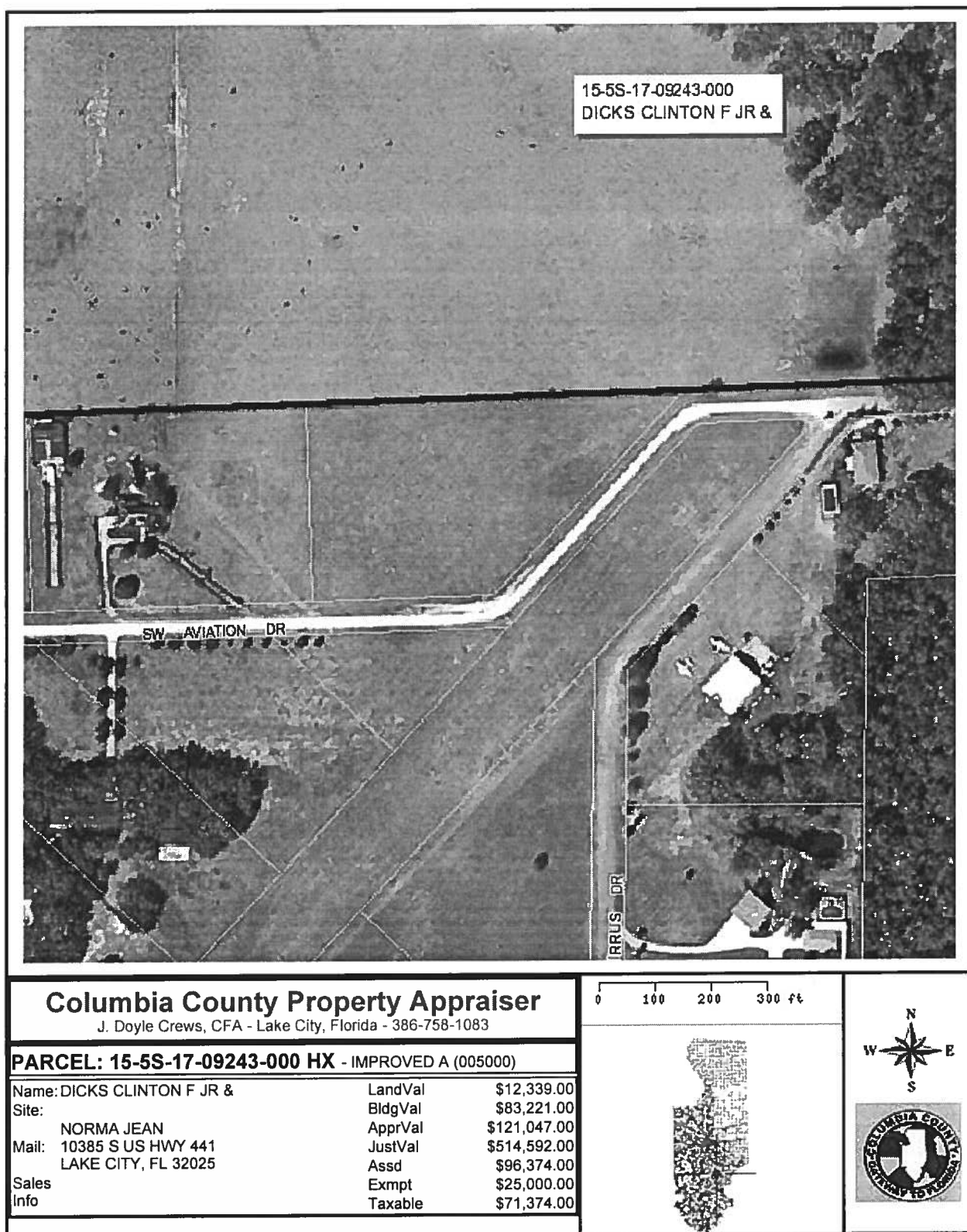
#### PARCEL: 22-5S-17-09322-012 - VACANT (000000)

|                                    |         |             |
|------------------------------------|---------|-------------|
| Name: DANNECKER WILLIAM C & JEAN D | LandVal | \$59,000.00 |
| Site:                              | BldgVal | \$0.00      |
| Mail: 6054 SW 52ND TERR            | ApprVal | \$59,000.00 |
| PALM CITY, FL 34990                | JustVal | \$59,000.00 |
| 2/18/2005 \$77,000.00V / Q         | Assd    | \$59,000.00 |
| 6/30/2004 \$50,000.00V / Q         | Exmpt   | \$0.00      |
| 10/25/1995 \$20,000.00V / Q        | Taxable | \$59,000.00 |

0 0.1 0.2 0.3 mi



This information, GIS Map Updated: 4/6/2006, was derived from data which was compiled by the Columbia County Property Appraiser Office solely for the governmental purpose of property assessment. This information should not be relied upon by anyone as a determination of the ownership of property or market value. No warranties, expressed or implied, are provided for the accuracy of the data herein, it's use, or it's interpretation. Although it is periodically updated, this information may not reflect the data currently on file in the Property Appraiser's office. The assessed values are NOT certified values and therefore are subject to change before being finalized for ad valorem assessment purposes.



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LAKE CITY AIRPORT LOT 12

TOTAL SITE  
PLAN



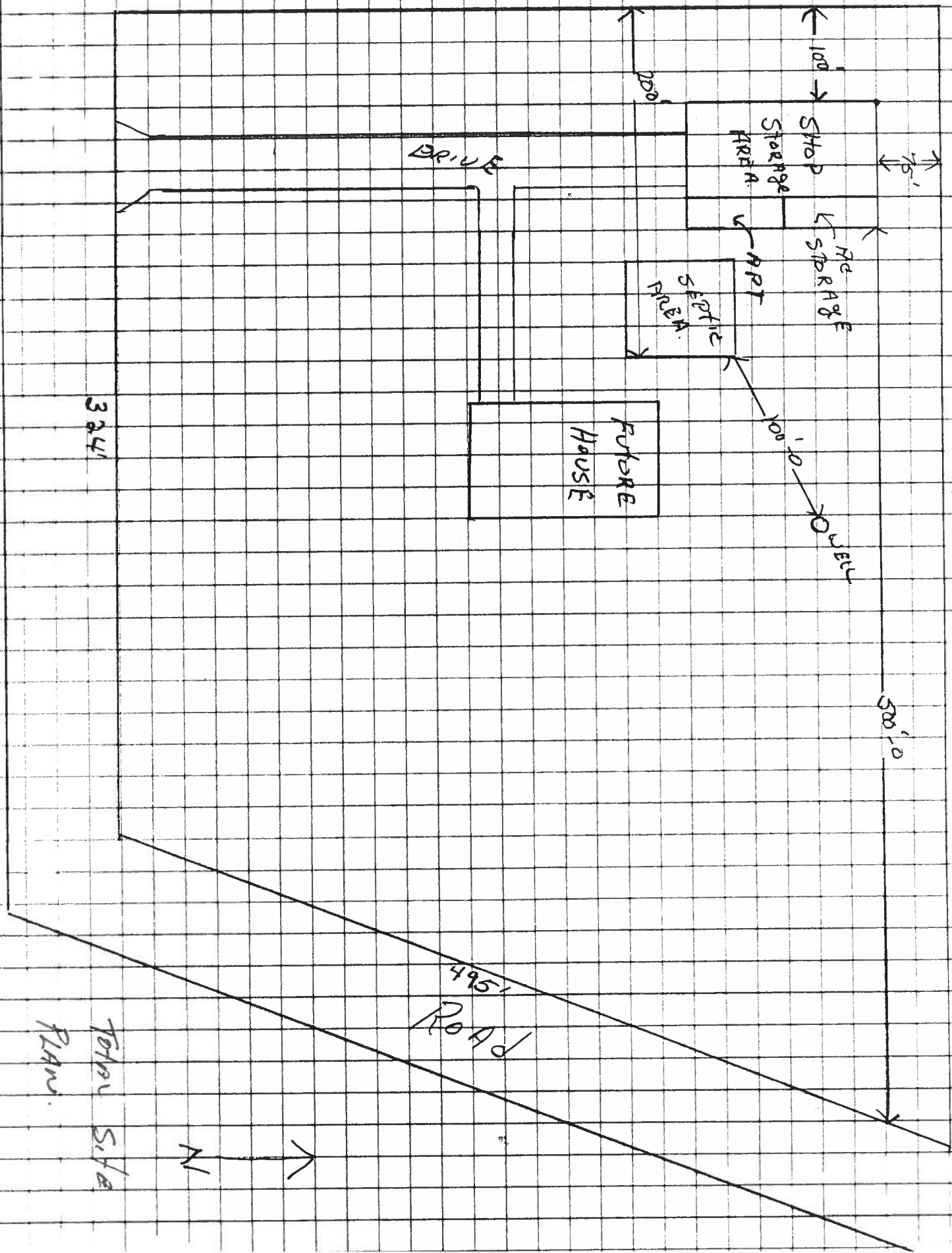
495'  
ROAD

324'

350

500'0"

610





# Columbia County Tax Collector

Site Provided by...  
governmax.com T1.14

## Tax Record

print | | | |

Owner Name  
1 of 1

DATA VIEW AS OF: 3/7/2006 9:53:03 AM EST

### Details

#### Tax Record

» Print View

License Renewal

Shopping Cart

Property Info →

### Searches

Account Number

Owner Name

Mailing Address

### Site Functions

Welcome

Tax Search

Occupational Lic.

Contact Us

Online Help

Home

### Ad Valorem Taxes and Non-Ad Valorem Assessments

The information contained herein does not constitute a title search and should not be relied on as such.

| Account Number                                                                                                                                    | Tax Type                      | Tax Year                            |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------|----------|
| R09322-012                                                                                                                                        | Real Estate                   | 2005                                |          |
| <b>Mailing Address</b><br>DANNECKER WILLIAM C & JEAN D<br>6054 SW 52ND TERR<br>PALM CITY FL 34990                                                 |                               |                                     |          |
|                                                                                                                                                   |                               | <b>Folio</b><br>126449.0000         |          |
| Assessed Value                                                                                                                                    | Exempt Amount                 | Taxable Value                       |          |
| \$30,000.00                                                                                                                                       | \$0.00                        | \$30,000.00                         |          |
| <b>Exemption Detail</b><br>NO EXEMPTIONS                                                                                                          |                               | <b>Millage Rate</b><br>003 19.06040 |          |
| <b>Legal Description</b><br>LOT 12 LAKE CITY AIRPARK S/D. ORB 667-332, 752-354, 764-533<br>792-1635, 802-163, 812-1257, WD 1020-429, WD 1039-1478 |                               |                                     |          |
| Tax Districts Detail                                                                                                                              |                               |                                     |          |
| Code                                                                                                                                              | Description                   | Exemption                           | Amount   |
| C001                                                                                                                                              | BOARD OF COUNTY COMMISSIONERS | \$0.00                              | \$261.78 |
| S002                                                                                                                                              | COLUMBIA COUNTY SCHOOL BOARD  | \$0.00                              | \$238.65 |
| W SR                                                                                                                                              | SUWANNEE RIVER WATER MGT DIST | \$0.00                              | \$14.74  |
| HLSH                                                                                                                                              | LAKE SHORE HOSPITAL AUTH      | \$0.00                              | \$52.50  |
| IIDA                                                                                                                                              | INDUSTRIAL DEVELOPEMENT AUTH  | \$0.00                              | \$4.14   |
| FFIR                                                                                                                                              | FIRE ASSESSMENTS              | \$0.00                              | \$28.09  |
|                                                                                                                                                   |                               | Total Gross                         | \$599.90 |
| If Paid By                                                                                                                                        |                               | Amount Due                          |          |
| 03/31/2006                                                                                                                                        |                               | \$599.90                            |          |

### Prior Year Taxes Due

NO DELINQUENT TAXES

[Click Here To Pay Now](#)

Print | << First < Previous Next > Last >>

Adel Steel Inc  
601, S. Elm Street  
Adel, GA 31620  
Phone No: 229 896 2263  
Fax No: 229 896 4658

## LETTER OF CERTIFICATION

Date: 4/20/06

Williams Dannacker  
6054 SW 52nd Terr.  
Palm City FL 34990  
SIZE: 70 x 70 x 16.728/20 x 70 x 12' LS

Re: Adel Steel Job 6002

To whom it may concern:

This is to certify that the Adel Steel, Inc. building described above is designed and fabricated to meet or exceed the criteria of the American National Standard Institute, American Institute of Steel Construction & American Welding Society as applicable to this project. In addition, the building is designed to meet or exceed the Following loads:

|                           |         |
|---------------------------|---------|
| BUILDING CODE:-----       | FBC 04  |
| LIVE LOAD TO ROOF :-----  | 20 psf  |
| LIVE LOAD TO FRAME :----- | 12 psf  |
| WIND LOAD :-----          | 120 mph |
| DEAD LOAD :-----          | 2 psf   |
| COLLATERAL LOAD :-----    | 3 psf   |
| OTHER LOADS : -----       | NONE    |

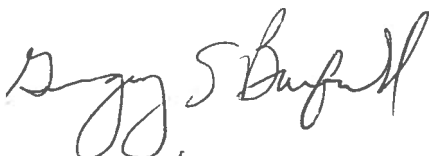
This "LEDA" building design conforms to the AISC FCD Category MB" Specification for Structural Steel Buildings-Allowable Stress Design and Plastic Design", AISI "Specification For the Design on Cold Formed Steel Structural Members", and the MBMA "Low Rise building System Manual". The Primary Structural framing is designed to the following:

- 1.Hot Rolled Structural Shapes: ASTM A-36 OR ASTM A-52.
- 2.Tubing or Pipe: ASTM A-500, Grade B, ASTM A-501 or ASTM A-53.
- 3.Plate or Bar Stock: ASTM A-529, ASTM A-570 OR ASTM A-572 (Min 50ksi Yield Strength)
- 4.Cold Formed Members: ASTM A-607, Grade 50.
- 5.Bolting Materials: ASTM A-325.
- 6.Bracing:
  - A. Cable: Minimum 7 Strand, Extra high strength galvanized steel.
  - B. Angles: ASTM A-36

If you have any questions or if you need any additional information regarding this project, please feel free to contact Adel Steel, Inc., During regular Business hours, from 8:00 AM. To 5:00 PM., Monday through Friday.

Respectfully Yours

Gregory Barfield, P.E.

  
4-29-06

GREGORY S. BARFIELD, P.E.  
2149 NELL PURVIS ROAD  
ADEL, GA 31620  
P E # 54419

Adel Steel, Inc.  
601, S. Elm St.  
Adel, GA 31620

REACTIONS, ANCHOR BOLTS, & BASE PLATES  
FOR  
Williams Dannacker  
6054 SW 52nd Terr.  
Palm City FL 34990

Lake City FL  
6002

BUILDING DATA

Width (ft) = 70.0  
Length (ft) = 70.0  
Eave Height (ft) = 16.3/ 16.7  
Roof Slope (rise/12 ) = 3.00/ 2.84  
Dead Load (psf ) = 2.0  
Roof Live Load (psf ) = 20.0  
Frame Live Load (psf ) = 12.0  
Collat. Load (psf ) = 3.0  
Wind Speed (mph ) = 120.0  
Wind Code = FBC 04  
Closed/Open = C  
Exposure = B  
Importance - Wind = 1.00  
Importance - Seismic = 1.00  
Seismic Design Category = B  
Seismic Coeff (Fa\*Ss) = 0.22

Designer =

-----

4/20/06

=====

05-909A                      Reactions, Anchor Bolts, & Base Plates:      4/20/06   10:57am

=====

| Frame<br>Line | Col<br>Line | -----Foundation_Loads(k )----- |      |       |             |       |       | -----     |       |            |       |       |
|---------------|-------------|--------------------------------|------|-------|-------------|-------|-------|-----------|-------|------------|-------|-------|
|               |             | Max_Pos_Val                    |      |       | Max_Neg_Val |       |       | Anc._Bolt |       | Base_Plate |       |       |
|               |             | Id                             | Horz | Vert  | Id          | Horz  | Vert  | No.       | Diam  | Width      | Len   | Thick |
| A             | 2           | 6                              | 7.8  | 1.7   | 7           | -7.1  | 1.7   | 4         | 0.625 | 10.00      | 8.50  | 0.375 |
| A             | 10          | 6                              | 7.9  | 1.7   | 7           | -7.2  | 1.7   | 4         | 0.625 | 10.00      | 8.50  | 0.375 |
| D             | 12          | 8                              | 0.0  | -3.1  | 8           | 0.0   | -3.1  | 4         | 0.625 | 8.00       | 8.00  | 0.375 |
|               |             | 1                              | 0.0  | 3.0   |             |       |       |           |       |            |       |       |
| D             | 8           | 9                              | 7.2  | -10.5 | 7           | -6.6  | -7.5  | 4         | 0.625 | 8.00       | 8.00  | 0.375 |
|               |             | 1                              | 0.0  | 8.1   | 9           | 7.2   | -10.5 |           |       |            |       |       |
| D             | 4           | 10                             | 7.2  | -10.7 | 7           | -6.5  | -7.5  | 4         | 0.625 | 8.00       | 8.00  | 0.375 |
|               |             | 1                              | 0.0  | 8.1   | 10          | 7.2   | -10.7 |           |       |            |       |       |
| D             | 1           | 6                              | 0.0  | -3.2  | 6           | 0.0   | -3.2  | 4         | 0.625 | 8.00       | 8.00  | 0.375 |
|               |             | 1                              | 0.0  | 3.0   |             |       |       |           |       |            |       |       |
| A             | 1           | 1                              | 6.0  | 10.6  | 2           | -4.2  | -5.6  | 4         | 0.750 | 6.00       | 16.50 | 0.375 |
| A             | 11          | 3                              | 2.7  | -6.9  | 1           | -5.9  | 13.5  | 4         | 0.750 | 6.00       | 16.50 | 0.375 |
|               |             | 1                              | -5.9 | 13.5  | 3           | 2.7   | -6.9  |           |       |            |       |       |
| B *           | 1           | 1                              | 9.6  | 15.2  | 2           | -11.6 | -14.9 | 4         | 0.750 | 6.00       | 12.50 | 0.375 |
|               |             |                                |      |       | 4           | -4.3  | -19.1 |           |       |            |       |       |
| B *           | 11          | 3                              | 8.9  | -17.2 | 1           | -9.5  | 19.4  | 4         | 0.750 | 6.00       | 12.56 | 0.375 |
|               |             | 1                              | -9.5 | 19.4  | 5           | -1.2  | -20.5 |           |       |            |       |       |

-----

B \* Frame Lines :B C

| Load<br>Id | Load<br>Combination     |
|------------|-------------------------|
| 1          | DL+CL+LL                |
| 2          | DL+CL+1.30WL1           |
| 3          | DL+CL+1.30WR1           |
| 4          | DL+CL+1.30LnWndL        |
| 5          | DL+CL+1.30LnWndR        |
| 6          | DL+CL+1.30WR1+1.30WS    |
| 7          | DL+CL+1.30WP+1.30LnWndL |
| 8          | DL+CL+1.30WL1+1.30WS    |
| 9          | DL+CL+1.30WL2+1.30WS    |
| 10         | DL+CL+1.30WR2+1.30WS    |

BRACING/PANEL SHEAR REACTIONS:

| ---Wall--- |      | -----Reactions(k )----- |              |      |             |      | Panel   |
|------------|------|-------------------------|--------------|------|-------------|------|---------|
| Loc        | Line | Col                     | ----Wind---- |      | --Seismic-- |      | Shear   |
|            |      | Line                    | Horz         | Vert | Horz        | Vert | (lb/ft) |
| L_EW       | A    | Rigid Frame At Endwall  |              |      |             |      |         |
| F_SW       | 12   | B ,C                    | 7.53         | 4.70 | 1.72        | 1.07 |         |
| R_EW       | D    | 8 ,4                    | 2.79         | 2.35 | 0.43        | 0.36 |         |
| B_SW       | 1    | C ,B                    | 6.37         | 3.85 | 1.42        | 0.86 |         |

## Rigid Frame Column Reactions

| Frame<br>Line | Col<br>Line | ---Dead--- |      | Collateral |      | ---Live--- |      | --Live_R-- |      | -Wind_L1-- |       |
|---------------|-------------|------------|------|------------|------|------------|------|------------|------|------------|-------|
|               |             | Horz       | Vert | Horz       | Vert | Horz       | Vert | Horz       | Vert | Horz       | Vert  |
| A             | 1           | 2.3        | 3.9  | 0.8        | 1.4  | 2.9        | 5.3  | 1.5        | 1.3  | -5.6       | -8.3  |
| A             | 11          | -2.3       | 4.2  | -0.7       | 1.7  | -2.9       | 7.5  | -1.5       | 3.9  | 1.1        | -8.0  |
| B *           | 1           | 1.5        | 2.7  | 1.7        | 2.5  | 6.4        | 9.9  | 3.3        | 2.5  | -11.4      | -15.5 |
| B *           | 11          | -1.5       | 3.3  | -1.6       | 3.2  | -6.3       | 12.9 | -3.3       | 7.3  | 3.2        | -14.8 |

| Frame<br>Line | Col<br>Line | -Wind_R1-- |       | -Wind_L2-- |      | -Wind_R2-- |       | Seismic_L- |      | Seismic_R- |      |
|---------------|-------------|------------|-------|------------|------|------------|-------|------------|------|------------|------|
|               |             | Horz       | Vert  | Horz       | Vert | Horz       | Vert  | Horz       | Vert | Horz       | Vert |
| A             | 1           | -2.3       | -6.5  | -4.4       | -4.7 | -1.2       | -2.9  | -0.2       | -0.1 | 0.2        | 0.1  |
| A             | 11          | 4.4        | -9.9  | 0.5        | -3.8 | 3.7        | -5.6  | -0.2       | 0.1  | 0.2        | -0.1 |
| B *           | 1           | -5.4       | -12.1 | -8.8       | -8.8 | -2.8       | -5.3  | -0.3       | -0.1 | 0.3        | 0.1  |
| B *           | 11          | 9.3        | -18.2 | 1.6        | -7.0 | 7.6        | -10.4 | -0.2       | 0.1  | 0.2        | -0.1 |

| Frame<br>Line | Col<br>Line | -LnWind_1- |       | -LnWind_2- |       | Ln_Seismic |      |
|---------------|-------------|------------|-------|------------|-------|------------|------|
|               |             | Horz       | Vert  | Horz       | Vert  | Horz       | Vert |
| A             | 1           | -2.7       | -8.0  | -3.5       | -6.9  | 0.0        | 0.0  |
| A             | 11          | 1.0        | -7.6  | 0.3        | -8.7  | 0.0        | 0.0  |
| B *           | 1           | -5.7       | -18.7 | -7.2       | -16.6 | 0.0        | -0.9 |
| B *           | 11          | 2.8        | -18.7 | 1.5        | -20.8 | 0.0        | -1.1 |

B \* Frame Lines :B C

## Endwall Column Reactions

| Frame<br>Line | Col<br>Line | Dead<br>Vert | Collat<br>Vert | Live<br>Vert | -Brc_Wind_L- |      | -Brc_Wind_R- |       | -Out_Of_Plane- |                |
|---------------|-------------|--------------|----------------|--------------|--------------|------|--------------|-------|----------------|----------------|
|               |             |              |                |              | Horz         | Vert | Horz         | Vert  | Wind_P<br>Horz | Wind_S<br>Horz |
| A             | 2           | 1.7          | 0.0            | 0.0          | 0.0          | 0.0  | 0.0          | 0.0   | -5.5           | 6.0            |
| A             | 10          | 1.7          | 0.0            | 0.0          | 0.0          | 0.0  | 0.0          | 0.0   | -5.5           | 6.1            |
| D             | 12          | 0.6          | 0.3            | 2.0          | 0.0          | -3.1 | 0.0          | -2.0  | 0.0            | 0.0            |
| D             | 8           | 1.5          | 0.9            | 5.7          | 2.8          | -9.9 | 0.0          | -2.5  | -5.1           | 5.6            |
| D             | 4           | 1.5          | 0.9            | 5.7          | 0.0          | -2.7 | 3.0          | -10.1 | -5.0           | 5.5            |
| D             | 1           | 0.6          | 0.3            | 2.0          | 0.0          | -2.0 | 0.0          | -3.1  | 0.0            | 0.0            |

## Endwall Column Reactions

| Frame<br>Line | Col<br>Line | -Raf_Wind_L- |      | -Raf_Wind_R- |      | --Seismic_L- |      | --Seismic_R- |      | WindLn<br>Vert |
|---------------|-------------|--------------|------|--------------|------|--------------|------|--------------|------|----------------|
|               |             | Horz         | Vert | Horz         | Vert | Horz         | Vert | Horz         | Vert |                |
| A             | 2           | -0.5         | 0.0  | -0.5         | 0.0  | -0.5         | 0.0  | -0.5         | 0.0  | 0.0            |
| A             | 10          | -0.5         | 0.0  | -0.5         | 0.0  | -0.5         | 0.0  | -0.5         | 0.0  | 0.0            |
| D             | 12          | 0.0          | -3.1 | 0.0          | -2.0 | 0.0          | 0.0  | 0.0          | 0.0  | -3.1           |
| D             | 8           | 0.0          | -7.6 | 0.0          | -5.0 | 0.0          | -0.4 | 0.0          | 0.4  | -7.6           |
| D             | 4           | 0.0          | -5.0 | 0.0          | -7.6 | 0.0          | 0.4  | 0.0          | -0.4 | -7.7           |
| D             | 1           | 0.0          | -2.0 | 0.0          | -3.1 | 0.0          | 0.0  | 0.0          | 0.0  | -3.1           |

| Frame<br>Line | Col<br>Line | --Aux_ 1--- |      | --Aux_ 2--- |      | --Aux_ 3--- |      | --Aux_ 4--- |      |
|---------------|-------------|-------------|------|-------------|------|-------------|------|-------------|------|
|               |             | Horz        | Vert | Horz        | Vert | Horz        | Vert | Horz        | Vert |
| A             | 2           | -0.5        | 0.0  | -0.5        | 0.0  | -0.5        | 0.0  | -0.5        | 0.0  |
| A             | 10          | -0.5        | 0.0  | -0.5        | 0.0  | -0.5        | 0.0  | -0.5        | 0.0  |
| D             | 12          | 0.0         | 1.1  | 0.0         | 0.0  | 0.0         | 1.0  | 0.0         | -0.1 |
| D             | 8           | 0.0         | 1.7  | 0.0         | -0.3 | 0.0         | 3.1  | 0.0         | 1.2  |
| D             | 4           | 0.0         | -0.3 | 0.0         | 1.7  | 0.0         | 1.2  | 0.0         | 3.1  |
| D             | 1           | 0.0         | 0.0  | 0.0         | 1.1  | 0.0         | -0.1 | 0.0         | 1.0  |

05-909A

Seismic Design Report:

4/20/06 10:57am

## Building Data

```

Code           =FBC  04
Length         = 70.00
Width          = 70.00
Left Eave Height = 16.25
Right Eave Height = 16.73

```

## Seismic Formula

```

Base Shear, V      = 0.667*1.2*Fa*Ss*W/R
Shear Force, E     = Omega*Rho*V/1.4
Zone/Design Category= B
Fa*Ss              = 0.220
Rho                = 2-20/(RMax*SQRT(Width*Length))

```

## Seismic Dead Load, W

```

Roof Dead+Collat = 5.00 (psf )
Frame Dead       = 2.00 (psf )
Roof Total       = 7.00 (psf ) , Weight= 34.30 (k )
L_EW Dead       = 2.00 (psf ) , Weight= 1.45 (k )
R_EW Dead       = 2.00 (psf ) , Weight= 1.45 (k )
F_SW Dead       = 2.00 (psf ) , Weight= 1.17 (k )
B_SW Dead       = 2.00 (psf ) , Weight= 1.14 (k )
Total = 39.51 (k )

```

## Seismic Forces

## Roof Bracing

```

R = 5.0 , Rho = 1.43, RMax = 0.50, Omega= 2.00
W = 37.20 (k )
Force, V = 1.31 (k )
Force, E = 2.67 (k )

```

## Sidewall Bracing

```

Front R = 5.0 , Rho = 1.43, RMax = 0.50, Omega= 2.00
W = 23.94 (k )
Force, V = 0.84 (k )
Force, E = 1.72 (k )
Back R = 5.0 , Rho = 1.43, RMax = 0.50, Omega= 2.00
W = 19.75 (k )
Force, V = 0.69 (k )
Force, E = 1.42 (k )

```

## Endwall Bracing

Right            R    =    5.0    , Rho = 1.14, RMax = 0.33, Omega= 2.00  
                 W    =    7.48 (k )  
Force, V       =    0.26 (k )  
Force, E       =    0.43 (k )

## Rigid Frames

                 R    =    3.5    , Rho = 1.14, RMax = 0.33, Omega= 1.00  
Frame 1        W    =    7.80 (k )  
                 Force, V    =    0.39 (k )  
                 Force, E    =    0.32 (k )  
Frame 2        W    =    12.19 (k )  
                 Force, V    =    0.61 (k )  
                 Force, E    =    0.50 (k )

## End Plates

Frame           Omega=    3.00

=====

Adel Steel, Inc.  
601, S. Elm St.  
Adel, GA 31620

STRUCTURAL DESIGN CALCULATIONS  
FOR

Williams Dannacker  
6054 SW 52nd Terr.  
Palm City FL 34990

Lake City FL  
6002

BUILDING DATA

Width (ft) = 70.0  
Length (ft) = 70.0  
Eave Height (ft) = 16.3/ 16.7  
Roof Slope (rise/12 ) = 3.00/ 2.84  
Dead Load (psf ) = 2.0  
Roof Live Load (psf ) = 20.0  
Frame Live Load (psf ) = 12.0  
Collat. Load (psf ) = 3.0  
Wind Speed (mph ) = 120.0  
Wind Code = FBC 04  
Closed/Open = C  
Exposure = B  
Importance - Wind = 1.00  
Importance - Seismic = 1.00  
Seismic Design Category = B  
Seismic Coeff (Fa\*Ss) = 0.22

Designer =

-----

4/20/06

```
=====
05-909A          Design Loads For Each Building Component:  4/20/06  10:57am
=====
```

# FRONT SIDEWALL: -----

## BASIC LOADS:

|       |                 |        | -----Edge_Strip_Ratio----- |      |       |      |
|-------|-----------------|--------|----------------------------|------|-------|------|
| Basic | Wind_Load_Ratio |        | Zone                       |      |       | Col/ |
| Wind  | Deflect         | Factor | Width                      | Girt | Panel | Jamb |
| 21.9  | 1.00            | 1.00   | 6.60                       | 1.07 | 1.23  | 1.07 |

## WIND PRESSURE/SUCTION:

| Wind  | Wind  | Wind |                |
|-------|-------|------|----------------|
| Press | Suct  | Long |                |
| 20.8  | -22.8 |      | .. Girt/Header |
| 25.9  | -28.1 |      | .. Panel       |
| 20.8  | -22.8 |      | .. Jamb        |
| 39.5  | -24.1 |      | .. Parapet     |

# BACK SIDEWALL: -----

## BASIC LOADS:

|       |                 |        | -----Edge_Strip_Ratio----- |      |       |      |
|-------|-----------------|--------|----------------------------|------|-------|------|
| Basic | Wind_Load_Ratio |        | Zone                       |      |       | Col/ |
| Wind  | Deflect         | Factor | Width                      | Girt | Panel | Jamb |
| 21.9  | 1.00            | 1.00   | 6.60                       | 1.07 | 1.23  | 1.07 |

## WIND PRESSURE/SUCTION:

| Wind  | Wind  | Wind |                |
|-------|-------|------|----------------|
| Press | Suct  | Long |                |
| 20.8  | -22.8 |      | .. Girt/Header |
| 25.9  | -28.1 |      | .. Panel       |
| 20.8  | -22.8 |      | .. Jamb        |
| 39.5  | -24.1 |      | .. Parapet     |

# LEFT ENDWALL: -----

## BASIC LOADS:

|      |        |      |      |       |                 |        | -----Edge_Strip_Ratio----- |      |       |      |
|------|--------|------|------|-------|-----------------|--------|----------------------------|------|-------|------|
| Dead | Collat | Live | Snow | Basic | Wind_Load_Ratio |        | Zone                       |      |       | Col/ |
| Load | Load   | Load | Load | Wind  | Deflect         | Factor | Width                      | Girt | Panel | Jamb |
| 2.0  | 3.0    | 20.0 | 0.0  | 21.9  | 1.00            | 1.00   | 6.60                       | 1.07 | 1.23  | 1.07 |

## BASIC LOADS AT EAVE:

| Seis_Coeff |       | Seis_Load |       | ---Torsion--- |         |
|------------|-------|-----------|-------|---------------|---------|
| Frame      | Brace | Frame     | Brace | Wind          | Seismic |
| 0.058      | 0.058 | 0.00      | 0.10  | 0.00          | 0.00    |

## WIND PRESSURE/SUCTION:

| Wind  | Wind  |                |
|-------|-------|----------------|
| Press | Suct  |                |
| 20.8  | -22.8 | .. Column      |
| 20.8  | -22.8 | .. Girt/Header |
| 20.8  | -22.8 | .. Jamb        |
| 25.9  | -28.1 | .. Panel       |
| 39.5  | -24.1 | .. Parapet     |

## WIND COEFFICIENTS:

| Surf | Rafter_Wind_1 | Rafter_Wind_2 | Bracing_Wind | Long  | Surface  |
|------|---------------|---------------|--------------|-------|----------|
| Id   | Left          | Right         | Left         | Right | Friction |
| 1    | 0.00          | 0.00          | 0.00         | 0.00  | 0.00     |

|   |       |       |       |       |       |       |       |      |
|---|-------|-------|-------|-------|-------|-------|-------|------|
| 2 | -1.19 | -0.77 | -0.83 | -0.41 | -1.19 | -0.77 | -1.18 | 0.00 |
| 3 | -0.77 | -1.19 | -0.41 | -0.83 | -0.77 | -1.19 | -1.18 | 0.00 |
| 4 | 0.00  | 0.00  | 0.00  | 0.00  | -0.82 | 0.54  | 0.00  | 0.00 |

## COLUMN &amp; BRACING DESIGN LOADS:

| Load |    | Snow/ |      | Rafter_Wind |      | Brace_Wind |      | Long  | Column_Wind |       |      | Aux_Load |    |      |
|------|----|-------|------|-------------|------|------------|------|-------|-------------|-------|------|----------|----|------|
| No.  | Id | Dead  | Coll | Live        | Left | Right      | Left | Right | Wind        | Press | Suct | Seis     | Id | Coef |
| 6    | 1  | 1.00  | 1.00 | 1.00        | 0.00 | 0.00       | 0.00 | 0.00  | 0.00        | 0.00  | 0.00 | 0.00     | 0  | 0.00 |
|      | 2  | 1.00  | 1.00 | 0.00        | 0.00 | 0.00       | 1.30 | 0.00  | 0.00        | 0.00  | 1.30 | 0.00     | 0  | 0.00 |
|      | 3  | 1.00  | 1.00 | 0.00        | 0.00 | 0.00       | 0.00 | 1.30  | 0.00        | 0.00  | 1.30 | 0.00     | 0  | 0.00 |
|      | 4  | 1.00  | 1.00 | 0.00        | 0.00 | 0.00       | 0.00 | 1.30  | 1.30        | 0.00  | 0.00 | 0.00     | 0  | 0.00 |
|      | 5  | 1.00  | 1.00 | 0.00        | 1.30 | 0.00       | 0.00 | 0.00  | 0.00        | 1.30  | 0.00 | 0.00     | 0  | 0.00 |
|      | 6  | 1.00  | 1.00 | 0.00        | 0.00 | 1.30       | 0.00 | 0.00  | 0.00        | 1.30  | 0.00 | 0.00     | 0  | 0.00 |

## RAFTER DESIGN LOADS:

| Load |    | Snow/ |      | Rafter_Wind_1 |      | Rafter_Wind_2 |      | Long  | Aux_Load |      |    |       |
|------|----|-------|------|---------------|------|---------------|------|-------|----------|------|----|-------|
| No   | Id | Dead  | Coll | Live          | Left | Right         | Left | Right | Wind     | Seis | Id | Coef  |
| 12   | 1  | 1.00  | 1.00 | 1.00          | 0.00 | 0.00          | 0.00 | 0.00  | 0.00     | 0.00 | 0  | 0.00  |
|      | 2  | 1.00  | 1.00 | 0.00          | 1.30 | 0.00          | 0.00 | 0.00  | 0.00     | 0.00 | 0  | 0.00  |
|      | 3  | 1.00  | 1.00 | 0.00          | 0.00 | 1.30          | 0.00 | 0.00  | 0.00     | 0.00 | 0  | 0.00  |
|      | 4  | 1.00  | 1.00 | 0.00          | 0.00 | 0.00          | 1.30 | 0.00  | 0.00     | 0.00 | 0  | 0.00  |
|      | 5  | 1.00  | 1.00 | 0.00          | 0.00 | 0.00          | 0.00 | 1.30  | 0.00     | 0.00 | 0  | 0.00  |
|      | 6  | 1.00  | 1.00 | 0.00          | 0.00 | 0.00          | 0.00 | 0.00  | 1.30     | 0.00 | 0  | 0.00  |
|      | 7  | 1.00  | 1.00 | 0.50          | 0.00 | 0.00          | 0.00 | 0.00  | 0.00     | 0.00 | 3  | 1.00  |
|      | 8  | 1.00  | 1.00 | 0.50          | 0.00 | 0.00          | 0.00 | 0.00  | 0.00     | 0.00 | 4  | 1.00  |
|      | 9  | 1.00  | 1.00 | 0.50          | 0.00 | 0.00          | 0.00 | 0.00  | 0.00     | 0.00 | 1  | 1.00  |
|      | 10 | 1.00  | 1.00 | 0.50          | 0.00 | 0.00          | 0.00 | 0.00  | 0.00     | 0.00 | 2  | 1.00  |
|      | 11 | 1.00  | 1.00 | 1.00          | 0.00 | 0.00          | 0.00 | 0.00  | 0.00     | 0.00 | 1  | -1.00 |
|      | 12 | 1.00  | 1.00 | 1.00          | 0.00 | 0.00          | 0.00 | 0.00  | 0.00     | 0.00 | 2  | -1.00 |

## AUXILIARY LOADS:

| No. | Aux | Aux        | No.  | Add_Load |
|-----|-----|------------|------|----------|
| Aux | Id  | Name       | Load | Id Coeff |
| 4   | 1   | ElPAT_LL 1 | 1    | 1 0.50   |
|     | 2   | ElPAT_LL 2 | 1    | 4 0.50   |
|     | 3   | ElPAT_LL 3 | 3    | 1 0.50   |
|     |     |            |      | 2 0.50   |
|     |     |            |      | 3 0.50   |
|     |     |            |      | 4 0.50   |
|     | 4   | ElPAT_LL 4 | 3    | 2 0.50   |
|     |     |            |      | 3 0.50   |
|     |     |            |      | 4 0.50   |

## ADDITIONAL LOADS:

| No. | Add | Surf | Basic  | Load | Fx    | Fy    | Mom   | X     | Y     | .. Conc |
|-----|-----|------|--------|------|-------|-------|-------|-------|-------|---------|
| Add | Id  | Id   | Load   | Type | W1    | W2    | Co    | Dx1   | Dx2   | .. Dist |
| 8   | 1   | 2    | -----  | D    | -0.01 | -0.01 | 0.25  | 0.00  | 9.96  |         |
|     | 2   | 2    | -----  | D    | -0.01 | -0.01 | 0.25  | 9.96  | 36.08 |         |
|     | 3   | 3    | -----  | D    | -0.01 | -0.01 | -0.24 | 0.00  | 26.02 |         |
|     | 4   | 3    | -----  | D    | -0.01 | -0.01 | -0.24 | 26.02 | 35.96 |         |
|     | 5   | 2    | WINDL1 | D    | -0.10 | -0.10 | 0.00  | 35.00 | 36.08 |         |
|     | 6   | 2    | WINDL2 | D    | -0.10 | -0.10 | 0.00  | 35.00 | 36.08 |         |
|     | 7   | 3    | WINDR1 | D    | -0.11 | -0.11 | 0.00  | 0.00  | 0.96  |         |
|     | 8   | 3    | WINDR2 | D    | -0.11 | -0.11 | 0.00  | 0.00  | 0.96  |         |

## RIGHT ENDWALL:

## BASIC LOADS:

| Dead | Collat | Live | Snow | Basic | Wind_Load_Ratio | -----Edge_Strip_Ratio----- |      |       |      |       |          |
|------|--------|------|------|-------|-----------------|----------------------------|------|-------|------|-------|----------|
| Load | Load   | Load | Load | Wind  | Deflect         | Factor                     | Zone | Width | Girt | Panel | Col/Jamb |
| 2.0  | 3.0    | 18.6 | 0.0  | 21.9  | 1.00            | 1.00                       |      | 6.60  | 1.07 | 1.23  | 1.07     |

## BASIC LOADS AT EAVE:

| Seis_Coeff | Seis_Load | ---Torsion--- |         |
|------------|-----------|---------------|---------|
| Frame      | Brace     | Frame         | Brace   |
| 0.058      | 0.058     | 0.43          | 0.43    |
|            |           | Wind          | Seismic |
|            |           | 0.00          | 0.00    |

## WIND PRESSURE/SUCTION:

| Wind Press | Wind Suct |                |
|------------|-----------|----------------|
| 20.8       | -22.8     | .. Column      |
| 20.8       | -22.8     | .. Girt/Header |
| 20.8       | -22.8     | .. Jamb        |
| 25.9       | -28.1     | .. Panel       |
| 39.5       | -24.1     | .. Parapet     |

## WIND COEFFICIENTS:

| Surf Id | Rafter_Wind_1 Left | Rafter_Wind_1 Right | Rafter_Wind_2 Left | Rafter_Wind_2 Right | Bracing_Wind Left | Bracing_Wind Right | Long Wind | Surface Friction |
|---------|--------------------|---------------------|--------------------|---------------------|-------------------|--------------------|-----------|------------------|
| 1       | 0.00               | 0.00                | 0.00               | 0.00                | 0.54              | -0.82              | 0.00      | 0.00             |
| 2       | -1.19              | -0.77               | -0.83              | -0.41               | -1.19             | -0.77              | -1.18     | 0.00             |
| 3       | -0.77              | -1.19               | -0.41              | -0.83               | -0.77             | -1.19              | -1.18     | 0.00             |
| 4       | 0.00               | 0.00                | 0.00               | 0.00                | -0.77             | 0.59               | 0.00      | 0.00             |

## COLUMN &amp; BRACING DESIGN LOADS:

| Load No. | Id | Dead | Coll | Snow/Live | Rafter_Wind_1 Left | Rafter_Wind_1 Right | Brace_Wind Left | Brace_Wind Right | Long Wind | Column_Wind Press | Column_Wind Suct | Seis  | Aux_Load Id | Aux_Load Coef |
|----------|----|------|------|-----------|--------------------|---------------------|-----------------|------------------|-----------|-------------------|------------------|-------|-------------|---------------|
| 8        | 1  | 1.00 | 1.00 | 1.00      | 0.00               | 0.00                | 0.00            | 0.00             | 0.00      | 0.00              | 0.00             | 0.00  | 0           | 0.00          |
|          | 2  | 1.00 | 1.00 | 0.00      | 0.00               | 0.00                | 1.30            | 0.00             | 0.00      | 0.00              | 1.30             | 0.00  | 0           | 0.00          |
|          | 3  | 1.00 | 1.00 | 0.00      | 0.00               | 0.00                | 0.00            | 1.30             | 0.00      | 0.00              | 1.30             | 0.00  | 0           | 0.00          |
|          | 4  | 1.00 | 1.00 | 0.00      | 0.00               | 0.00                | 0.00            | 0.00             | 1.30      | 1.30              | 0.00             | 0.00  | 0           | 0.00          |
|          | 5  | 1.00 | 1.00 | 0.00      | 1.30               | 0.00                | 0.00            | 0.00             | 0.00      | 0.00              | 1.30             | 0.00  | 0           | 0.00          |
|          | 6  | 1.00 | 1.00 | 0.00      | 0.00               | 1.30                | 0.00            | 0.00             | 0.00      | 0.00              | 1.30             | 0.00  | 0           | 0.00          |
|          | 7  | 1.00 | 1.00 | 0.00      | 0.00               | 0.00                | 0.00            | 0.00             | 0.00      | 0.00              | 0.00             | 1.00  | 0           | 0.00          |
|          | 8  | 1.00 | 1.00 | 0.00      | 0.00               | 0.00                | 0.00            | 0.00             | 0.00      | 0.00              | 0.00             | -1.00 | 0           | 0.00          |

## RAFTER DESIGN LOADS:

| Load No. | Id | Dead | Coll | Snow/Live | Rafter_Wind_1 Left | Rafter_Wind_1 Right | Rafter_Wind_2 Left | Rafter_Wind_2 Right | Long Wind | Seis  | Aux_Load Id | Aux_Load Coef |
|----------|----|------|------|-----------|--------------------|---------------------|--------------------|---------------------|-----------|-------|-------------|---------------|
| 14       | 1  | 1.00 | 1.00 | 1.00      | 0.00               | 0.00                | 0.00               | 0.00                | 0.00      | 0.00  | 0           | 0.00          |
|          | 2  | 1.00 | 1.00 | 0.00      | 1.30               | 0.00                | 0.00               | 0.00                | 0.00      | 0.00  | 0           | 0.00          |
|          | 3  | 1.00 | 1.00 | 0.00      | 0.00               | 1.30                | 0.00               | 0.00                | 0.00      | 0.00  | 0           | 0.00          |
|          | 4  | 1.00 | 1.00 | 0.00      | 0.00               | 0.00                | 1.30               | 0.00                | 0.00      | 0.00  | 0           | 0.00          |
|          | 5  | 1.00 | 1.00 | 0.00      | 0.00               | 0.00                | 0.00               | 1.30                | 0.00      | 0.00  | 0           | 0.00          |
|          | 6  | 1.00 | 1.00 | 0.00      | 0.00               | 0.00                | 0.00               | 0.00                | 1.30      | 0.00  | 0           | 0.00          |
|          | 7  | 1.00 | 1.00 | 0.50      | 0.00               | 0.00                | 0.00               | 0.00                | 0.00      | 0.00  | 3           | 1.00          |
|          | 8  | 1.00 | 1.00 | 0.50      | 0.00               | 0.00                | 0.00               | 0.00                | 0.00      | 0.00  | 4           | 1.00          |
|          | 9  | 1.00 | 1.00 | 0.50      | 0.00               | 0.00                | 0.00               | 0.00                | 0.00      | 0.00  | 1           | 1.00          |
|          | 10 | 1.00 | 1.00 | 0.50      | 0.00               | 0.00                | 0.00               | 0.00                | 0.00      | 0.00  | 2           | 1.00          |
|          | 11 | 1.00 | 1.00 | 1.00      | 0.00               | 0.00                | 0.00               | 0.00                | 0.00      | 0.00  | 1           | -1.00         |
|          | 12 | 1.00 | 1.00 | 1.00      | 0.00               | 0.00                | 0.00               | 0.00                | 0.00      | 0.00  | 2           | -1.00         |
|          | 13 | 1.00 | 1.00 | 0.00      | 0.00               | 0.00                | 0.00               | 0.00                | 0.00      | 1.00  | 0           | 0.00          |
|          | 14 | 1.00 | 1.00 | 0.00      | 0.00               | 0.00                | 0.00               | 0.00                | 0.00      | -1.00 | 0           | 0.00          |

## AUXILIARY LOADS:

| No. | Aux Id | Aux Name   | No. | Add_Load Id | Add_Load Coeff |
|-----|--------|------------|-----|-------------|----------------|
| 4   | 1      | E2PAT_LL 1 | 1   | 1           | 0.50           |
|     | 2      | E2PAT_LL 2 | 1   | 4           | 0.50           |
|     | 3      | E2PAT_LL 3 | 3   | 1           | 0.50           |
|     |        |            |     | 2           | 0.50           |
|     |        |            |     | 3           | 0.50           |
|     | 4      | E2PAT_LL 4 | 3   | 2           | 0.50           |
|     |        |            |     | 3           | 0.50           |
|     |        |            |     | 4           | 0.50           |

## ADDITIONAL LOADS:

| No. | Add Id | Surf Id | Basic Load | Load Type | Fx W1 | Fy W2 | Mom Co | X Dx1 | Y Dx2 | .. Conc | .. Dist |
|-----|--------|---------|------------|-----------|-------|-------|--------|-------|-------|---------|---------|
| 8   | 1      | 2       | -----      | D         | -0.21 | -0.21 | 0.24   | 0.00  | 23.98 |         |         |
|     | 2      | 2       | -----      | D         | -0.21 | -0.21 | 0.24   | 23.98 | 35.96 |         |         |
|     | 3      | 3       | -----      | D         | -0.21 | -0.21 | -0.25  | 0.00  | 12.03 |         |         |
|     | 4      | 3       | -----      | D         | -0.21 | -0.21 | -0.25  | 12.03 | 36.08 |         |         |
|     | 5      | 2       | WINDL1     | D         | -0.11 | -0.11 | 0.00   | 35.00 | 35.96 |         |         |
|     | 6      | 2       | WINDL2     | D         | -0.11 | -0.11 | 0.00   | 35.00 | 35.96 |         |         |

|   |   |        |   |       |       |      |      |      |
|---|---|--------|---|-------|-------|------|------|------|
| 7 | 3 | WINDR1 | D | -0.10 | -0.10 | 0.00 | 0.00 | 1.08 |
| 8 | 3 | WINDR2 | D | -0.10 | -0.10 | 0.00 | 0.00 | 1.08 |

## ROOFDES:

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## BASIC LOADS:

| Dead Load | Collat Load | Live Load | Snow Load | Basic Wind | Wind Load Ratio Deflect | Surface Friction Factor | --Seis_Coeff-- Frame | % Snow |
|-----------|-------------|-----------|-----------|------------|-------------------------|-------------------------|----------------------|--------|
| 2.0       | 3.0         | 20.0      | 0.0       | 21.9       | 1.00                    | 1.00                    | 0.072                | 0.00   |

## WIND PRESSURE/SUCTION:

| Wind Press | Wind Suct | Wind Suct_Roof |                                 |
|------------|-----------|----------------|---------------------------------|
| 10.5       | -21.5     |                | .. Purlins                      |
| 0.0        | -48.3     |                | .. Gable Extensions             |
| 14.9       | -23.7     |                | .. Panels                       |
| 12.7       | -2.4      | -15.1          | .. Long Bracing, Building       |
| 17.3       | -5.5      |                | .. Long Bracing, Wall Edge Zone |
| 39.5       | -24.1     | 17.5           | .. Long Bracing, Facia/Parapet  |

## EDGE &amp; CORNER ZONE WIND:

| -----Left_End----- |     |                |        |        |       | -----Center----- |        |       | -----Right_End----- |        |        |       |
|--------------------|-----|----------------|--------|--------|-------|------------------|--------|-------|---------------------|--------|--------|-------|
| Surface            |     | -----Coeff---- |        |        |       | -----Coeff----   |        |       | -----Coeff----      |        |        |       |
| Id                 | Loc | Width          | Length | Purlin | Panel | Width            | Purlin | Panel | Width               | Length | Purlin | Panel |
| 2                  | L   | 6.60           | 6.60   | 1.16   | 1.00  | 6.60             | 1.16   | 1.00  | 6.60                | 6.60   | 1.16   | 1.00  |
|                    | C   | 22.88          | 6.60   | 1.16   | 1.00  | 22.88            | 1.00   | 1.00  | 22.88               | 6.60   | 1.16   | 1.00  |
|                    | R   | 6.60           | 6.60   | 1.16   | 1.00  | 6.60             | 1.16   | 1.00  | 6.60                | 6.60   | 1.16   | 1.00  |
| 3                  | L   | 6.60           | 6.60   | 1.16   | 1.00  | 6.60             | 1.16   | 1.00  | 6.60                | 6.60   | 1.16   | 1.00  |
|                    | C   | 22.76          | 6.60   | 1.16   | 1.00  | 22.76            | 1.00   | 1.00  | 22.76               | 6.60   | 1.16   | 1.00  |
|                    | R   | 6.60           | 6.60   | 1.16   | 1.00  | 6.60             | 1.16   | 1.00  | 6.60                | 6.60   | 1.16   | 1.00  |

## PURLIN DESIGN LOADS:

| Surf Id | No. Loads | Load Id | Dead | Collat | Live/Snow | Wind Press | Wind Suct | Aux_Load Id | Coef  |
|---------|-----------|---------|------|--------|-----------|------------|-----------|-------------|-------|
| 2       | 9         | 1       | 1.00 | 1.00   | 1.00      | 0.00       | 0.00      | 0           | 0.00  |
|         |           | 2       | 1.00 | 1.00   | 0.00      | 1.30       | 0.00      | 0           | 0.00  |
|         |           | 3       | 1.00 | 0.00   | 0.00      | 0.00       | 1.30      | 0           | 0.00  |
|         |           | 4       | 1.00 | 1.00   | 0.50      | 0.00       | 0.00      | 3           | 1.00  |
|         |           | 5       | 1.00 | 1.00   | 0.50      | 0.00       | 0.00      | 4           | 1.00  |
|         |           | 6       | 1.00 | 1.00   | 0.50      | 0.00       | 0.00      | 1           | 1.00  |
|         |           | 7       | 1.00 | 1.00   | 0.50      | 0.00       | 0.00      | 2           | 1.00  |
|         |           | 8       | 1.00 | 1.00   | 1.00      | 0.00       | 0.00      | 1           | -1.00 |
|         |           | 9       | 1.00 | 1.00   | 1.00      | 0.00       | 0.00      | 2           | -1.00 |
| 3       | 9         | 1       | 1.00 | 1.00   | 1.00      | 0.00       | 0.00      | 0           | 0.00  |
|         |           | 2       | 1.00 | 1.00   | 0.00      | 1.30       | 0.00      | 0           | 0.00  |
|         |           | 3       | 1.00 | 0.00   | 0.00      | 0.00       | 1.30      | 0           | 0.00  |
|         |           | 4       | 1.00 | 1.00   | 0.50      | 0.00       | 0.00      | 3           | 1.00  |
|         |           | 5       | 1.00 | 1.00   | 0.50      | 0.00       | 0.00      | 4           | 1.00  |
|         |           | 6       | 1.00 | 1.00   | 0.50      | 0.00       | 0.00      | 1           | 1.00  |
|         |           | 7       | 1.00 | 1.00   | 0.50      | 0.00       | 0.00      | 2           | 1.00  |
|         |           | 8       | 1.00 | 1.00   | 1.00      | 0.00       | 0.00      | 1           | -1.00 |
|         |           | 9       | 1.00 | 1.00   | 1.00      | 0.00       | 0.00      | 2           | -1.00 |

## BRACING DESIGN LOADS:

| Surf Id | No. Loads | Load Id | Dead | Collat | Live/Snow | Wind Press | Wind Suct | Seis Load | Aux_Load Id | Coef |
|---------|-----------|---------|------|--------|-----------|------------|-----------|-----------|-------------|------|
| 2       | 3         | 1       | 1.00 | 1.00   | 1.00      | 1.00       | 1.00      | 0.00      | 0           | 0.00 |
|         |           | 2       | 1.00 | 0.00   | 0.00      | 1.30       | 1.30      | 0.00      | 0           | 0.00 |
|         |           | 3       | 1.02 | 1.02   | 1.00      | 0.00       | 0.00      | 1.00      | 0           | 0.00 |
| 3       | 3         | 1       | 1.00 | 1.00   | 1.00      | 1.00       | 1.00      | 0.00      | 0           | 0.00 |
|         |           | 2       | 1.00 | 0.00   | 0.00      | 1.30       | 1.30      | 0.00      | 0           | 0.00 |
|         |           | 3       | 1.02 | 1.02   | 1.00      | 0.00       | 0.00      | 1.00      | 0           | 0.00 |

## AUXILIARY LOADS:

| No. Aux | Aux Id | Aux Name | No. Load | Add_Load Id | Coef |
|---------|--------|----------|----------|-------------|------|
| 4       | 1      | -----    | 1        | 1           | 0.50 |

|   |       |   |   |      |
|---|-------|---|---|------|
| 2 | ----- | 1 | 3 | 0.50 |
| 3 | ----- | 2 | 1 | 0.50 |
|   |       |   | 2 | 0.50 |
| 4 | ----- | 2 | 2 | 0.50 |
|   |       |   | 3 | 0.50 |

## ADDITIONAL LOADS:

| No. | Add | Surf | Basic | Load | Fy    |       | Dx   |      | .. Conc |
|-----|-----|------|-------|------|-------|-------|------|------|---------|
| Add | Id  | Id   | Load  | Type | W1    | W2    | Dx1  | Dx2  | .. Dist |
| 7   | 1   | 0    | ----- | D    | -20.0 | -20.0 | 0.0  | 23.3 |         |
|     | 2   | 0    | ----- | D    | -20.0 | -20.0 | 23.3 | 46.7 |         |
|     | 3   | 0    | ----- | D    | -20.0 | -20.0 | 46.7 | 70.0 |         |
|     | 4   | 2    | WINDL | F    | 1.1   | 0.0   | 23.3 | 16.7 |         |
|     | 5   | 2    | SEISL | F    | 0.3   | 0.0   | 23.3 | 16.7 |         |
|     | 6   | 2    | WINDR | F    | 1.1   | 0.0   | 46.7 | 16.7 |         |
|     | 7   | 2    | SEISR | F    | 0.3   | 0.0   | 46.7 | 16.7 |         |

## RIGID FRAME #1:

## BASIC LOADS:

| Dead | Live | Snow | Collateral | Basic | Defl  |
|------|------|------|------------|-------|-------|
|      |      |      |            | Wind  | Ratio |
| 2.0  | 12.0 | 0.0  | 3.0        | 21.9  | 1.00  |

## BASIC LOADS AT EAVE:

| ----Seismic---- |       |      | Weak_Axis_L |      | Weak_Axis_R |      | --Torsion-- |      | -EW_Brace-- |      |
|-----------------|-------|------|-------------|------|-------------|------|-------------|------|-------------|------|
| Load            | SpcEP | Coef | Wind        | Seis | Wind        | Seis | Wind        | Seis | Wind        | Seis |
| 0.16            | 0.49  | 0.22 | 0.00        | 0.00 | 0.00        | 0.00 | 0.00        | 0.00 | 0.00        | 0.00 |

## WIND COEFFICIENTS:

| Surf | --Wind_1-- |       | --Wind_2-- |       | Long_Wind |       | Surface  |
|------|------------|-------|------------|-------|-----------|-------|----------|
| Id   | Left       | Right | Left       | Right | 1         | 2     | Friction |
| 1    | 0.30       | -0.55 | 0.66       | -0.19 | -0.63     | -0.63 | 0.00     |
| 2    | -0.87      | -0.61 | -0.51      | -0.25 | -0.87     | -0.55 | 0.00     |
| 3    | -0.61      | -0.87 | -0.25      | -0.51 | -0.55     | -0.87 | 0.00     |
| 4    | -0.55      | 0.29  | -0.19      | 0.65  | -0.63     | -0.63 | 0.00     |

## DESIGN LOADS:

| Load |    | Live/ | Live | -Wind_1-- | -Wind_2-- | Long_Wind | -Seismic-- | Aux_Load |      |       |       |      |       |    |      |
|------|----|-------|------|-----------|-----------|-----------|------------|----------|------|-------|-------|------|-------|----|------|
| No.  | Id | Dead  | Coll | Snow      | Right     | Lt        | Rt         | Lt       | Rt   | Lt    | Rt    | Long | Tran  | Id | Coef |
| 18   | 1  | 1.00  | 1.00 | 1.00      | 0.00      | 0.00      | 0.00       | 0.00     | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0  | 0.00 |
|      | 2  | 0.90  | 0.00 | 0.00      | 0.00      | 0.00      | 0.00       | 0.00     | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0  | 0.00 |
|      | 3  | 1.00  | 1.00 | 0.00      | 0.00      | 1.30      | 0.00       | 0.00     | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0  | 0.00 |
|      | 4  | 1.00  | 1.00 | 0.00      | 0.00      | 0.00      | 1.30       | 0.00     | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0  | 0.00 |
|      | 5  | 1.00  | 1.00 | 0.00      | 0.00      | 0.00      | 0.00       | 1.30     | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0  | 0.00 |
|      | 6  | 1.00  | 1.00 | 0.00      | 0.00      | 0.00      | 0.00       | 1.30     | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0  | 0.00 |
|      | 7  | 1.00  | 1.00 | 0.00      | 0.00      | 0.65      | 0.00       | 0.00     | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0  | 0.00 |
|      | 8  | 1.00  | 1.00 | 0.00      | 0.00      | 0.00      | 0.65       | 0.00     | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0  | 0.00 |
|      | 9  | 1.00  | 1.00 | 0.00      | 0.00      | 0.00      | 0.00       | 0.65     | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0  | 0.00 |
|      | 10 | 1.00  | 1.00 | 0.00      | 0.00      | 0.00      | 0.00       | 0.00     | 0.65 | 0.00  | 0.00  | 0.00 | 0.00  | 0  | 0.00 |
|      | 11 | 1.00  | 1.00 | 0.00      | 0.00      | 0.00      | 0.00       | 0.00     | 0.00 | 1.30  | 0.00  | 0.00 | 0.00  | 0  | 0.00 |
|      | 12 | 1.00  | 1.00 | 0.00      | 0.00      | 0.00      | 0.00       | 0.00     | 0.00 | -1.30 | 0.00  | 0.00 | 0.00  | 0  | 0.00 |
|      | 13 | 1.00  | 1.00 | 0.00      | 0.00      | 0.00      | 0.00       | 0.00     | 0.00 | 0.00  | 1.30  | 0.00 | 0.00  | 0  | 0.00 |
|      | 14 | 1.00  | 1.00 | 0.00      | 0.00      | 0.00      | 0.00       | 0.00     | 0.00 | 0.00  | -1.30 | 0.00 | 0.00  | 0  | 0.00 |
|      | 15 | 1.02  | 1.02 | 0.00      | 0.00      | 0.00      | 0.00       | 0.00     | 0.00 | 0.00  | 0.00  | 0.00 | 1.00  | 0  | 0.00 |
|      | 16 | 1.02  | 1.02 | 0.00      | 0.00      | 0.00      | 0.00       | 0.00     | 0.00 | 0.00  | 0.00  | 0.00 | -1.00 | 0  | 0.00 |
|      | 17 | 0.00  | 0.00 | 0.00      | 0.00      | 0.00      | 0.00       | 0.00     | 0.00 | 0.00  | 0.00  | 0.00 | 1.00  | 0  | 0.00 |
|      | 18 | 0.00  | 0.00 | 0.00      | 0.00      | 0.00      | 0.00       | 0.00     | 0.00 | 0.00  | 0.00  | 0.00 | -1.00 | 0  | 0.00 |

## ADDITIONAL LOADS:

| No. | Add | Surf | Basic  | Load | Fx    | Fy    | Mom    | Dx    | Dy    | .. Conc |
|-----|-----|------|--------|------|-------|-------|--------|-------|-------|---------|
| Add | Id  | Id   | Type   | Type | W1    | W2    | Co     | D11   | D12   | .. Dist |
| 15  | 1   | 2    | WINDL1 | D    | -0.07 | -0.07 | 0.000  | 35.00 | 36.08 |         |
|     | 2   | 2    | WINDL2 | D    | -0.07 | -0.07 | 0.000  | 35.00 | 36.08 |         |
|     | 3   | 3    | WINDR1 | D    | -0.07 | -0.07 | 0.000  | 0.00  | 0.96  |         |
|     | 4   | 3    | WINDR2 | D    | -0.07 | -0.07 | 0.000  | 0.00  | 0.96  |         |
|     | 5   | 2    | DEAD   | D    | -0.07 | -0.07 | 0.250  | 9.96  | 36.08 |         |
|     | 6   | 3    | DEAD   | D    | -0.08 | -0.08 | -0.240 | 0.00  | 26.02 |         |

|    |   |        |   |       |       |      |      |       |
|----|---|--------|---|-------|-------|------|------|-------|
| 7  | 4 | DEAD   | C | -0.01 | -0.38 | 0.00 | 0.00 | -0.48 |
| 8  | 4 | COLLAT | C | -0.01 | -0.38 | 0.00 | 0.00 | -0.48 |
| 9  | 4 | LIVE   | C | -0.07 | -2.32 | 0.00 | 0.00 | -0.48 |
| 10 | 4 | WINDR1 | C | 1.26  | 2.21  | 0.00 | 0.00 | -0.48 |
| 11 | 4 | WINDL1 | C | 1.26  | 2.21  | 0.00 | 0.00 | -0.48 |
| 12 | 4 | WINDR2 | C | 0.74  | 1.29  | 0.00 | 0.00 | -0.48 |
| 13 | 4 | WINDL2 | C | 0.74  | 1.29  | 0.00 | 0.00 | -0.48 |
| 14 | 4 | LWIND2 | C | 2.44  | 1.93  | 0.00 | 0.00 | -0.48 |
| 15 | 4 | LWIND1 | C | 2.44  | 1.93  | 0.00 | 0.00 | -0.48 |

## RIGID FRAME #2:

-----  
BASIC LOADS:

| Dead | Live | Snow | Collateral | Basic<br>Wind | Defl<br>Ratio |
|------|------|------|------------|---------------|---------------|
| 2.0  | 12.0 | 0.0  | 3.0        | 21.9          | 1.00          |

## BASIC LOADS AT EAVE:

| ---Seismic--- |      |      | Weak_Axis_L |      | Weak_Axis_R |      | --Torsion-- |      | -EW_Brace-- |      |
|---------------|------|------|-------------|------|-------------|------|-------------|------|-------------|------|
| Load          | Spce | Coef | Wind        | Seis | Wind        | Seis | Wind        | Seis | Wind        | Seis |
| 0.25          | 0.75 | 0.22 | 0.00        | 0.00 | 0.00        | 0.00 | 0.00        | 0.00 | 0.00        | 0.00 |

## WIND COEFFICIENTS:

| Surf | --Wind_1-- |       | --Wind_2-- |       | Long_Wind |       | Surface  |
|------|------------|-------|------------|-------|-----------|-------|----------|
| Id   | Left       | Right | Left       | Right | 1         | 2     | Friction |
| 1    | 0.30       | -0.55 | 0.66       | -0.19 | -0.63     | -0.63 | 0.00     |
| 2    | -0.87      | -0.61 | -0.51      | -0.25 | -0.87     | -0.55 | 0.00     |
| 3    | -0.61      | -0.87 | -0.25      | -0.51 | -0.55     | -0.87 | 0.00     |
| 4    | -0.55      | 0.29  | -0.19      | 0.65  | -0.63     | -0.63 | 0.00     |

## DESIGN LOADS:

| Load |    |      |      | Live/ | Live  | -Wind_1-- |      | -Wind_2-- |      | Long_Wind |       | -Seismic-- |      | Aux_Load |      |      |
|------|----|------|------|-------|-------|-----------|------|-----------|------|-----------|-------|------------|------|----------|------|------|
| No.  | Id | Dead | Coll | Snow  | Right | Lt        | Rt   | Lt        | Rt   | Lt        | Rt    | Long       | Tran | Id       | Coef |      |
| 18   | 1  | 1.00 | 1.00 | 1.00  | 0.00  | 0.00      | 0.00 | 0.00      | 0.00 | 0.00      | 0.00  | 0.00       | 0.00 | 0        | 0.00 |      |
|      | 2  | 0.90 | 0.00 | 0.00  | 0.00  | 0.00      | 0.00 | 0.00      | 0.00 | 0.00      | 0.00  | 0.00       | 0.00 | 0        | 0.00 |      |
|      | 3  | 1.00 | 1.00 | 0.00  | 0.00  | 1.30      | 0.00 | 0.00      | 0.00 | 0.00      | 0.00  | 0.00       | 0.00 | 0        | 0.00 |      |
|      | 4  | 1.00 | 1.00 | 0.00  | 0.00  | 0.00      | 1.30 | 0.00      | 0.00 | 0.00      | 0.00  | 0.00       | 0.00 | 0        | 0.00 |      |
|      | 5  | 1.00 | 1.00 | 0.00  | 0.00  | 0.00      | 0.00 | 1.30      | 0.00 | 0.00      | 0.00  | 0.00       | 0.00 | 0        | 0.00 |      |
|      | 6  | 1.00 | 1.00 | 0.00  | 0.00  | 0.00      | 0.00 | 0.00      | 1.30 | 0.00      | 0.00  | 0.00       | 0.00 | 0        | 0.00 |      |
|      | 7  | 1.00 | 1.00 | 0.00  | 0.00  | 0.65      | 0.00 | 0.00      | 0.00 | 0.00      | 0.00  | 0.00       | 0.00 | 0        | 0.00 |      |
|      | 8  | 1.00 | 1.00 | 0.00  | 0.00  | 0.00      | 0.65 | 0.00      | 0.00 | 0.00      | 0.00  | 0.00       | 0.00 | 0        | 0.00 |      |
|      | 9  | 1.00 | 1.00 | 0.00  | 0.00  | 0.00      | 0.00 | 0.65      | 0.00 | 0.00      | 0.00  | 0.00       | 0.00 | 0        | 0.00 |      |
|      | 10 | 1.00 | 1.00 | 0.00  | 0.00  | 0.00      | 0.00 | 0.00      | 0.65 | 0.00      | 0.00  | 0.00       | 0.00 | 0        | 0.00 |      |
|      | 11 | 1.00 | 1.00 | 0.00  | 0.00  | 0.00      | 0.00 | 0.00      | 0.00 | 1.30      | 0.00  | 0.00       | 0.00 | 0        | 0.00 |      |
|      | 12 | 1.00 | 1.00 | 0.00  | 0.00  | 0.00      | 0.00 | 0.00      | 0.00 | 0.00      | -1.30 | 0.00       | 0.00 | 0        | 0.00 |      |
|      | 13 | 1.00 | 1.00 | 0.00  | 0.00  | 0.00      | 0.00 | 0.00      | 0.00 | 0.00      | 0.00  | 1.30       | 0.00 | 0        | 0.00 |      |
|      | 14 | 1.00 | 1.00 | 0.00  | 0.00  | 0.00      | 0.00 | 0.00      | 0.00 | 0.00      | 0.00  | -1.30      | 0.00 | 0        | 0.00 |      |
|      | 15 | 1.02 | 1.02 | 0.00  | 0.00  | 0.00      | 0.00 | 0.00      | 0.00 | 0.00      | 0.00  | 0.00       | 0.00 | 1.00     | 0    | 0.00 |
|      | 16 | 1.02 | 1.02 | 0.00  | 0.00  | 0.00      | 0.00 | 0.00      | 0.00 | 0.00      | 0.00  | 0.00       | 0.00 | -1.00    | 0    | 0.00 |
|      | 17 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00      | 0.00 | 0.00      | 0.00 | 0.00      | 0.00  | 0.00       | 0.00 | 1.00     | 0    | 0.00 |
|      | 18 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00      | 0.00 | 0.00      | 0.00 | 0.00      | 0.00  | 0.00       | 0.00 | -1.00    | 0    | 0.00 |

## ADDITIONAL LOADS:

| No. | Add | Surf | Basic  | Load | Fx    | Fy    | Mom   | Dx    | Dy    | .. Conc |
|-----|-----|------|--------|------|-------|-------|-------|-------|-------|---------|
| Add | Id  | Id   | Type   | Type | W1    | W2    | Co    | D11   | D12   | .. Dist |
| 13  | 1   | 2    | WINDL1 | D    | -0.13 | -0.13 | 0.000 | 35.00 | 36.08 |         |
|     | 2   | 2    | WINDL2 | D    | -0.13 | -0.13 | 0.000 | 35.00 | 36.08 |         |
|     | 3   | 3    | WINDR1 | D    | -0.13 | -0.13 | 0.000 | 0.00  | 0.96  |         |
|     | 4   | 3    | WINDR2 | D    | -0.13 | -0.13 | 0.000 | 0.00  | 0.96  |         |
|     | 5   | 4    | DEAD   | C    | -0.02 | -0.58 | 0.00  | 0.00  | -0.48 |         |
|     | 6   | 4    | COLLAT | C    | -0.02 | -0.68 | 0.00  | 0.00  | -0.48 |         |
|     | 7   | 4    | LIVE   | C    | -0.10 | -3.22 | 0.00  | 0.00  | -0.48 |         |
|     | 8   | 4    | WINDR1 | C    | 2.24  | 3.93  | 0.00  | 0.00  | -0.48 |         |
|     | 9   | 4    | WINDL1 | C    | 2.24  | 3.93  | 0.00  | 0.00  | -0.48 |         |
|     | 10  | 4    | WINDR2 | C    | 1.31  | 2.30  | 0.00  | 0.00  | -0.48 |         |
|     | 11  | 4    | WINDL2 | C    | 1.31  | 2.30  | 0.00  | 0.00  | -0.48 |         |
|     | 12  | 4    | LWIND2 | C    | 4.34  | 3.44  | 0.00  | 0.00  | -0.48 |         |
|     | 13  | 4    | LWIND1 | C    | 4.34  | 3.44  | 0.00  | 0.00  | -0.48 |         |



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05-909A                      Reactions, Anchor Bolts, & Base Plates:      4/20/06 10:57am

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| -----Foundation_Loads(k )----- |             |             |      |       |             |       |       |           |       |            |       |       |
|--------------------------------|-------------|-------------|------|-------|-------------|-------|-------|-----------|-------|------------|-------|-------|
| Frame<br>Line                  | Col<br>Line | Max_Pos_Val |      |       | Max_Neg_Val |       |       | Anc._Bolt |       | Base_Plate |       |       |
|                                |             | Id          | Horz | Vert  | Id          | Horz  | Vert  | No.       | Diam  | Width      | Len   | Thick |
| A                              | 2           | 6           | 7.8  | 1.7   | 7           | -7.1  | 1.7   | 4         | 0.625 | 10.00      | 8.50  | 0.375 |
| A                              | 10          | 6           | 7.9  | 1.7   | 7           | -7.2  | 1.7   | 4         | 0.625 | 10.00      | 8.50  | 0.375 |
| D                              | 12          | 8           | 0.0  | -3.1  | 8           | 0.0   | -3.1  | 4         | 0.625 | 8.00       | 8.00  | 0.375 |
|                                |             | 1           | 0.0  | 3.0   |             |       |       |           |       |            |       |       |
| D                              | 8           | 9           | 7.2  | -10.5 | 7           | -6.6  | -7.5  | 4         | 0.625 | 8.00       | 8.00  | 0.375 |
|                                |             | 1           | 0.0  | 8.1   | 9           | 7.2   | -10.5 |           |       |            |       |       |
| D                              | 4           | 10          | 7.2  | -10.7 | 7           | -6.5  | -7.5  | 4         | 0.625 | 8.00       | 8.00  | 0.375 |
|                                |             | 1           | 0.0  | 8.1   | 10          | 7.2   | -10.7 |           |       |            |       |       |
| D                              | 1           | 6           | 0.0  | -3.2  | 6           | 0.0   | -3.2  | 4         | 0.625 | 8.00       | 8.00  | 0.375 |
|                                |             | 1           | 0.0  | 3.0   |             |       |       |           |       |            |       |       |
| A                              | 1           | 1           | 6.0  | 10.6  | 2           | -4.2  | -5.6  | 4         | 0.750 | 6.00       | 16.50 | 0.375 |
| A                              | 11          | 3           | 2.7  | -6.9  | 1           | -5.9  | 13.5  | 4         | 0.750 | 6.00       | 16.50 | 0.375 |
|                                |             | 1           | -5.9 | 13.5  | 3           | 2.7   | -6.9  |           |       |            |       |       |
| B *                            | 1           | 1           | 9.6  | 15.2  | 2           | -11.6 | -14.9 | 4         | 0.750 | 6.00       | 12.50 | 0.375 |
|                                |             |             |      |       | 4           | -4.3  | -19.1 |           |       |            |       |       |
| B *                            | 11          | 3           | 8.9  | -17.2 | 1           | -9.5  | 19.4  | 4         | 0.750 | 6.00       | 12.56 | 0.375 |
|                                |             | 1           | -9.5 | 19.4  | 5           | -1.2  | -20.5 |           |       |            |       |       |

-----

B \* Frame Lines :B C

| Load<br>Id | Load<br>Combination     |
|------------|-------------------------|
| 1          | DL+CL+LL                |
| 2          | DL+CL+1.30WL1           |
| 3          | DL+CL+1.30WR1           |
| 4          | DL+CL+1.30LnWndL        |
| 5          | DL+CL+1.30LnWndR        |
| 6          | DL+CL+1.30WR1+1.30WS    |
| 7          | DL+CL+1.30WP+1.30LnWndL |
| 8          | DL+CL+1.30WL1+1.30WS    |
| 9          | DL+CL+1.30WL2+1.30WS    |
| 10         | DL+CL+1.30WR2+1.30WS    |

BRACING/PANEL SHEAR REACTIONS:

| ---Wall--- |      | Col                    | -----Reactions(k )----- |      |               |      | Panel   |
|------------|------|------------------------|-------------------------|------|---------------|------|---------|
| Loc        | Line | Line                   | ---Wind---              |      | ---Seismic--- |      | Shear   |
|            |      |                        | Horz                    | Vert | Horz          | Vert | (lb/ft) |
| L_EW       | A    | Rigid Frame At Endwall |                         |      |               |      |         |
| F_SW       | 12   | B ,C                   | 7.53                    | 4.70 | 1.72          | 1.07 |         |
| R_EW       | D    | 8 ,4                   | 2.79                    | 2.35 | 0.43          | 0.36 |         |
| B_SW       | 1    | C ,B                   | 6.37                    | 3.85 | 1.42          | 0.86 |         |

## Rigid Frame Column Reactions

| Frame<br>Line | Col<br>Line | ---Dead--- |      | Collateral |      | ---Live--- |      | --Live_R-- |      | -Wind_L1-- |       |
|---------------|-------------|------------|------|------------|------|------------|------|------------|------|------------|-------|
|               |             | Horz       | Vert | Horz       | Vert | Horz       | Vert | Horz       | Vert | Horz       | Vert  |
| A             | 1           | 2.3        | 3.9  | 0.8        | 1.4  | 2.9        | 5.3  | 1.5        | 1.3  | -5.6       | -8.3  |
| A             | 11          | -2.3       | 4.2  | -0.7       | 1.7  | -2.9       | 7.5  | -1.5       | 3.9  | 1.1        | -8.0  |
| B *           | 1           | 1.5        | 2.7  | 1.7        | 2.5  | 6.4        | 9.9  | 3.3        | 2.5  | -11.4      | -15.5 |
| B *           | 11          | -1.5       | 3.3  | -1.6       | 3.2  | -6.3       | 12.9 | -3.3       | 7.3  | 3.2        | -14.8 |

| Frame<br>Line | Col<br>Line | -Wind_R1-- |       | -Wind_L2-- |      | -Wind_R2-- |       | Seismic_L- |      | Seismic_R- |      |
|---------------|-------------|------------|-------|------------|------|------------|-------|------------|------|------------|------|
|               |             | Horz       | Vert  | Horz       | Vert | Horz       | Vert  | Horz       | Vert | Horz       | Vert |
| A             | 1           | -2.3       | -6.5  | -4.4       | -4.7 | -1.2       | -2.9  | -0.2       | -0.1 | 0.2        | 0.1  |
| A             | 11          | 4.4        | -9.9  | 0.5        | -3.8 | 3.7        | -5.6  | -0.2       | 0.1  | 0.2        | -0.1 |
| B *           | 1           | -5.4       | -12.1 | -8.8       | -8.8 | -2.8       | -5.3  | -0.3       | -0.1 | 0.3        | 0.1  |
| B *           | 11          | 9.3        | -18.2 | 1.6        | -7.0 | 7.6        | -10.4 | -0.2       | 0.1  | 0.2        | -0.1 |

| Frame<br>Line | Col<br>Line | -LnWind_1- |       | -LnWind_2- |       | Ln_Seismic |      |
|---------------|-------------|------------|-------|------------|-------|------------|------|
|               |             | Horz       | Vert  | Horz       | Vert  | Horz       | Vert |
| A             | 1           | -2.7       | -8.0  | -3.5       | -6.9  | 0.0        | 0.0  |
| A             | 11          | 1.0        | -7.6  | 0.3        | -8.7  | 0.0        | 0.0  |
| B *           | 1           | -5.7       | -18.7 | -7.2       | -16.6 | 0.0        | -0.9 |
| B *           | 11          | 2.8        | -18.7 | 1.5        | -20.8 | 0.0        | -1.1 |

B \* Frame Lines :B C

## Endwall Column Reactions

| Frame<br>Line | Col<br>Line | Dead<br>Vert | Collat<br>Vert | Live<br>Vert | -Brc_Wind_L- |      | -Brc_Wind_R- |       | -Out_Of_Plane- |                |
|---------------|-------------|--------------|----------------|--------------|--------------|------|--------------|-------|----------------|----------------|
|               |             |              |                |              | Horz         | Vert | Horz         | Vert  | Wind_P<br>Horz | Wind_S<br>Horz |
| A             | 2           | 1.7          | 0.0            | 0.0          | 0.0          | 0.0  | 0.0          | 0.0   | -5.5           | 6.0            |
| A             | 10          | 1.7          | 0.0            | 0.0          | 0.0          | 0.0  | 0.0          | 0.0   | -5.5           | 6.1            |
| D             | 12          | 0.6          | 0.3            | 2.0          | 0.0          | -3.1 | 0.0          | -2.0  | 0.0            | 0.0            |
| D             | 8           | 1.5          | 0.9            | 5.7          | 2.8          | -9.9 | 0.0          | -2.5  | -5.1           | 5.6            |
| D             | 4           | 1.5          | 0.9            | 5.7          | 0.0          | -2.7 | 3.0          | -10.1 | -5.0           | 5.5            |
| D             | 1           | 0.6          | 0.3            | 2.0          | 0.0          | -2.0 | 0.0          | -3.1  | 0.0            | 0.0            |

## Endwall Column Reactions

| Frame<br>Line | Col<br>Line | -Raf_Wind_L- |      | -Raf_Wind_R- |      | --Seismic_L- |      | --Seismic_R- |      | WindLn<br>Vert |
|---------------|-------------|--------------|------|--------------|------|--------------|------|--------------|------|----------------|
|               |             | Horz         | Vert | Horz         | Vert | Horz         | Vert | Horz         | Vert |                |
| A             | 2           | -0.5         | 0.0  | -0.5         | 0.0  | -0.5         | 0.0  | -0.5         | 0.0  | 0.0            |
| A             | 10          | -0.5         | 0.0  | -0.5         | 0.0  | -0.5         | 0.0  | -0.5         | 0.0  | 0.0            |
| D             | 12          | 0.0          | -3.1 | 0.0          | -2.0 | 0.0          | 0.0  | 0.0          | 0.0  | -3.1           |
| D             | 8           | 0.0          | -7.6 | 0.0          | -5.0 | 0.0          | -0.4 | 0.0          | 0.4  | -7.6           |
| D             | 4           | 0.0          | -5.0 | 0.0          | -7.6 | 0.0          | 0.4  | 0.0          | -0.4 | -7.7           |
| D             | 1           | 0.0          | -2.0 | 0.0          | -3.1 | 0.0          | 0.0  | 0.0          | 0.0  | -3.1           |

| Frame | Col  | --Aux_ 1-- |      | --Aux_ 2-- |      | --Aux_ 3-- |      | --Aux_ 4-- |      |
|-------|------|------------|------|------------|------|------------|------|------------|------|
| Line  | Line | Horz       | Vert | Horz       | Vert | Horz       | Vert | Horz       | Vert |
| A     | 2    | -0.5       | 0.0  | -0.5       | 0.0  | -0.5       | 0.0  | -0.5       | 0.0  |
| A     | 10   | -0.5       | 0.0  | -0.5       | 0.0  | -0.5       | 0.0  | -0.5       | 0.0  |
| D     | 12   | 0.0        | 1.1  | 0.0        | 0.0  | 0.0        | 1.0  | 0.0        | -0.1 |
| D     | 8    | 0.0        | 1.7  | 0.0        | -0.3 | 0.0        | 3.1  | 0.0        | 1.2  |
| D     | 4    | 0.0        | -0.3 | 0.0        | 1.7  | 0.0        | 1.2  | 0.0        | 3.1  |
| D     | 1    | 0.0        | 0.0  | 0.0        | 1.1  | 0.0        | -0.1 | 0.0        | 1.0  |

```
=====
05-909A                Seismic Design Report:                4/20/06  10:57am
=====
```

#### Building Data

```
-----
Code           =FBC  04
Length        = 70.00
Width         = 70.00
Left Eave Height = 16.25
Right Eave Height = 16.73
```

#### Seismic Formula

```
-----
Base Shear, V    = 0.667*1.2*Fa*Ss*W/R

Shear Force, E   = Omega*Rho*V/1.4
Zone/Design Category=  B
Fa*Ss            = 0.220
Rho              = 2-20/(RMax*SQRT(Width*Length))
```

#### Seismic Dead Load, W

```
-----
Roof Dead+Collat = 5.00 (psf )
Frame Dead       = 2.00 (psf )
Roof Total       = 7.00 (psf )    , Weight= 34.30 (k )
L_EW Dead       = 2.00 (psf )    , Weight= 1.45 (k )
R_EW Dead       = 2.00 (psf )    , Weight= 1.45 (k )
F_SW Dead       = 2.00 (psf )    , Weight= 1.17 (k )
B_SW Dead       = 2.00 (psf )    , Weight= 1.14 (k )
```

```
-----
Total = 39.51 (k )
```

#### Seismic Forces

##### Roof Bracing

```

R = 5.0 , Rho = 1.43, RMax = 0.50, Omega= 2.00
W = 37.20 (k )
Force, V = 1.31 (k )
Force, E = 2.67 (k )
```

##### Sidewall Bracing

```

Front
R = 5.0 , Rho = 1.43, RMax = 0.50, Omega= 2.00
W = 23.94 (k )
Force, V = 0.84 (k )
Force, E = 1.72 (k )

Back
R = 5.0 , Rho = 1.43, RMax = 0.50, Omega= 2.00
W = 19.75 (k )
Force, V = 0.69 (k )
Force, E = 1.42 (k )
```

##### Endwall Bracing

Right            R    =    5.0    , Rho = 1.14, RMax = 0.33, Omega= 2.00  
                 W    =    7.48 (k )  
         Force, V   =   0.26 (k )  
         Force, E   =   0.43 (k )

## Rigid Frames

                 R    =    3.5    , Rho = 1.14, RMax = 0.33, Omega= 1.00  
Frame 1          W    =    7.80 (k )  
         Force, V   =   0.39 (k )  
         Force, E   =   0.32 (k )  
Frame 2          W    =   12.19 (k )  
         Force, V   =   0.61 (k )  
         Force, E   =   0.50 (k )

## End Plates

Frame            Omega=    3.00

=====

Adel Steel, Inc.  
601, S. Elm St.  
Adel, GA 31620

REACTIONS, ANCHOR BOLTS, & BASE PLATES  
FOR  
Williams Dannacker  
6054 SW 52nd Terr.  
Palm City FL 34990

Lake City FL  
6002

BUILDING DATA

Width (ft) = 20.0  
Length (ft) = 70.0  
Eave Height (ft) = 12.0/ 16.7  
Roof Slope (rise/12 ) = 2.84  
Dead Load (psf ) = 2.0  
Roof Live Load (psf ) = 20.0  
Frame Live Load (psf ) = 14.7  
Collat. Load (psf ) = 3.0  
Wind Speed (mph ) = 120.0  
Wind Code = FBC 04  
Closed/Open = C  
Exposure = B  
Importance - Wind = 1.00  
Importance - Seismic = 1.00  
Seismic Design Category = B  
Seismic Coeff (Fa\*Ss) = 0.22

Designer = \_\_\_\_\_

4/20/06

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05-909LT                      Reactions, Anchor Bolts, & Base Plates:      4/20/06      1:17pm

=====

| -----Foundation_Loads(k )----- |      |             |      |      |             |      |      |           |       |            |       |       |
|--------------------------------|------|-------------|------|------|-------------|------|------|-----------|-------|------------|-------|-------|
| Frame                          | Col  | Max_Pos_Val |      |      | Max_Neg_Val |      |      | Anc._Bolt |       | Base_Plate |       |       |
| Line                           | Line | Id          | Horz | Vert | Id          | Horz | Vert | No.       | Diam  | Width      | Len   | Thick |
| D                              | 13   | 6           | 0.0  | -2.4 | 6           | 0.0  | -2.4 | 4         | 0.625 | 8.00       | 8.00  | 0.375 |
|                                |      | 3           | 0.0  | 3.2  |             |      |      |           |       |            |       |       |
| D                              | 12   | 6           | 0.0  | -2.9 | 6           | 0.0  | -2.9 | 2         | 0.625 | 5.75       | 5.75  | 0.250 |
|                                |      | 3           | 0.0  | 3.2  |             |      |      |           |       |            |       |       |
| A                              | 13   | 1           | 1.2  | -3.0 | 2           | -0.1 | -2.6 | 4         | 0.750 | 6.00       | 12.50 | 0.375 |
|                                |      | 3           | 0.1  | 3.6  | 1           | 1.2  | -3.0 |           |       |            |       |       |
| C *                            | 13   | 1           | 2.2  | -5.1 | 2           | -0.1 | -4.9 | 4         | 0.750 | 6.00       | 12.50 | 0.375 |
|                                |      | 3           | 0.1  | 5.2  | 5           | 2.2  | -6.0 |           |       |            |       |       |

-----

C \* Frame Lines :C B

| Load | Load                 |
|------|----------------------|
| Id   | Combination          |
| 1    | DL+CL-1.30LnWndR     |
| 2    | DL+CL+1.30WR1        |
| 3    | DL+CL+LL             |
| 4    | 1.02DL+1.02CL+Seis_L |
| 5    | DL+CL+1.30LnWndR     |
| 6    | DL+CL+1.30WR1+1.30WS |

BRACING/PANEL SHEAR REACTIONS:

| -----Reactions(k )----- |      |                        |      |             |      |      | Panel   |
|-------------------------|------|------------------------|------|-------------|------|------|---------|
| ---Wall---              | Col  | ---Wind---             |      | --Seismic-- |      |      | Shear   |
| Loc                     | Line | Line                   | Horz | Vert        | Horz | Vert | (lb/ft) |
| L_EW                    | D    |                        |      |             |      |      | 507.22  |
| F_SW                    | 11   |                        |      |             |      |      | 0.00    |
| R_EW                    | A    | Rigid Frame At Endwall |      |             |      |      |         |
| B_SW                    | 13   | B ,C                   | 0.87 | 0.37        | 0.30 | 0.13 |         |

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05-909LT                      Additional Reactions Report:                      4/20/06      1:17pm

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Rigid Frame Column Reactions

| Frame | Col  | ---Dead--- |      | Collateral |      | ---Live--- |      | --Live_R-- |      | -Wind_L1-- |      |
|-------|------|------------|------|------------|------|------------|------|------------|------|------------|------|
| Line  | Line | Horz       | Vert | Horz       | Vert | Horz       | Vert | Horz       | Vert | Horz       | Vert |
| A     | 13   | 0.0        | 0.6  | 0.0        | 0.4  | 0.1        | 2.6  | 0.0        | 0.0  | -0.1       | -2.8 |
| C *   | 13   | 0.0        | 0.8  | 0.0        | 0.8  | 0.1        | 3.6  | 0.0        | 0.0  | -0.1       | -5.0 |

| Frame<br>Line | Col<br>Line | -Wind_R1-- |      | -Wind_L2-- |      | -Wind_R2-- |      | Seismic_L- |      | Seismic_R- |      |
|---------------|-------------|------------|------|------------|------|------------|------|------------|------|------------|------|
|               |             | Horz       | Vert | Horz       | Vert | Horz       | Vert | Horz       | Vert | Horz       | Vert |
| A             | 13          | -0.1       | -2.8 | 0.0        | -1.6 | 0.0        | -1.6 | 0.0        | 0.0  | 0.0        | 0.0  |
| C *           | 13          | -0.1       | -5.0 | -0.1       | -2.9 | -0.1       | -2.9 | 0.0        | 0.0  | 0.0        | 0.0  |

| Frame<br>Line | Col<br>Line | -LnWind_1- |      | -LnWind_2- |      | Ln_Seismic |      |
|---------------|-------------|------------|------|------------|------|------------|------|
|               |             | Horz       | Vert | Horz       | Vert | Horz       | Vert |
| A             | 13          | 0.9        | -3.1 | 0.9        | -3.1 | 0.0        | 0.0  |
| C *           | 13          | 1.6        | -5.8 | 1.6        | -5.8 | 0.0        | -0.1 |

C \* Frame Lines :C B

#### Endwall Column Reactions

| Frame<br>Line | Col<br>Line | Dead<br>Vert | Collat<br>Vert | Live<br>Vert | -Brc_Wind_L- |      | -Brc_Wind_R- |      | -Out_Of_Plane- |                |
|---------------|-------------|--------------|----------------|--------------|--------------|------|--------------|------|----------------|----------------|
|               |             |              |                |              | Horz         | Vert | Horz         | Vert | Wind_P<br>Horz | Wind_S<br>Horz |
| D             | 13          | 0.5          | 0.4            | 2.3          | 0.0          | -2.5 | 0.0          | -2.5 | 0.0            | 0.0            |
| D             | 12          | 0.5          | 0.4            | 2.3          | 0.0          | -2.9 | 0.0          | -2.9 | 0.0            | 0.0            |

#### Endwall Column Reactions

| Frame<br>Line | Col<br>Line | -Raf_Wind_L- |      | -Raf_Wind_R- |      | --Seismic_L- |      | --Seismic_R- |      | WindLn<br>Vert |
|---------------|-------------|--------------|------|--------------|------|--------------|------|--------------|------|----------------|
|               |             | Horz         | Vert | Horz         | Vert | Horz         | Vert | Horz         | Vert |                |
| D             | 13          | 0.0          | -2.5 | 0.0          | -2.5 | 0.0          | 0.0  | 0.0          | 0.0  | -2.5           |
| D             | 12          | 0.0          | -2.9 | 0.0          | -2.9 | 0.0          | 0.0  | 0.0          | 0.0  | -2.9           |

=====

|          |                        |         |        |
|----------|------------------------|---------|--------|
| 05-909LT | Seismic Design Report: | 4/20/06 | 1:17pm |
|----------|------------------------|---------|--------|

=====

#### Building Data

```

Code           =FBC 04
Length         = 70.00
Width          = 20.00
Left Eave Height = 12.00
Right Eave Height = 16.73

```

#### Seismic Formula

```

Base Shear, V   = 0.667*1.2*Fa*Ss*W/R

Shear Force, E  = Omega*Rho*V/1.4
Zone/Design Category= B
Fa*Ss           = 0.220
Rho              = 2-20/(RMax*SQRT(Width*Length))

```

Seismic Dead Load, W

|       |             |   |             |                     |
|-------|-------------|---|-------------|---------------------|
| Roof  | Dead+Collat | = | 5.00 (psf ) |                     |
| Frame | Dead        | = | 2.00 (psf ) |                     |
| Roof  | Total       | = | 7.00 (psf ) | , Weight= 9.80 (k ) |
| L_EW  | Dead        | = | 2.00 (psf ) | , Weight= 0.29 (k ) |
| R_EW  | Dead        | = | 2.00 (psf ) | , Weight= 0.29 (k ) |
| F_SW  | Dead        | = | 2.00 (psf ) | , Weight= 1.17 (k ) |
| B_SW  | Dead        | = | 2.00 (psf ) | , Weight= 0.84 (k ) |
| ----- |             |   |             |                     |
|       |             |   |             | Total = 12.39 (k )  |

## Seismic Forces

-----  
Roof Bracing

R = 5.0 , Rho = 1.00, RMax = 0.50, Omega= 2.00  
 W = 10.37 (k )  
 Force, V = 0.37 (k )  
 Force, E = 0.52 (k )

## Sidewall Bracing

Back R = 5.0 , Rho = 1.00, RMax = 0.50, Omega= 2.00  
 W = 6.00 (k )  
 Force, V = 0.21 (k )  
 Force, E = 0.30 (k )

## Rigid Frames

R = 3.5 , Rho = 1.00, RMax = 0.33, Omega= 1.00  
 Frame 1 W = 2.23 (k )  
 Force, V = 0.11 (k )  
 Force, E = 0.08 (k )  
 Frame 2 W = 3.34 (k )  
 Force, V = 0.17 (k )  
 Force, E = 0.12 (k )

## End Plates

Frame Omega= 3.00

=====

Adel Steel, Inc.  
601, S. Elm St.  
Adel, GA 31620

STRUCTURAL DESIGN CALCULATIONS  
FOR  
Williams Dannacker  
6054 SW 52nd Terr.  
Palm City FL 34990

Lake City FL  
6002

BUILDING DATA

Width (ft) = 20.0  
Length (ft) = 70.0  
Eave Height (ft) = 12.0/ 16.7  
Roof Slope (rise/12 ) = 2.84  
Dead Load (psf ) = 2.0  
Roof Live Load (psf ) = 20.0  
Frame Live Load (psf ) = 14.7  
Collat. Load (psf ) = 3.0  
Wind Speed (mph ) = 120.0  
Wind Code = FBC 04  
Closed/Open = C  
Exposure = B  
Importance - Wind = 1.00  
Importance - Seismic = 1.00  
Seismic Design Category = B  
Seismic Coeff (Fa\*Ss) = 0.22

Designer =  
-----

4/20/06

```
=====
05-909LT          Design Loads For Each Building Component:  4/20/06   1:17pm
=====
```

FRONT SIDEWALL:

BASIC LOADS:

|       |                 |        | -----Edge_Strip_Ratio----- |      |       |      |
|-------|-----------------|--------|----------------------------|------|-------|------|
| Basic | Wind_Load_Ratio |        | Zone                       |      |       | Col/ |
| Wind  | Deflect         | Factor | Width                      | Girt | Panel | Jamb |
| 21.9  | 1.00            | 1.00   | 3.00                       | 1.07 | 1.23  | 1.07 |

WIND PRESSURE/SUCTION:

| Wind  | Wind  | Wind |                |
|-------|-------|------|----------------|
| Press | Suct  | Long |                |
| 0.0   | 0.0   |      | .. Girt/Header |
| 0.0   | 0.0   |      | .. Panel       |
| 0.0   | 0.0   |      | .. Jamb        |
| 39.5  | -24.1 |      | .. Parapet     |

BACK SIDEWALL:

BASIC LOADS:

|       |                 |        | -----Edge_Strip_Ratio----- |      |       |      |
|-------|-----------------|--------|----------------------------|------|-------|------|
| Basic | Wind_Load_Ratio |        | Zone                       |      |       | Col/ |
| Wind  | Deflect         | Factor | Width                      | Girt | Panel | Jamb |
| 21.9  | 1.00            | 1.00   | 3.00                       | 1.07 | 1.23  | 1.07 |

WIND PRESSURE/SUCTION:

| Wind  | Wind  | Wind |                |
|-------|-------|------|----------------|
| Press | Suct  | Long |                |
| 0.0   | 0.0   |      | .. Girt/Header |
| 0.0   | 0.0   |      | .. Panel       |
| 0.0   | 0.0   |      | .. Jamb        |
| 39.5  | -24.1 |      | .. Parapet     |

LEFT ENDWALL:

BASIC LOADS:

|      |        |      |      |       |                 |        | -----Edge_Strip_Ratio----- |      |       |      |
|------|--------|------|------|-------|-----------------|--------|----------------------------|------|-------|------|
| Dead | Collat | Live | Snow | Basic | Wind_Load_Ratio |        | Zone                       |      |       | Col/ |
| Load | Load   | Load | Load | Wind  | Deflect         | Factor | Width                      | Girt | Panel | Jamb |
| 2.0  | 3.0    | 19.3 | 0.0  | 21.9  | 1.00            | 1.00   | 3.00                       | 1.07 | 1.23  | 1.07 |

BASIC LOADS AT EAVE:

| Seis_Coeff |       | Seis_Load |       | ---Torsion--- |         |
|------------|-------|-----------|-------|---------------|---------|
| Frame      | Brace | Frame     | Brace | Wind          | Seismic |
| 0.050      | 0.050 | 0.11      | 0.11  | 0.00          | 0.00    |

WIND PRESSURE/SUCTION:

| Wind  | Wind  |                |
|-------|-------|----------------|
| Press | Suct  |                |
| 0.0   | 0.0   | .. Column      |
| 0.0   | 0.0   | .. Girt/Header |
| 0.0   | 0.0   | .. Jamb        |
| 0.0   | 0.0   | .. Panel       |
| 39.5  | -24.1 | .. Parapet     |

WIND COEFFICIENTS:

| Surf | Rafter_Wind_1 |       | Rafter_Wind_2 |       | Bracing_Wind |       | Long | Surface  |
|------|---------------|-------|---------------|-------|--------------|-------|------|----------|
| Id   | Left          | Right | Left          | Right | Left         | Right | Wind | Friction |
| 1    | 0.00          | 0.00  | 0.00          | 0.00  | 0.48         | -0.63 | 0.00 | 0.00     |

|   |       |       |       |       |       |       |       |      |
|---|-------|-------|-------|-------|-------|-------|-------|------|
| 2 | -1.04 | -1.04 | -0.68 | -0.68 | -1.04 | -1.04 | -1.04 | 0.00 |
| 3 | 0.00  | 0.00  | 0.00  | 0.00  | -0.76 | 0.40  | 0.00  | 0.00 |

## COLUMN &amp; BRACING DESIGN LOADS:

| Load |    | Snow/ |      | Rafter_Wind |      | Brace_Wind |      | Long  | Column_Wind |       | Aux_Load |       |    |      |
|------|----|-------|------|-------------|------|------------|------|-------|-------------|-------|----------|-------|----|------|
| No.  | Id | Dead  | Coll | Live        | Left | Right      | Left | Right | Wind        | Press | Suct     | Seis  | Id | Coef |
| 8    | 1  | 1.00  | 1.00 | 1.00        | 0.00 | 0.00       | 0.00 | 0.00  | 0.00        | 0.00  | 0.00     | 0.00  | 0  | 0.00 |
|      | 2  | 1.00  | 1.00 | 0.00        | 0.00 | 0.00       | 1.30 | 0.00  | 0.00        | 0.00  | 1.30     | 0.00  | 0  | 0.00 |
|      | 3  | 1.00  | 1.00 | 0.00        | 0.00 | 0.00       | 0.00 | 1.30  | 0.00        | 0.00  | 1.30     | 0.00  | 0  | 0.00 |
|      | 4  | 1.00  | 1.00 | 0.00        | 0.00 | 0.00       | 0.00 | 0.00  | 1.30        | 1.30  | 0.00     | 0.00  | 0  | 0.00 |
|      | 5  | 1.00  | 1.00 | 0.00        | 1.30 | 0.00       | 0.00 | 0.00  | 0.00        | 0.00  | 1.30     | 0.00  | 0  | 0.00 |
|      | 6  | 1.00  | 1.00 | 0.00        | 0.00 | 1.30       | 0.00 | 0.00  | 0.00        | 0.00  | 1.30     | 0.00  | 0  | 0.00 |
|      | 7  | 1.00  | 1.00 | 0.00        | 0.00 | 0.00       | 0.00 | 0.00  | 0.00        | 0.00  | 0.00     | 1.00  | 0  | 0.00 |
|      | 8  | 1.00  | 1.00 | 0.00        | 0.00 | 0.00       | 0.00 | 0.00  | 0.00        | 0.00  | 0.00     | -1.00 | 0  | 0.00 |

## RAFTER DESIGN LOADS:

| Load |    | Snow/ |      | Rafter_Wind_1 |      | Rafter_Wind_2 |      | Long  | Aux_Load |       |    |      |
|------|----|-------|------|---------------|------|---------------|------|-------|----------|-------|----|------|
| No   | Id | Dead  | Coll | Live          | Left | Right         | Left | Right | Wind     | Seis  | Id | Coef |
| 8    | 1  | 1.00  | 1.00 | 1.00          | 0.00 | 0.00          | 0.00 | 0.00  | 0.00     | 0.00  | 0  | 0.00 |
|      | 2  | 1.00  | 1.00 | 0.00          | 1.30 | 0.00          | 0.00 | 0.00  | 0.00     | 0.00  | 0  | 0.00 |
|      | 3  | 1.00  | 1.00 | 0.00          | 0.00 | 1.30          | 0.00 | 0.00  | 0.00     | 0.00  | 0  | 0.00 |
|      | 4  | 1.00  | 1.00 | 0.00          | 0.00 | 0.00          | 1.30 | 0.00  | 0.00     | 0.00  | 0  | 0.00 |
|      | 5  | 1.00  | 1.00 | 0.00          | 0.00 | 0.00          | 0.00 | 1.30  | 0.00     | 0.00  | 0  | 0.00 |
|      | 6  | 1.00  | 1.00 | 0.00          | 0.00 | 0.00          | 0.00 | 0.00  | 1.30     | 0.00  | 0  | 0.00 |
|      | 7  | 1.00  | 1.00 | 0.00          | 0.00 | 0.00          | 0.00 | 0.00  | 0.00     | 1.00  | 0  | 0.00 |
|      | 8  | 1.00  | 1.00 | 0.00          | 0.00 | 0.00          | 0.00 | 0.00  | 0.00     | -1.00 | 0  | 0.00 |

## RIGHT ENDWALL:

-----

## BASIC LOADS:

|      |        |      |      |       |           |        | -----Edge_Strip_Ratio----- |      |       |          |
|------|--------|------|------|-------|-----------|--------|----------------------------|------|-------|----------|
| Dead | Collat | Live | Snow | Basic | Wind_Load | Ratio  | Zone                       |      |       |          |
| Load | Load   | Load | Load | Wind  | Deflect   | Factor | Width                      | Girt | Panel | Col/Jamb |
| 2.0  | 3.0    | 19.3 | 0.0  | 21.9  | 1.00      | 1.00   | 3.00                       | 1.07 | 1.23  | 1.07     |

## BASIC LOADS AT EAVE:

| Seis_Coeff |       | Seis_Load |       | ---Torsion--- |         |
|------------|-------|-----------|-------|---------------|---------|
| Frame      | Brace | Frame     | Brace | Wind          | Seismic |
| 0.050      | 0.050 | 0.00      | 0.02  | 0.00          | 0.00    |

## WIND PRESSURE/SUCTION:

| Wind  | Wind  |                |
|-------|-------|----------------|
| Press | Suct  |                |
| 0.0   | 0.0   | .. Column      |
| 0.0   | 0.0   | .. Girt/Header |
| 0.0   | 0.0   | .. Jamb        |
| 0.0   | 0.0   | .. Panel       |
| 39.5  | -24.1 | .. Parapet     |

## WIND COEFFICIENTS:

| Surf | Rafter_Wind_1 |       | Rafter_Wind_2 |       | Bracing_Wind |       | Long  | Surface  |
|------|---------------|-------|---------------|-------|--------------|-------|-------|----------|
| Id   | Left          | Right | Left          | Right | Left         | Right | Wind  | Friction |
| 1    | 0.00          | 0.00  | 0.00          | 0.00  | 0.40         | -0.76 | 0.00  | 0.00     |
| 2    | -1.04         | -1.04 | -0.68         | -0.68 | -1.04        | -1.04 | -1.04 | 0.00     |
| 3    | 0.00          | 0.00  | 0.00          | 0.00  | -0.63        | 0.48  | 0.00  | 0.00     |

## COLUMN &amp; BRACING DESIGN LOADS:

| Load |    | Snow/ |      | Rafter_Wind |      | Brace_Wind |      | Long  | Column_Wind |       | Aux_Load |      |    |      |
|------|----|-------|------|-------------|------|------------|------|-------|-------------|-------|----------|------|----|------|
| No.  | Id | Dead  | Coll | Live        | Left | Right      | Left | Right | Wind        | Press | Suct     | Seis | Id | Coef |
| 6    | 1  | 1.00  | 1.00 | 1.00        | 0.00 | 0.00       | 0.00 | 0.00  | 0.00        | 0.00  | 0.00     | 0.00 | 0  | 0.00 |
|      | 2  | 1.00  | 1.00 | 0.00        | 0.00 | 0.00       | 1.30 | 0.00  | 0.00        | 0.00  | 1.30     | 0.00 | 0  | 0.00 |
|      | 3  | 1.00  | 1.00 | 0.00        | 0.00 | 0.00       | 0.00 | 1.30  | 0.00        | 0.00  | 1.30     | 0.00 | 0  | 0.00 |
|      | 4  | 1.00  | 1.00 | 0.00        | 0.00 | 0.00       | 0.00 | 0.00  | 1.30        | 1.30  | 0.00     | 0.00 | 0  | 0.00 |
|      | 5  | 1.00  | 1.00 | 0.00        | 1.30 | 0.00       | 0.00 | 0.00  | 0.00        | 0.00  | 1.30     | 0.00 | 0  | 0.00 |
|      | 6  | 1.00  | 1.00 | 0.00        | 0.00 | 1.30       | 0.00 | 0.00  | 0.00        | 0.00  | 1.30     | 0.00 | 0  | 0.00 |

## RAFTER DESIGN LOADS:

| Load |    |      |      | Snow/ | Rafter_Wind_1 | Rafter_Wind_2 | Long | Aux_Load |      |      |    |      |
|------|----|------|------|-------|---------------|---------------|------|----------|------|------|----|------|
| No   | Id | Dead | Coll | Live  | Left          | Right         | Left | Right    | Wind | Seis | Id | Coef |
| 6    | 1  | 1.00 | 1.00 | 1.00  | 0.00          | 0.00          | 0.00 | 0.00     | 0.00 | 0.00 | 0  | 0.00 |
|      | 2  | 1.00 | 1.00 | 0.00  | 1.30          | 0.00          | 0.00 | 0.00     | 0.00 | 0.00 | 0  | 0.00 |
|      | 3  | 1.00 | 1.00 | 0.00  | 0.00          | 1.30          | 0.00 | 0.00     | 0.00 | 0.00 | 0  | 0.00 |
|      | 4  | 1.00 | 1.00 | 0.00  | 0.00          | 0.00          | 1.30 | 0.00     | 0.00 | 0.00 | 0  | 0.00 |
|      | 5  | 1.00 | 1.00 | 0.00  | 0.00          | 0.00          | 0.00 | 1.30     | 0.00 | 0.00 | 0  | 0.00 |
|      | 6  | 1.00 | 1.00 | 0.00  | 0.00          | 0.00          | 0.00 | 0.00     | 1.30 | 0.00 | 0  | 0.00 |

## ROOFDES:

## BASIC LOADS:

| Dead Load | Collat Load | Live Load | Snow Load | Basic Wind | Wind Load_Ratio Deflect | Surface Friction | --Seis_Coeff- Frame | % Snow |
|-----------|-------------|-----------|-----------|------------|-------------------------|------------------|---------------------|--------|
| 2.0       | 3.0         | 20.0      | 0.0       | 21.9       | 1.00                    | 1.00             | 0.00                | 0.050  |

## WIND PRESSURE/SUCTION:

| Wind Press | Wind Suct | Wind Suct_Roof |                                 |
|------------|-----------|----------------|---------------------------------|
| 10.5       | -28.1     |                | .. Purlins                      |
| 0.0        | -48.3     |                | .. Gable Extensions             |
| 12.7       | -32.5     |                | .. Panels                       |
| 0.0        | 0.0       | -15.1          | .. Long Bracing, Building       |
| 17.3       | -5.5      |                | .. Long Bracing, Wall Edge Zone |
| 39.5       | -24.1     | 17.5           | .. Long Bracing, Facia/Parapet  |

## EDGE &amp; CORNER ZONE WIND:

| Surface |     | -----Left_End----- |        |        |       | -----Center----- |        |       | -----Right_End----- |        |        |       |
|---------|-----|--------------------|--------|--------|-------|------------------|--------|-------|---------------------|--------|--------|-------|
|         |     | -----Coeff----     |        |        |       | -----Coeff----   |        |       | -----Coeff----      |        |        |       |
| Id      | Loc | Width              | Length | Purlin | Panel | Width            | Purlin | Panel | Width               | Length | Purlin | Panel |
| 2       | L   | 3.00               | 3.00   | 1.17   | 1.00  | 3.00             | 1.17   | 1.00  | 3.00                | 3.00   | 1.17   | 1.00  |
|         | C   | 14.55              | 3.00   | 1.17   | 1.00  | 14.55            | 1.00   | 1.00  | 14.55               | 3.00   | 1.17   | 1.00  |
|         | R   | 3.00               | 3.00   | 1.17   | 1.00  | 3.00             | 1.17   | 1.00  | 3.00                | 3.00   | 1.17   | 1.00  |

## PURLIN DESIGN LOADS:

| Surf Id | No. Loads | Load Id | Dead | Collat | Live/Snow | Wind Press | Wind Suct | Aux_Load Id | Coef  |
|---------|-----------|---------|------|--------|-----------|------------|-----------|-------------|-------|
| 2       | 9         | 1       | 1.00 | 1.00   | 1.00      | 0.00       | 0.00      | 0           | 0.00  |
|         |           | 2       | 1.00 | 1.00   | 0.00      | 1.30       | 0.00      | 0           | 0.00  |
|         |           | 3       | 1.00 | 0.00   | 0.00      | 0.00       | 1.30      | 0           | 0.00  |
|         |           | 4       | 1.00 | 1.00   | 0.50      | 0.00       | 0.00      | 3           | 1.00  |
|         |           | 5       | 1.00 | 1.00   | 0.50      | 0.00       | 0.00      | 4           | 1.00  |
|         |           | 6       | 1.00 | 1.00   | 0.50      | 0.00       | 0.00      | 1           | 1.00  |
|         |           | 7       | 1.00 | 1.00   | 0.50      | 0.00       | 0.00      | 2           | 1.00  |
|         |           | 8       | 1.00 | 1.00   | 1.00      | 0.00       | 0.00      | 1           | -1.00 |
|         |           | 9       | 1.00 | 1.00   | 1.00      | 0.00       | 0.00      | 2           | -1.00 |

## BRACING DESIGN LOADS:

| Surf Id | No. Loads | Load Id | Dead | Collat | Live/Snow | Wind Press | Wind Suct | Seis Load | Aux_Load Id | Coef |
|---------|-----------|---------|------|--------|-----------|------------|-----------|-----------|-------------|------|
| 2       | 3         | 1       | 1.00 | 1.00   | 1.00      | 1.00       | 1.00      | 0.00      | 0           | 0.00 |
|         |           | 2       | 1.00 | 0.00   | 0.00      | 1.30       | 1.30      | 0.00      | 0           | 0.00 |
|         |           | 3       | 1.02 | 1.02   | 1.00      | 0.00       | 0.00      | 1.00      | 0           | 0.00 |

## AUXILIARY LOADS:

| No. Aux | Aux Id | Aux Name | No. Load | Add_Load Id | Coef |
|---------|--------|----------|----------|-------------|------|
| 4       | 1      | -----    | 1        | 1           | 0.50 |
|         | 2      | -----    | 1        | 3           | 0.50 |
|         | 3      | -----    | 2        | 1           | 0.50 |
|         |        |          |          | 2           | 0.50 |
|         | 4      | -----    | 2        | 2           | 0.50 |
|         |        |          |          | 3           | 0.50 |

## ADDITIONAL LOADS:

| No. Add | Add Id | Surf Id | Basic Load Type | Fy W1 | Dx W2   | .. Conc |
|---------|--------|---------|-----------------|-------|---------|---------|
|         |        |         |                 |       | Dx1 Dx2 | .. Dist |

| 3 | 1 | 0 | ----- | D | -20.0 | -20.0 | 0.0  | 23.3 |
|---|---|---|-------|---|-------|-------|------|------|
|   | 2 | 0 | ----- | D | -20.0 | -20.0 | 23.3 | 46.7 |
|   | 3 | 0 | ----- | D | -20.0 | -20.0 | 46.7 | 70.0 |

## RIGID FRAME #1:

-----  
BASIC LOADS:

| Dead | Live | Snow | Collateral | Basic<br>Wind | Defl<br>Ratio |
|------|------|------|------------|---------------|---------------|
| 2.0  | 18.8 | 0.0  | 3.0        | 21.9          | 1.00          |

## BASIC LOADS AT EAVE:

| ---Seismic--- |       |      | Weak_Axis_L |      | Weak_Axis_R |      | --Torsion-- |      | -EW_Brace-- |      |
|---------------|-------|------|-------------|------|-------------|------|-------------|------|-------------|------|
| Load          | SpcEP | Coef | Wind        | Seis | Wind        | Seis | Wind        | Seis | Wind        | Seis |
| 0.04          | 0.12  | 0.22 | 0.00        | 0.00 | 0.00        | 0.00 | 0.00        | 0.00 | 0.00        | 0.00 |

## WIND COEFFICIENTS:

| Surf | --Wind_1--- |       | --Wind_2--- |       | Long_Wind |       | Surface  |
|------|-------------|-------|-------------|-------|-----------|-------|----------|
| Id   | Left        | Right | Left        | Right | 1         | 2     | Friction |
| 1    | 0.00        | 0.00  | 0.00        | 0.00  | -0.63     | -0.63 | 0.00     |
| 2    | -0.87       | -0.87 | -0.51       | -0.51 | -0.87     | -0.87 | 0.00     |
| 3    | 0.00        | 0.00  | 0.00        | 0.00  | 0.00      | 0.00  | 0.00     |

## DESIGN LOADS:

| Load   | Live/     | Live       | -Wind_1-- | -Wind_2-- | Long_Wind | -Seismic-- | Aux_Load     |
|--------|-----------|------------|-----------|-----------|-----------|------------|--------------|
| No. Id | Dead Coll | Snow Right | Lt Rt     | Lt Rt     | Lt Rt     | Long Tran  | Id Coef      |
| 18 1   | 1.00 1.00 | 1.00       | 0.00 0.00 | 0.00 0.00 | 0.00 0.00 | 0.00 0.00  | 0 0.00       |
| 2      | 0.90 0.00 | 0.00       | 0.00 0.00 | 0.00 0.00 | 0.00 0.00 | 0.00 0.00  | 0 0.00       |
| 3      | 1.00 1.00 | 0.00       | 0.00 1.30 | 0.00 0.00 | 0.00 0.00 | 0.00 0.00  | 0 0.00       |
| 4      | 1.00 1.00 | 0.00       | 0.00 0.00 | 1.30 0.00 | 0.00 0.00 | 0.00 0.00  | 0 0.00       |
| 5      | 1.00 1.00 | 0.00       | 0.00 0.00 | 0.00 1.30 | 0.00 0.00 | 0.00 0.00  | 0 0.00       |
| 6      | 1.00 1.00 | 0.00       | 0.00 0.00 | 0.00 0.00 | 1.30 0.00 | 0.00 0.00  | 0 0.00       |
| 7      | 1.00 1.00 | 0.00       | 0.00 0.65 | 0.00 0.00 | 0.00 0.00 | 0.00 0.00  | 0 0.00       |
| 8      | 1.00 1.00 | 0.00       | 0.00 0.00 | 0.65 0.00 | 0.00 0.00 | 0.00 0.00  | 0 0.00       |
| 9      | 1.00 1.00 | 0.00       | 0.00 0.00 | 0.00 0.65 | 0.00 0.00 | 0.00 0.00  | 0 0.00       |
| 10     | 1.00 1.00 | 0.00       | 0.00 0.00 | 0.00 0.00 | 0.65 0.00 | 0.00 0.00  | 0 0.00       |
| 11     | 1.00 1.00 | 0.00       | 0.00 0.00 | 0.00 0.00 | 0.00 1.30 | 0.00 0.00  | 0 0.00       |
| 12     | 1.00 1.00 | 0.00       | 0.00 0.00 | 0.00 0.00 | 0.00-1.30 | 0.00 0.00  | 0 0.00       |
| 13     | 1.00 1.00 | 0.00       | 0.00 0.00 | 0.00 0.00 | 0.00 0.00 | 1.30 0.00  | 0 0.00       |
| 14     | 1.00 1.00 | 0.00       | 0.00 0.00 | 0.00 0.00 | 0.00 0.00 | 0.00-1.30  | 0 0.00       |
| 15     | 1.02 1.02 | 0.00       | 0.00 0.00 | 0.00 0.00 | 0.00 0.00 | 0.00 0.00  | 1.00 0 0.00  |
| 16     | 1.02 1.02 | 0.00       | 0.00 0.00 | 0.00 0.00 | 0.00 0.00 | 0.00 0.00  | -1.00 0 0.00 |
| 17     | 0.00 0.00 | 0.00       | 0.00 0.00 | 0.00 0.00 | 0.00 0.00 | 0.00 0.00  | 1.00 0 0.00  |
| 18     | 0.00 0.00 | 0.00       | 0.00 0.00 | 0.00 0.00 | 0.00 0.00 | 0.00 0.00  | -1.00 0 0.00 |

## RIGID FRAME #2:

-----  
BASIC LOADS:

| Dead | Live | Snow | Collateral | Basic<br>Wind | Defl<br>Ratio |
|------|------|------|------------|---------------|---------------|
| 2.0  | 14.7 | 0.0  | 3.0        | 21.9          | 1.00          |

## BASIC LOADS AT EAVE:

| ---Seismic--- |       |      | Weak_Axis_L |      | Weak_Axis_R |      | --Torsion-- |      | -EW_Brace-- |      |
|---------------|-------|------|-------------|------|-------------|------|-------------|------|-------------|------|
| Load          | SpcEP | Coef | Wind        | Seis | Wind        | Seis | Wind        | Seis | Wind        | Seis |
| 0.06          | 0.19  | 0.22 | 0.00        | 0.00 | 0.00        | 0.00 | 0.00        | 0.00 | 0.00        | 0.00 |

## WIND COEFFICIENTS:

| Surf | --Wind_1--- |       | --Wind_2--- |       | Long_Wind |       | Surface  |
|------|-------------|-------|-------------|-------|-----------|-------|----------|
| Id   | Left        | Right | Left        | Right | 1         | 2     | Friction |
| 1    | 0.00        | 0.00  | 0.00        | 0.00  | -0.63     | -0.63 | 0.00     |
| 2    | -0.87       | -0.87 | -0.51       | -0.51 | -0.87     | -0.87 | 0.00     |
| 3    | 0.00        | 0.00  | 0.00        | 0.00  | 0.00      | 0.00  | 0.00     |

## DESIGN LOADS:

| Load   | Live/     | Live       | -Wind_1-- | -Wind_2-- | Long_Wind | -Seismic-- | Aux_Load |
|--------|-----------|------------|-----------|-----------|-----------|------------|----------|
| No. Id | Dead Coll | Snow Right | Lt Rt     | Lt Rt     | Lt Rt     | Long Tran  | Id Coef  |
| 18 1   | 1.00 1.00 | 1.00       | 0.00 0.00 | 0.00 0.00 | 0.00 0.00 | 0.00 0.00  | 0 0.00   |

|    |      |      |      |      |      |      |      |      |       |       |      |       |      |      |      |
|----|------|------|------|------|------|------|------|------|-------|-------|------|-------|------|------|------|
| 2  | 0.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0.00 | 0    | 0.00 |
| 3  | 1.00 | 1.00 | 0.00 | 0.00 | 1.30 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0.00 | 0    | 0.00 |
| 4  | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.30 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0.00 | 0    | 0.00 |
| 5  | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.30 | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0.00 | 0    | 0.00 |
| 6  | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.30 | 0.00  | 0.00  | 0.00 | 0.00  | 0.00 | 0    | 0.00 |
| 7  | 1.00 | 1.00 | 0.00 | 0.00 | 0.65 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0.00 | 0    | 0.00 |
| 8  | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.65 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0.00 | 0    | 0.00 |
| 9  | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.65 | 0.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0.00 | 0    | 0.00 |
| 10 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.65 | 0.00  | 0.00  | 0.00 | 0.00  | 0.00 | 0    | 0.00 |
| 11 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.30  | 0.00  | 0.00 | 0.00  | 0.00 | 0    | 0.00 |
| 12 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -1.30 | 0.00  | 0.00 | 0.00  | 0.00 | 0    | 0.00 |
| 13 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 1.30  | 0.00 | 0.00  | 0.00 | 0    | 0.00 |
| 14 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | -1.30 | 0.00 | 0.00  | 0.00 | 0    | 0.00 |
| 15 | 1.02 | 1.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00 | 1.00  | 0    | 0.00 |      |
| 16 | 1.02 | 1.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00 | -1.00 | 0    | 0.00 |      |
| 17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00 | 1.00  | 0    | 0.00 |      |
| 18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00  | 0.00  | 0.00 | -1.00 | 0    | 0.00 |      |

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05-909LT                      Reactions, Anchor Bolts, & Base Plates:                      4/20/06      1:17pm

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| -----Foundation_Loads(k )----- |             |             |      |      |             |      |      |           |       |            |       |       |
|--------------------------------|-------------|-------------|------|------|-------------|------|------|-----------|-------|------------|-------|-------|
| Frame<br>Line                  | Col<br>Line | Max_Pos_Val |      |      | Max_Neg_Val |      |      | Anc._Bolt |       | Base_Plate |       |       |
|                                |             | Id          | Horz | Vert | Id          | Horz | Vert | No.       | Diam  | Width      | Len   | Thick |
| D                              | 13          | 6           | 0.0  | -2.4 | 6           | 0.0  | -2.4 | 4         | 0.625 | 8.00       | 8.00  | 0.375 |
|                                |             | 3           | 0.0  | 3.2  |             |      |      |           |       |            |       |       |
| D                              | 12          | 6           | 0.0  | -2.9 | 6           | 0.0  | -2.9 | 2         | 0.625 | 5.75       | 5.75  | 0.250 |
|                                |             | 3           | 0.0  | 3.2  |             |      |      |           |       |            |       |       |
| A                              | 13          | 1           | 1.2  | -3.0 | 2           | -0.1 | -2.6 | 4         | 0.750 | 6.00       | 12.50 | 0.375 |
|                                |             | 3           | 0.1  | 3.6  | 1           | 1.2  | -3.0 |           |       |            |       |       |
| C *                            | 13          | 1           | 2.2  | -5.1 | 2           | -0.1 | -4.9 | 4         | 0.750 | 6.00       | 12.50 | 0.375 |
|                                |             | 3           | 0.1  | 5.2  | 5           | 2.2  | -6.0 |           |       |            |       |       |

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C \* Frame Lines :C B

| Load<br>Id | Load<br>Combination  |
|------------|----------------------|
| 1          | DL+CL-1.30LnWndR     |
| 2          | DL+CL+1.30WR1        |
| 3          | DL+CL+LL             |
| 4          | 1.02DL+1.02CL+Seis_L |
| 5          | DL+CL+1.30LnWndR     |
| 6          | DL+CL+1.30WR1+1.30WS |

BRACING/PANEL SHEAR REACTIONS:

| -----Reactions(k )----- |             |                        |      |      |                       |      | Panel<br>Shear<br>(lb/ft) |
|-------------------------|-------------|------------------------|------|------|-----------------------|------|---------------------------|
| ---Wall--<br>Loc        | Col<br>Line | ---Wind---<br>Line     | Horz | Vert | ---Seismic---<br>Horz | Vert |                           |
| L_EW                    | D           |                        |      |      |                       |      | 507.22                    |
| F_SW                    | 11          |                        |      |      |                       |      | 0.00                      |
| R_EW                    | A           | Rigid Frame At Endwall |      |      |                       |      |                           |
| B_SW                    | 13          | B ,C                   | 0.87 | 0.37 | 0.30                  | 0.13 |                           |

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05-909LT                      Additional Reactions Report:                      4/20/06      1:17pm

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Rigid Frame Column Reactions

| Frame<br>Line | Col<br>Line | ---Dead--- |      | Collateral |      | ---Live--- |      | --Live_R-- |      | -Wind_L1-- |      |
|---------------|-------------|------------|------|------------|------|------------|------|------------|------|------------|------|
|               |             | Horz       | Vert | Horz       | Vert | Horz       | Vert | Horz       | Vert | Horz       | Vert |
| A             | 13          | 0.0        | 0.6  | 0.0        | 0.4  | 0.1        | 2.6  | 0.0        | 0.0  | -0.1       | -2.8 |
| C *           | 13          | 0.0        | 0.8  | 0.0        | 0.8  | 0.1        | 3.6  | 0.0        | 0.0  | -0.1       | -5.0 |

| Frame | Col  | -Wind_R1-- |      | -Wind_L2-- |      | -Wind_R2-- |      | Seismic_L- |      | Seismic_R- |      |
|-------|------|------------|------|------------|------|------------|------|------------|------|------------|------|
| Line  | Line | Horz       | Vert | Horz       | Vert | Horz       | Vert | Horz       | Vert | Horz       | Vert |
| A     | 13   | -0.1       | -2.8 | 0.0        | -1.6 | 0.0        | -1.6 | 0.0        | 0.0  | 0.0        | 0.0  |
| C *   | 13   | -0.1       | -5.0 | -0.1       | -2.9 | -0.1       | -2.9 | 0.0        | 0.0  | 0.0        | 0.0  |

| Frame | Col  | -LnWind_1- |      | -LnWind_2- |      | Ln_Seismic |      |
|-------|------|------------|------|------------|------|------------|------|
| Line  | Line | Horz       | Vert | Horz       | Vert | Horz       | Vert |
| A     | 13   | 0.9        | -3.1 | 0.9        | -3.1 | 0.0        | 0.0  |
| C *   | 13   | 1.6        | -5.8 | 1.6        | -5.8 | 0.0        | -0.1 |

C \* Frame Lines :C B

#### Endwall Column Reactions

| Frame | Col  | Dead | Collat | Live | -Brc_Wind_L- |      | -Brc_Wind_R- |      | -Out_Of_Plane- |        |
|-------|------|------|--------|------|--------------|------|--------------|------|----------------|--------|
| Line  | Line | Vert | Vert   | Vert | Horz         | Vert | Horz         | Vert | Wind_P         | Wind_S |
| D     | 13   | 0.5  | 0.4    | 2.3  | 0.0          | -2.5 | 0.0          | -2.5 | 0.0            | 0.0    |
| D     | 12   | 0.5  | 0.4    | 2.3  | 0.0          | -2.9 | 0.0          | -2.9 | 0.0            | 0.0    |

#### Endwall Column Reactions

| Frame | Col  | -Raf_Wind_L- |      | -Raf_Wind_R- |      | --Seismic_L- |      | --Seismic_R- |      | WindLn |
|-------|------|--------------|------|--------------|------|--------------|------|--------------|------|--------|
| Line  | Line | Horz         | Vert | Horz         | Vert | Horz         | Vert | Horz         | Vert | Vert   |
| D     | 13   | 0.0          | -2.5 | 0.0          | -2.5 | 0.0          | 0.0  | 0.0          | 0.0  | -2.5   |
| D     | 12   | 0.0          | -2.9 | 0.0          | -2.9 | 0.0          | 0.0  | 0.0          | 0.0  | -2.9   |

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|          |                         |         |        |
|----------|-------------------------|---------|--------|
| 05-909LT | *Seismic Design Report: | 4/20/06 | 1:17pm |
|----------|-------------------------|---------|--------|

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#### Building Data

Code = FBC 04  
Length = 70.00  
Width = 20.00  
Left Eave Height = 12.00  
Right Eave Height = 16.73

#### Seismic Formula

Base Shear, V =  $0.667 \cdot 1.2 \cdot F_a \cdot S_s \cdot W/R$   
Shear Force, E =  $\Omega \cdot \rho \cdot V / 1.4$   
Zone/Design Category = B  
 $F_a \cdot S_s$  = 0.220  
 $\rho$  =  $2 - 20 / (R_{Max} \cdot \sqrt{Width \cdot Length})$

Seismic Dead Load, W

|       |             |   |             |           |            |
|-------|-------------|---|-------------|-----------|------------|
| Roof  | Dead+Collat | = | 5.00 (psf ) |           |            |
| Frame | Dead        | = | 2.00 (psf ) |           |            |
| Roof  | Total       | = | 7.00 (psf ) | , Weight= | 9.80 (k )  |
| L_EW  | Dead        | = | 2.00 (psf ) | , Weight= | 0.29 (k )  |
| R_EW  | Dead        | = | 2.00 (psf ) | , Weight= | 0.29 (k )  |
| F_SW  | Dead        | = | 2.00 (psf ) | , Weight= | 1.17 (k )  |
| B_SW  | Dead        | = | 2.00 (psf ) | , Weight= | 0.84 (k )  |
| ----- |             |   |             |           |            |
|       |             |   |             | Total =   | 12.39 (k ) |

## Seismic Forces

-----

## Roof Bracing

|          |   |            |                                        |
|----------|---|------------|----------------------------------------|
| R        | = | 5.0        | , Rho = 1.00, RMax = 0.50, Omega= 2.00 |
| W        | = | 10.37 (k ) |                                        |
| Force, V | = | 0.37 (k )  |                                        |
| Force, E | = | 0.52 (k )  |                                        |

## Sidewall Bracing

|      |          |   |           |                                        |
|------|----------|---|-----------|----------------------------------------|
| Back | R        | = | 5.0       | , Rho = 1.00, RMax = 0.50, Omega= 2.00 |
|      | W        | = | 6.00 (k ) |                                        |
|      | Force, V | = | 0.21 (k ) |                                        |
|      | Force, E | = | 0.30 (k ) |                                        |

## Rigid Frames

|         |          |   |           |                                        |
|---------|----------|---|-----------|----------------------------------------|
|         | R        | = | 3.5       | , Rho = 1.00, RMax = 0.33, Omega= 1.00 |
| Frame 1 | W        | = | 2.23 (k ) |                                        |
|         | Force, V | = | 0.11 (k ) |                                        |
|         | Force, E | = | 0.08 (k ) |                                        |
| Frame 2 | W        | = | 3.34 (k ) |                                        |
|         | Force, V | = | 0.17 (k ) |                                        |
|         | Force, E | = | 0.12 (k ) |                                        |

## End Plates

|       |        |      |
|-------|--------|------|
| Frame | Omega= | 3.00 |
|-------|--------|------|

=====

JOE

## FOREMAN & OLVERA, P.A.

ATTORNEYS AT LAW

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August 14, 2008

VIA FAX 758-0950  
AND US MAIL

Marlin Feagle  
PO Box 1653  
Lake City, Florida 32056-1653

Re: Dan and Jean Dannecker  
Application of Florida Building Code 412.3  
Residential Hangars

Dear Marlin,

We represent Dan and Jean Dannecker, owners of Lot 22 at Lake City Airpark who are currently building a new home to go with a hangar they recently had constructed under permit number 000024538.

After construction and final inspection of the hangar but while the Danneckers were in the process of building their adjacent, detached home, a neighbor complained to the county that a firewall had been removed from the Danneckers' hangar. While I have yet to see any notice of violation from county code enforcement, it is my understanding a file has been opened concerning the removal of this firewall, and the Danneckers' contractor, Jerry Castagna, has been advised that there will be no CO on the home until the issue with the firewall in the hangar is resolved.

I have previously discussed this with Mr. Kepner and Mr. Haltiwanger to get the county's position. Since I believe this ultimately comes down to a question of constructing the language of the relevant section of the Florida Building Code, I am writing you to see what your read is.

As I understand things, it is the county's position that sections 412.3 through 412.3.6 of the Florida Building Code (the "Code") require a firewall containing 2,000 square feet of floor space set apart as a hangar from the remainder of any structure also containing a dwelling. To that end, when the hangar was originally given its final inspection, a firewall in compliance with 412.3.2 was built which essentially cut the hangar space off from the remaining storage and shop areas inside the building. As you can imagine, this barrier is undesirable to the Danneckers, who are accustomed to having a hangar bay that is open to their shop and storage areas.

I think the county's reading of the Code at this point is just one of two possible readings, and I am not convinced it is the intended reading.

Section 412.3.2 of the Code contemplates that a hangar shall not be attached to a dwelling unless separated by a fire barrier having a fire resistance rating not less than one hour (the "firewall"). As a threshold matter, the main dwelling situated on the Danneckers' property is not and never will be attached to the hangar. The house and hangar will be completed as separate structures. On this ground alone, we think we escape any firewall requirement in the Code.

There is, however, an apartment inside the hangar building. If the County considers this a "dwelling" or "dwelling unit" within the meaning of the Code, then the firewall requirement does attach. Even with this, however, we do not believe the requirement has been properly applied to the point that the firewall must abut and enclose the square footage set apart for the hangar.

The pertinent section reads as follows:

**412.3.2 Fire separation.** A hangar shall not be attached to a dwelling unless separated by a fire barrier having a fire-resistance rating of not less than 1 hour. Such separation shall be continuous from the foundation to the underside of the roof and unpierced except for doors leading to the dwelling unit. Doors into the dwelling unit must be equipped with self-closing devices and conform to the requirements of Section 715 with at least a 4-inch (102 mm) noncombustible raised sill. Openings from a hangar directly into a room used for sleeping purposes shall not be permitted.

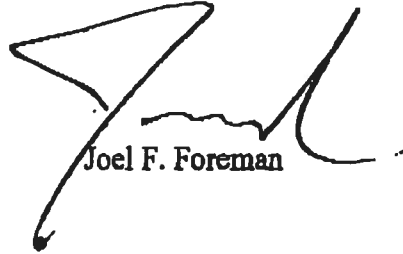
There seem to be two readings of this section. One reading - the county's reading - is that the first sentence imposes a requirement that the hangar be separated off from any other part of the building. Our reading goes the other way, and seems to be supported by the remainder of the section. Our position is that the requirement is that the dwelling be separated from the hangar by the one-hour firewall. It is clear from the balance of the section that the drafters are most concerned with the safety of individuals living inside the dwelling unit, and not with enclosing the hangar bay with a one-hour wall. According to Jerry Castagna, the apartment is already separated from the remainder of the hangar building by a firewall built to meet the requirements of 412.3.2. In other words, so long as the apartment is firewalled in, any firewalling in of the hangar is redundant.

I have spent several hours trying to figure out the answer to this problem. We had originally planned to ask the County for an exemption, but in the process of researching what we were asking to be exempted from, it appears the Code is simply being misapplied. I tend to think other counties and municipalities are following our interpretation of the Code as to the firewall, as the Danneckers report to me that the airpark community where they lived in South Florida was full of buildings similar to the one they had constructed in the Lake City Airpark, yet they don't recall any one-hour firewalls there like the one they are being required to build now.

Please discuss this analysis with whoever has the Danneckers' file regarding the code enforcement complaint. I need to know if my clients are going to be given a formal notice of violation and I also need to know if the county actually intends to hold up the Danneckers' CO on their new home due to this alleged problem.

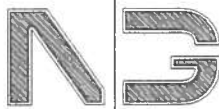
I look forward to speaking with you soon.

Very truly yours,

A handwritten signature in black ink, appearing to be 'JF Foreman', written over the printed name.

Joel F. Foreman

cc: Clients  
JFF/



**NICHOLAS  
PAUL  
GEISLER**  
**ARCHITECT**  
N.C.A.R.B. Certified

1758 NW Brown Road  
Lake City, FL 32055  
386/755-9021

16 APRIL 2008

JOHNNY KEARSE, BUILDING OFFICIAL  
COLUMBIA COUNTY, BUILDING DEPT.  
COLUMBIA COUNTY COURTHOUSE ANNEX  
LAKE CITY, FLORIDA 32055

Re: DANNAKER HANGER  
PERMIT Nr.: \_\_\_\_\_

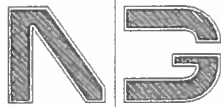
DEAR SIR:

IN THE MATTER REGARDING THE REMOVAL OF THE DEMISING PARTITION AND SUBSEQUENT OVERSIZING OF THE PRIVATE AIRCRAFT HANGER FOR THE ABOVE REFERENCED PROJECT, I OFFER THE FOLLOWING AS A MEANS OF BRINGING THE EXISTING CONSTRUCTION INTO CODE COMPLIANCE:

1. A TWO HOUR FIRE RATED WALL ASSEMBLY. CURRENTLY THIS WALL IS ONLY ONE HOUR RATED. PLEASE REFER TO THE ATTACHED DETAIL FOR THE CORRECTIONS OF THIS CONDITION.
2. 30' TO PROPERTY LINES OR PUBLIC WAYS BE 2 HOUR FIRE RATED - THIS PROJECT HAS NO WALL CLOSER THAN 50' FROM ANY PROPERTY LINE OR PUBLIC WAY.
3. EQUIPTED WITH A FLOOR DRAIN DISCHARGING THROUGH AN OIL SEPERATOR. THE PROPOSED CORRECTION IS TO REMOVE A PORTION OF THE EXISTING SLAB AND REPOUR WITH A SLOPE AND FLOOR DRAIN. SEE THE ATTACHED DRAWING FOR SCOPE OF THE PROPOSED WORK AND ASSOCIATED DETAILS.
4. SUPPRESSION PROVIDED THAT NO MAJOR MAINTAINENCE OR OVERHAUL WORK WILL BE PERFORMED. THIS PROJECT IS FOR THE PURPOSE OF STORAGE OF PRIVATE AIRCRAFT AND NOT INTENDED TO PROVIDE SUCH SERVICE THAT WOULD REQUIRE FOAM FIRE SUPPRESSION.
5. ELECTRICAL REQUIREMENTS OF THE NEC REQUIRE THAT NO ELECTRICAL BE INSTALLED LOWER THAN 18" ABOVE THE FLOOR SLAB. ALL CURRENT ELECTRICAL WORK IS CURRENTLY ABOVE THIS LEVEL.

SHOULD YOU HAVE ANY FURTHER QUESTIONS WITH THIS, PLEASE CALL FOR ASSISTANCE.

YOURS TRULY,  
NICHOLAS PAUL GEISLER, ARCHITECT AR0007005



**NICHOLAS  
PAUL  
GEISLER  
ARCHITECT**  
N.C.A.R.B. Certified

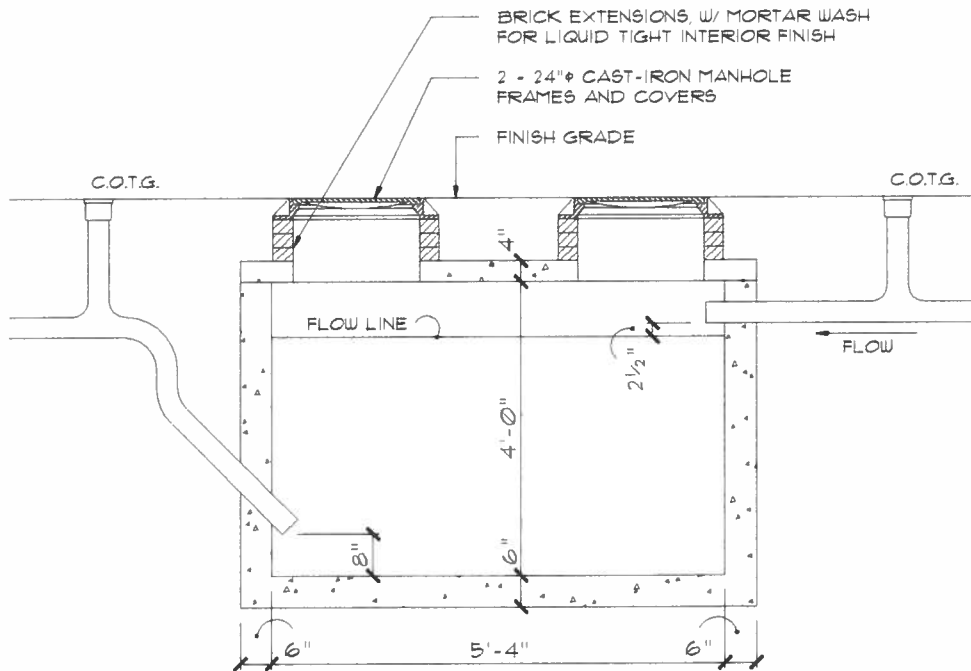
1758 NW Brown Road  
Lake City, FL 32055  
386/755-9021

Florida DEP  
1-904-807-3300  
Jeff Martin

" or  
Vo "

#### OIL TRAP NOTES:

1. TANK SHALL BE CONSTRUCTED OF REINFORCED CONCRETE OR CMU - REBAR SHALL BE GRADE 40 KSI OR GREATER - CONCRETE SHALL BE  $F'_c = 3000$  PSI OR GREATER.
2. WHERE TANK IS LOCATED IN VEHICULAR USE AREA, A TRAFFIC LID SHALL BE PROVIDED.
3. NET TANK WIDTH SHALL BE 3'-0" I.D., 4'-0" O.D.
4. ENGINEERED SHOP DRAWING SHALL BE PROVIDED, INDICATING ALL DIMENSIONS, LOAD RATING (IF REQ'D), NET CAPACITY AND GRADE OR STRENGTH OF MATERIALS PROPOSED.
5. LID SHALL HAVE CAST-IN-PLACE LIFTING RINGS
6. FINISHED PRODUCT SHALL BE LIQUID TIGHT.



#### OIL TRAP DETAIL

SCALE: NONE

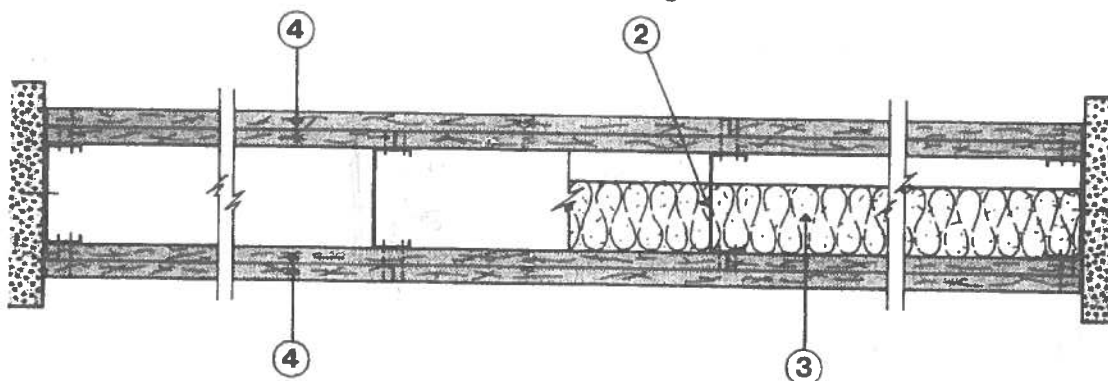
400 GALLON CAPACITY



Re: DANKAKER HANGER  
PERMIT Nr.: \_\_\_\_\_

*[Signature]*  
APR 10 2005 16 Apr 2008

**Design No. U412**  
**Nonbearing Wall Rating—2 HR.**



1. **Floor and Ceiling Runner**—(Not Shown)—25 MSG (min) galv steel 1 in. high, return legs 1-5/8 in. wide (min), attached to floor and ceiling with fasteners 24 in. O.C.
2. **Steel Studs**—1-5/8 in. wide (min), 1-1/4 in. legs, 1/4 in. return, formed of 25 MSG (min) galv steel max stud spacing 24 in. O.C.
3. **Batts and Blankets**—(Optional)—Mineral wool or glass fiber batts, partially or completely filling stud cavity. Fasten each batt to wallboard base layer with a min 9/16 in. long staple. Use five staples for each 4 ft long piece. Drive one staple in the center of each piece and a staple at each corner, approx 3 in. from edges.  
See Batts and Blankets (BZJZ) category for names of manufacturers.
4. **Wallboard, Gypsum\***—1/2 in. thick. Wallboard applied vertically in two layers. (Laminated System) Inner layer attached to studs with 1 in. long Type S steel screws spaced 24 in. O.C. along vertical edges and 24 in. O.C. in the field. Outer layer laminated to inner layer with joint compound, applied with a notched spreader producing continuous beads of compound about 3/8 in. in diameter, spaced not greater than 2 in. O.C. Joints of laminated outer layer offset 12 in. from inner layer joints. Outer layer wallboard attached to inner layer with 1-1/2 in. long Type G steel screws spaced 24 in. O.C. along edges and center line of each sheet.  
Optional, (Direct Attached System) Wallboard applied vertically in two layers. Inner layer attached to studs with 1 in. long Type S steel screws spaced 24 in. O.C. in the field and along the vertical edges. Outer layer attached to the studs over the inner layer with 1-5/8 in. long Type S steel screws spaced 12 in. O.C. in the field, along the vertical edges, and to the floor and ceiling runners. Joints of screw-attached outer layer offset from inner layer joints.  
Optional, (Direct Attached System) Inner layer wallboard applied vertically, outer layer wallboard applied horizontally. Inner layer attached to studs with 1 in. Type S steel screws spaced 24 in. O.C. along vertical edges and in the field. Outer layer attached to the studs over the inner layer with 1-5/8 in. long Type S steel screws spaced 12 in. O.C. in the field, along the vertical edges, and to the floor and ceiling runners. Outer layer secured to inner layer wallboard with 1-1/2 in. long Type G steel screws located midway between studs and 1 in. from the horizontal joint.  
Outer layer wallboard joints covered with joint tape and min two coats of joint compound, and screwheads covered with min two coats of joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced.

Canadian Gypsum Co., Ltd.—Type C.

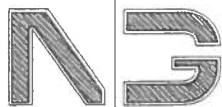
Celotex Corp.—Type FRP or J. When Type J wallboard is used, both layers of gypsum wallboard must be screw-attached to the steel studs and floor and ceiling runners with steel screws spaced maximum 12 in. O.C. at the joint edges and in the field (laminating adhesive optional).

Domtar Gypsum—Type C.

United States Gypsum Co.—Type C or IP-X2.

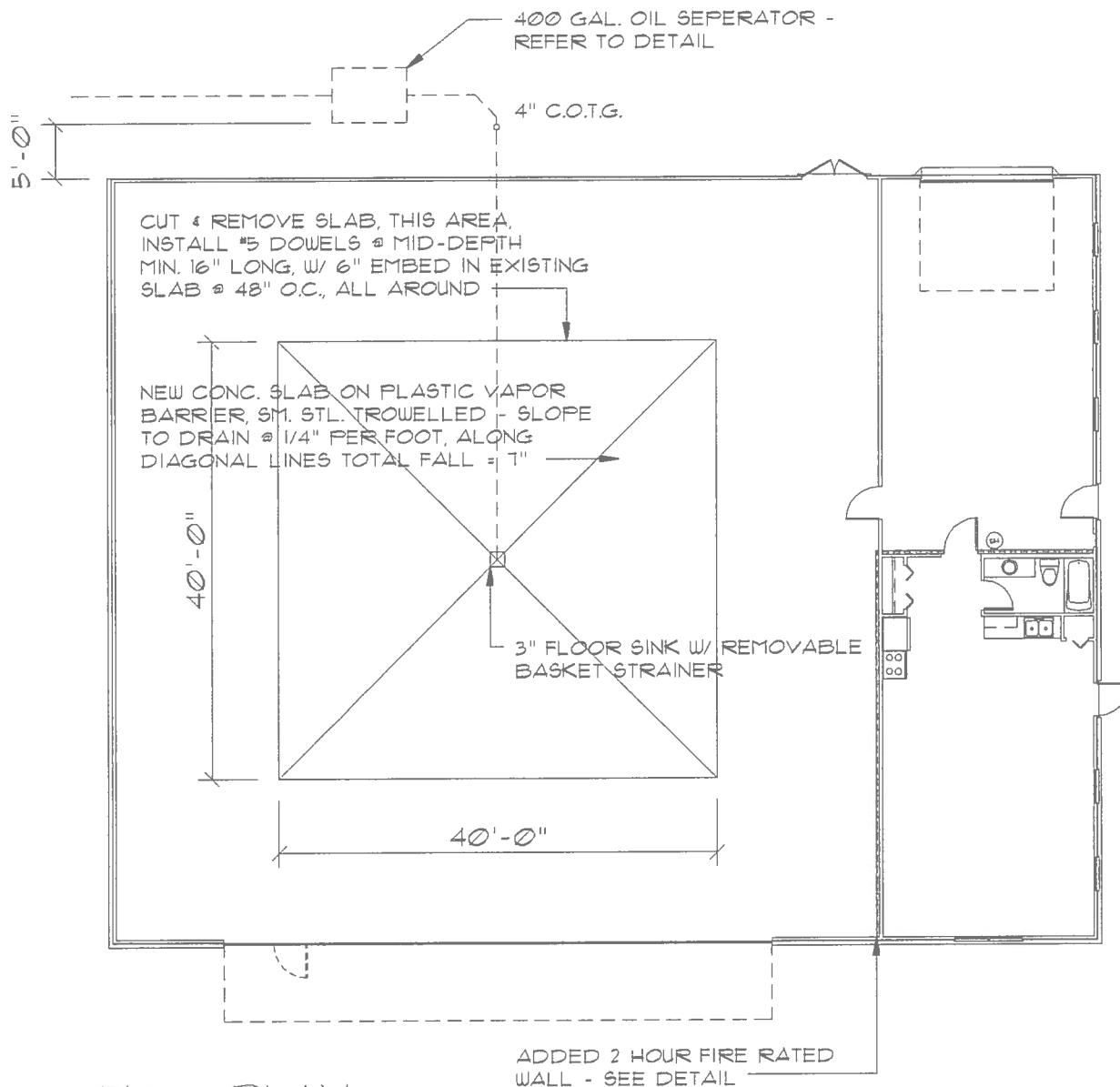
\*Bearing the UL Classification Marking

*AR 700X 16 Apr 2008*



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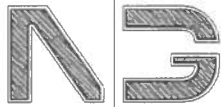


## Floor PLAN

SCALE: 1/16" = 1'-0"

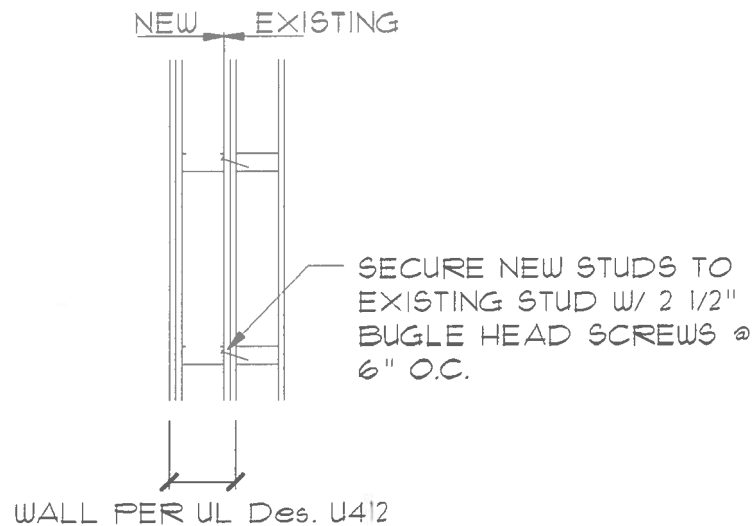
Re: DANKER HANGER  
PERMIT Nr.: \_\_\_\_\_

*APR 16 2008*



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## WALL DETAIL

SCALE: 3/4" = 1'-0"

Re: DANKAKER HANGER  
PERMIT Nr.: \_\_\_\_\_

*[Handwritten signature]*  
16 Apr 2K8

# COLUMBIA COUNTY FLORIDA DEPARTMENT OF BUILDING AND ZONING

## OCCUPANCY

### COLUMBIA COUNTY, FLORIDA

#### Department of Building and Zoning Inspection

This Certificate of Occupancy is issued to the below named permit holder for the building and premises at the below named location, and certifies that the work has been completed in accordance with the Columbia County Building Code.

Parcel Number 22-5S-17-09322-012

Building permit No. 000024538

Use Classification HANGAR

Fire: 0.00

Permit Holder JERRY CASTAGNA

Waste: 0.00

Owner of Building WILLIAM DANNECKER

Total: 0.00

Location: 355 SW AVIATION DR(LAKE CITY AIR PARK,LOT 12)

Date: 03/07/2007

*Harry Dick*

Building Inspector



POST IN A CONSPICUOUS PLACE  
(Business Places Only)