

# **SQUARE***columns*<sup>TM</sup> *by Metwood*

## Reports

### **Axial Compression of Steel Columns**

Applied Testing & Geosciences, LLC

# SQUAREcolumns™

A perfect match for truSPAN™ and throughSPAN Beams, but the fact is they'll support just about anything. Square Columns have several advantages over round columns or jack posts and at comparable prices they feature strength and flexibility not found in most column products on the market. Metwood Square Structural Columns together with truSPAN™ Beams will give you a whole new set of possibilities.

- "Tabbed" Top Plate for flexibility at the job site. This allows for immediate use of the column and no need for

"temporaries".

- Fasten with screws, and trim easily with a reciprocating saw, hacksaw, or saw with abrasive blade.
- Easier to plumb and attach treatments such as wood, masonry, vinyl, dryvit, and more.
- 3" Square Columns fit inside 2 x 4 framed walls, and are perfect as supports or wall stiffeners.
- Lighter gauge than round columns but featuring higher load capacities.
- Galvanized with an in-line Flo-Coat for a triple layer of corrosion protection. An excellent choice for exterior applications.

- Available lengths are 9', 10' and 12' along with custom lengths and end plates.



### Available Loads (lbs.)

3" - 13 Ga.	9' - 18,637 lbs.	10' - 16,162 lbs.
4" - 13 Ga.	10' - 29,776 lbs.	12' - 25,280 lbs.
4" - 11 Ga.	10' - 37,204 lbs.	12' - 31,503 lbs.



**1**  
Measure



**2**  
Cut



**3**  
Assemble



**4**  
Install



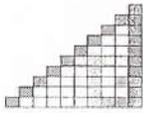
# SQUAREcolumns™

by Metwood



A Publicly Traded Company, OTC-MTWD

819 Naff Road Boones Mill, VA. 24065 Ph: 540-334-4294 www.metwood.com



### Report of Axial Compression of Steel Columns

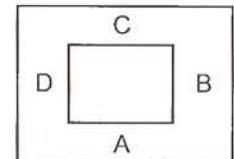
Name of Project	Metwood - Column Testing
Client	Metwood, Inc., Boones Mill, VA
Description of Work	Axial Compression of Steel Columns
Location of Work	Applied Testing & Geosciences, LLC, Bridgeport, PA
Material Supplier	Allied Tubing
Test Pump/Gauge	Enerpac RCH-606, P-80 Jack, Serial No. 257 - Calibration Services, Inc. 4/10/2007
Test Cylinder	TFL42-200K, Serial No. 200016
Load Calibration	Morehouse Instrument Company, Inc. / Certificate # 20016F2507
Indicator	Load Cell Central AHM Readout, Serial No. 1000341745
Test Procedure	ASTM E72 Modified
Test Engineer	Joss / Ianuli / Rivera

### Section Properties

Column Label	Gauge #	Column Size	Side A thk (inches)	Side B thk (inches)	Side C thk (inches)	Side D thk (inches)	Average thk (inches)
1	13	3"x3"x10'	0.101	0.100	0.093	0.106	0.100
4	13	3"x3"x10'	0.096	0.096	0.097	0.092	0.095
7	13	3"x3"x10'	0.107	0.094	0.095	0.092	0.097

### Results

Column Label	Gauge #	Initial Load (lbf)	Ultimate Load (lbf)	Allowable Load (lbf)	Ultimate vs. Allowable
1	13	20	24,400	15,884	1.5
4	13	80	25,120	15,884	1.6
7	13	480	25,960	15,884	1.6
Average:			25,160		1.6

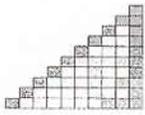


Reported to: Al Smith  
Report Date 6/26/2007

Respectfully Submitted,  
**Applied Testing & Geosciences, LLC**

**Craig J. Joss, Ph.D., P.E.**  
Technical Manager





**Report of Axial Compression of Steel Columns**

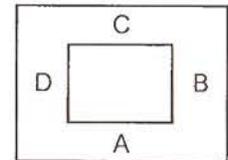
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**Section Properties**

Column Label	Gauge #	Column Size	Side A thk (inches)	Side B thk (inches)	Side C thk (inches)	Side D thk (inches)	Average thk (inches)
10	-	3"x3"x10'	0.113	0.116	0.119	0.112	0.115
5	-	3"x3"x10'	0.114	0.116	0.114	0.114	0.115
3	-	3"x3"x10'	0.114	0.117	0.112	0.112	0.114

**Results**

Column Label	Gauge #	Initial Load (lbf)	Ultimate Load (lbf)	Allowable Load (lbf)	Ultimate vs. Allowable
10	-	400	31,090	-	-
5	-	330	41,230	-	-
3	-	100	41,270	-	-
Average:			37,863		

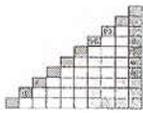


Reported to: Al Smith  
Report Date 6/27/2007

Respectfully Submitted,  
**Applied Testing & Geosciences, LLC**

**Craig J. Joss, Ph.D., P.E.**  
Technical Manager





**Report of Axial Compression of Steel Columns**

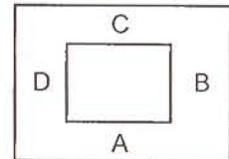
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**Section Properties**

Column Label	Gauge #	Column Size	Side A thk (inches)	Side B thk (inches)	Side C thk (inches)	Side D thk (inches)	Average thk (inches)
9	11	4"x4"x10'	0.121	0.135	0.135	0.120	0.128
12	11	4"x4"x10'	0.118	0.121	0.135	0.133	0.127
11	11	4"x4"x10'	0.136	0.134	0.119	0.121	0.128

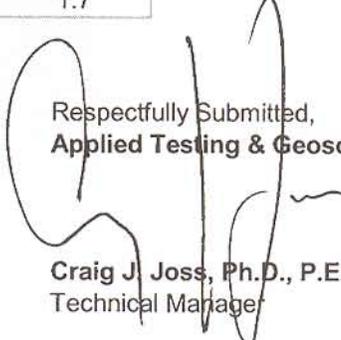
**Results**

Column Label	Gauge #	Initial Load (lbf)	Ultimate Load (lbf)	Allowable Load (lbf)	Ultimate vs. Allowable
9	11	60	61,840	38,072	1.6
12	11	1570	66,170	38,072	1.7
11	11	-30	67,930	38,072	1.8
Average:			65,313		1.7



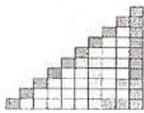
Reported to: Al Smith  
Report Date 6/28/2007

Respectfully Submitted,  
**Applied Testing & Geosciences, LLC**



**Craig J. Joss, Ph.D., P.E.**  
 Technical Manager





### Report of Axial Compression of Steel Columns

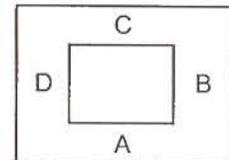
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### Section Properties

Column Label	Gauge #	Column Size	Side A thk (inches)	Side B thk (inches)	Side C thk (inches)	Side D thk (inches)	Average thk (inches)
2	13	4"x4"x10'	0.097	0.097	0.094	0.097	0.096
8	13	4"x4"x10'	0.095	0.095	0.095	0.097	0.096
6	13	4"x4"x10'	0.096	0.097	0.095	0.097	0.096

### Results

Column Label	Gauge #	Initial Load (lbf)	Ultimate Load (lbf)	Allowable Load (lbf)	Ultimate vs. Allowable
2	13	90	48,280	28,361	1.7
8	13	-100	50,030	28,361	1.8
6	13	-60	53,140	28,361	1.9
Average:			50,483		1.8



Reported to: Al Smith  
Report Date 6/29/2007

Respectfully Submitted,  
**Applied Testing & Geosciences, LLC**

*Craig J. Joss*  
**Craig J. Joss, Ph.D., P.E.**  
Technical Manager

