



E-Series/Eagle

2045 Kerper Blvd., Dubuque, IA 52004-1072

STRUCTURAL STEEL MULLION



2" x 4" x .25" TUBE MULLION

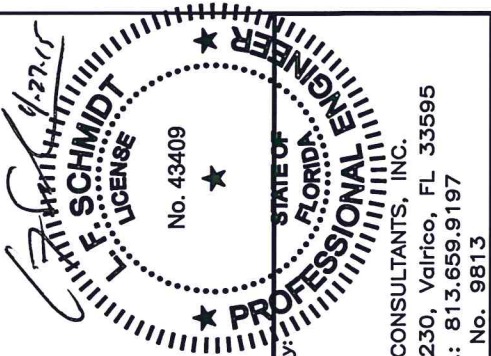
GENERAL NOTES:

- 1. This product has been evaluated and is in compliance with the 5th Edition (2014) Florida Building Code (FBC) structural requirements excluding the "High Velocity Hurricane Zone".
- 2. When used in areas requiring wind borne debris protection this product complies with Section 1609.1.2 of the FBC and does not require an impact resistant covering. This product meets missile level "D" and excludes Wind Zone 4 as defined in ASTM E 1996 and Section 1609.1.2.2 of the FBC.
- 3. Wood bucks by others, must be anchored properly to transfer loads to the structure and be reviewed by the Building Official.
- 4. Mullion anchor embedment to base material shall be beyond wall dressing or stucco.
- 5. Separate product approvals for each glazing product used with these mullions must be submitted along with this mullion product approval.
- 6. Anchoring of each glazing product to the mullion shall be as shown in each individual glazing product approval.
- 7. Any conditions not covered in this evaluation are subject to separate Engineering evaluation.
- 8. Mullion design pressure rating, see load rating table sheets 2 - 5 of this drawing.
- 9. The design pressure rating of the assembly shall be the lesser of the load capacity of the mullion as determined using this approval or the design pressure rating of the individual glazing products used.

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TYPICAL MULLION CONFIGURATIONS

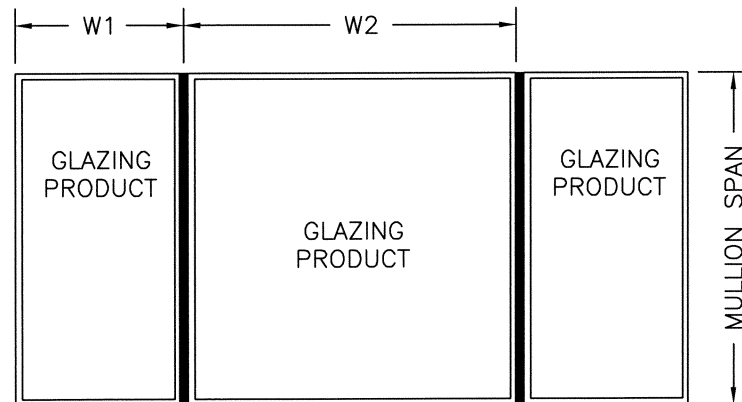


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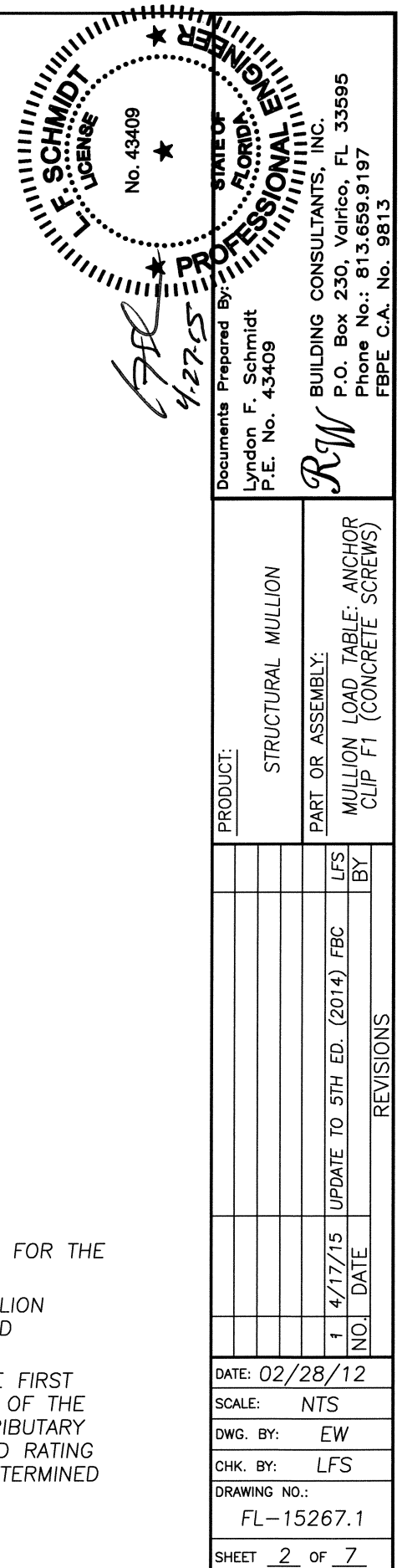
|                         |         |                                   |           |
|-------------------------|---------|-----------------------------------|-----------|
| PRODUCT:                |         | STRUCTURAL MULLION                |           |
| PART OR ASSEMBLY:       |         | TYPICAL ELEVATION & GENERAL NOTES |           |
| NO.                     | DATE    | UPDATE TO                         | REVISIONS |
|                         | 4/17/15 | 5TH ED. (2014) FBC                |           |
| 1                       |         | LFS                               |           |
| DATE: 02/28/12          |         | SCALE: NTS                        |           |
| DWG. BY: EW             |         | CHK. BY: LFS                      |           |
| DRAWING NO.: FL-15267.1 |         | SHEET 1 OF 7                      |           |

$$\text{TRIBUTARY WIDTH} = \frac{W1 + W2}{2}$$



| CONCRETE     |        | 2" x 4" x .25" STEEL STRUCTURAL BEAM MULLION LOAD TABLE (PSF) - ANCHOR CLIP F1 |        |        |        |        |        |        |        |        |        |        |        |        |
|--------------|--------|--------------------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|              |        | TRIBUTARY WIDTH                                                                |        |        |        |        |        |        |        |        |        |        |        |        |
| SCREW        |        | 44.0"                                                                          | 50.0"  | 57.0"  | 63.0"  | 69.0"  | 76.0"  | 82.0"  | 88.0"  | 95.0"  | 101.0" | 107.0" | 114.0" | 120.0" |
| MULLION SPAN | 120.0" | 30.72                                                                          | 27.89  | 25.40  | 23.74  | 22.30  | 20.83  | 19.71  | 18.71  | 17.66  | 16.85  | 16.12  | 15.33  | NA     |
|              | 116.0" | 32.03                                                                          | 29.12  | 26.56  | 24.83  | 23.31  | 21.75  | 20.58  | 19.52  | 18.42  | 17.57  | 16.80  | 15.97  | 15.33  |
|              | 112.0" | 33.45                                                                          | 30.46  | 27.83  | 26.00  | 24.39  | 22.75  | 21.51  | 20.39  | 19.23  | 18.34  | 17.52  | 16.66  | 15.98  |
|              | 108.0" | 35.01                                                                          | 31.92  | 29.21  | 27.26  | 25.56  | 23.82  | 22.51  | 21.33  | 20.11  | 19.17  | 18.31  | 17.40  | 16.69  |
|              | 104.0" | 36.72                                                                          | 33.54  | 30.70  | 28.63  | 26.82  | 24.98  | 23.59  | 22.35  | 21.06  | 20.06  | 19.16  | 18.20  | 17.45  |
|              | 100.0" | 38.60                                                                          | 35.33  | 32.31  | 30.11  | 28.19  | 26.23  | 24.76  | 23.45  | 22.08  | 21.03  | 20.07  | 19.06  | 18.27  |
|              | 96.0"  | 40.69                                                                          | 37.30  | 34.07  | 31.72  | 29.68  | 27.60  | 26.04  | 24.64  | 23.19  | 22.08  | 21.07  | 20.00  | 19.17  |
|              | 92.0"  | 43.01                                                                          | 39.45  | 36.00  | 33.49  | 31.30  | 29.09  | 27.43  | 25.95  | 24.41  | 23.23  | 22.15  | 21.02  | 20.14  |
|              | 88.0"  | 45.62                                                                          | 41.82  | 38.11  | 35.42  | 33.09  | 30.72  | 28.95  | 27.37  | 25.73  | 24.48  | 23.34  | 22.14  | 21.20  |
|              | 84.0"  | 48.53                                                                          | 44.43  | 40.44  | 37.55  | 35.05  | 32.52  | 30.62  | 28.94  | 27.19  | 25.85  | 24.64  | 23.37  | 22.37  |
|              | 80.0"  | 51.75                                                                          | 47.31  | 43.01  | 39.90  | 37.21  | 34.50  | 32.47  | 30.67  | 28.80  | 27.37  | 26.08  | 24.72  | 23.66  |
|              | 76.0"  | 55.34                                                                          | 50.53  | 45.87  | 42.52  | 39.62  | 36.70  | 34.52  | 32.58  | 30.58  | 29.05  | 27.67  | 26.21  | 25.08  |
|              | 72.0"  | 59.35                                                                          | 54.12  | 49.07  | 45.43  | 42.30  | 39.15  | 36.80  | 34.72  | 32.57  | 30.92  | 29.44  | 27.88  | 26.67  |
|              | 68.0"  | 63.88                                                                          | 58.16  | 52.66  | 48.71  | 45.31  | 41.90  | 39.36  | 37.11  | 34.79  | 33.02  | 31.42  | 29.74  | 28.44  |
|              | 64.0"  | 69.00                                                                          | 62.73  | 56.71  | 52.41  | 48.71  | 45.00  | 42.24  | 39.81  | 37.30  | 35.38  | 33.66  | 31.85  | 30.44  |
|              | 60.0"  | 74.85                                                                          | 67.94  | 61.33  | 56.62  | 52.57  | 48.53  | 45.53  | 42.87  | 40.15  | 38.07  | 36.20  | 34.23  | 32.71  |
|              | 56.0"  | 81.58                                                                          | 73.93  | 66.64  | 61.45  | 57.01  | 52.57  | 49.29  | 46.39  | 43.41  | 41.14  | 39.10  | 36.96  | 35.31  |
|              | 52.0"  | 89.39                                                                          | 80.88  | 72.79  | 67.04  | 62.14  | 57.25  | 53.64  | 50.45  | 47.18  | 44.70  | 42.46  | 40.12  | 38.31  |
|              | 48.0"  | 98.57                                                                          | 89.03  | 80.00  | 73.60  | 68.15  | 62.73  | 58.72  | 55.20  | 51.59  | 48.85  | 46.39  | 43.81  | 41.82  |
|              | 44.0"  | 109.49                                                                         | 98.72  | 88.56  | 81.38  | 75.27  | 69.22  | 64.75  | 60.83  | 56.81  | 53.77  | 51.03  | 48.17  | 45.97  |
| 40.0"        | 122.67 | 110.40                                                                         | 98.87  | 90.74  | 83.85  | 77.02  | 72.00  | 67.59  | 63.09  | 59.68  | 56.62  | 53.42  | 50.95  |        |
| 36.0"        | 138.87 | 124.75                                                                         | 111.52 | 102.22 | 94.36  | 86.59  | 80.88  | 75.88  | 70.77  | 66.91  | 63.45  | 59.84  | 57.05  |        |
| 32.0"        | 150.00 | 142.76                                                                         | 127.38 | 116.62 | 107.53 | 98.57  | 92.00  | 86.25  | 80.39  | 75.96  | 72.00  | 67.87  | 64.69  |        |
| 28.0"        | 150.00 | 150.00                                                                         | 147.86 | 135.18 | 124.51 | 114.01 | 106.32 | 99.61  | 92.77  | 87.62  | 83.01  | 78.21  | 74.51  |        |
| 24.0"        | 150.00 | 150.00                                                                         | 150.00 | 150.00 | 147.20 | 134.63 | 125.45 | 117.45 | 109.31 | 103.18 | 97.70  | 92.00  | 87.62  |        |
| 20.0"        | 150.00 | 150.00                                                                         | 150.00 | 150.00 | 150.00 | 150.00 | 150.00 | 142.45 | 132.48 | 124.98 | 118.29 | 111.33 | 105.98 |        |

1. DETERMINE THE DESIGN LOAD REQUIREMENT PER CHAPTER 16 OF THE FBC FOR THE PARTICULAR OPENING.
2. FOR THE PARTICULAR OPENING, DETERMINE THE TRIBUTARY WIDTH AND MULLION SPAN. REFERENCE THE SKETCHES ON THIS SHEET FOR MULLION SPAN AND TRIBUTARY WIDTH DETERMINATION.
3. IN THE FIRST COLUMN OF THE TABLE, LOCATE THE MULLION SPAN. IN THE FIRST ROW OF THE TABLE, LOCATE THE TRIBUTARY WIDTH. AT THE INTERSECTION OF THE ROW CONTAINING THE MULLION SPAN AND THE COLUMN CONTAINING THE TRIBUTARY WIDTH, READ THE MULLION LOAD RATING GIVEN IN PSF. THE MULLION LOAD RATING MUST BE EQUAL TO OR GREATER THAN THE DESIGN LOAD REQUIREMENT DETERMINED IN STEP 1 ABOVE.

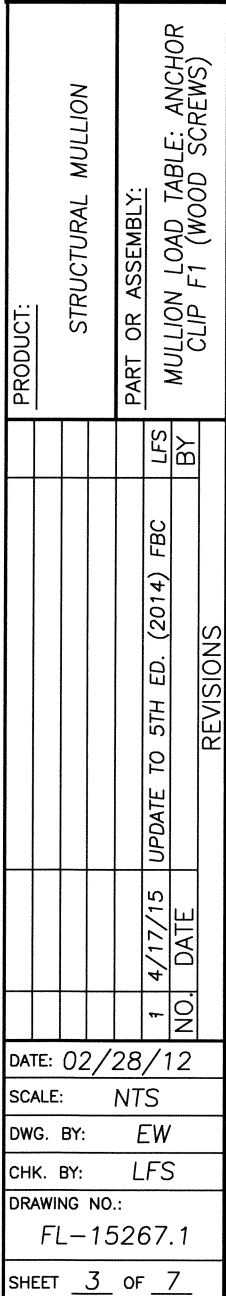




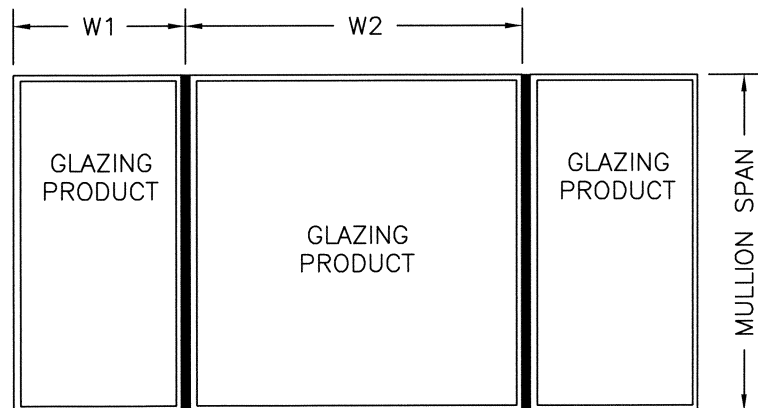
The diagram illustrates a three-pane glazing unit. It consists of three vertical rectangular panes separated by two vertical mullions. The left pane is labeled "GLAZING PRODUCT". The middle pane is labeled "GLAZING PRODUCT". The right pane is labeled "GLAZING PRODUCT". Above the panes, dimension lines indicate the width of the first pane as  $W1$  and the width of the second pane as  $W2$ . To the right of the panes, a vertical dimension line indicates the height of the mullion as "MULLION SPAN".

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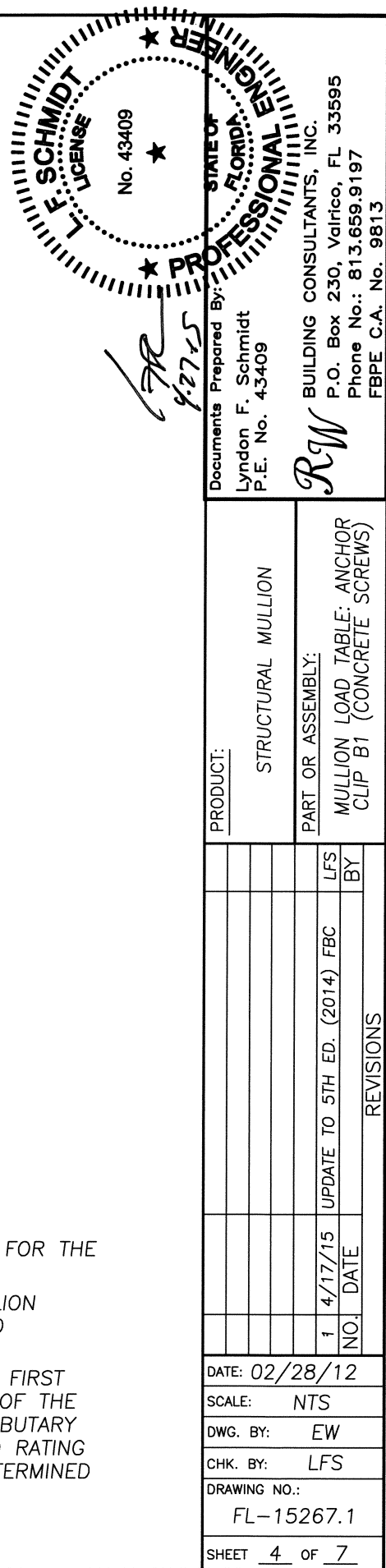
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$$\text{TRIBUTARY WIDTH} = \frac{W1 + W2}{2}$$

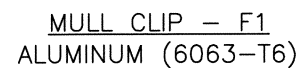
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Technical drawing of a bracket. The drawing shows a base plate with a total width of 5 inches. A vertical support is located 2.157 inches from the left edge. A horizontal arm extends from the top of this support to the right edge, with a height of 2.375 inches. The thickness of the base plate is 0.125 inches typical. The distance between the vertical support and the right edge of the base plate is 0.437 inches.



DISSIMILAR METALS THAT COME IN  
CONTACT MUST BE PAINTED TO  
AVOID CORROSION.

WOOD FRAMING (S.G.  $\geq 0.42$ )  
SHEET METAL SCREWS (SAE GRADE 5 MIN.): HILTI KWIK-FLEX or ELCO DRIL-FLEX  
CONCRETE CONFORMING TO ACI 301 (3,000 PSI MIN.) OR HOLLOW BLOCK CONFORMING TO ASTM C90

1-1/4" MIN.  
EMBED.

1-1/4" MIN.  
EMBED.

1/4" MAX.

MULLION CLIP  
F1

SPACER

2" x 4" x 1/4"  
STEEL MULLION

(2) 10-16 x 1-3/4"  
PFH SMS

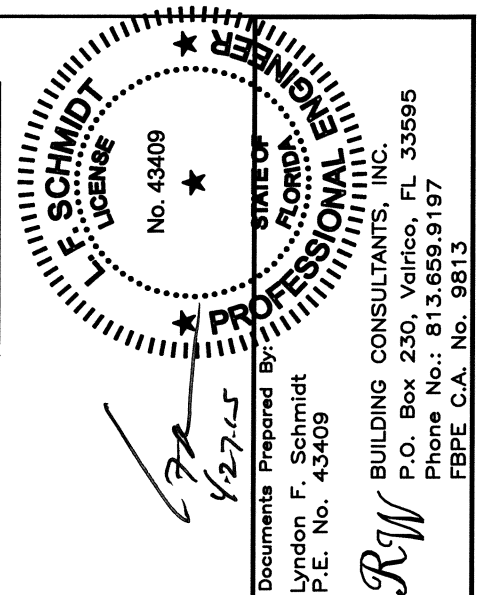
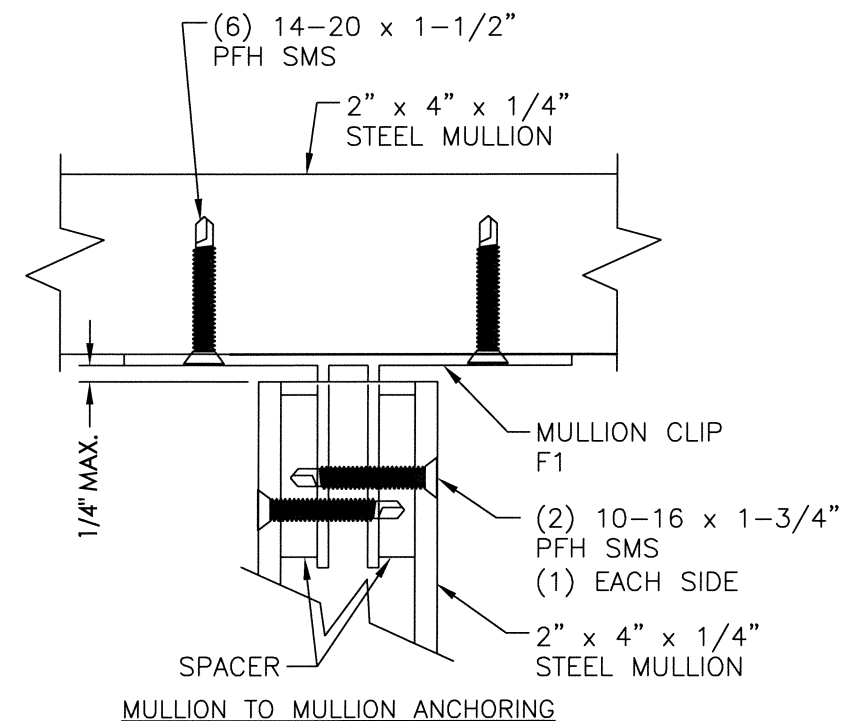
(1) EACH SIDE

(4) 3/16" x 1-3/4"  
ELCO CONCRETE SCREWS

(2) SCREWS ON EACH  
SIDE OF MULLION CLIP

SKIP CENTER MOUNTING HOLE

ANCHOR TO MASONRY  
USING 1/4" x 1-3/4"  
ELCO CONCRETE SCREWS

[illegible]



