



**Product Approval**  
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OFFICE OF THE SECRETARY

| FL #   | FL42454  |                 |             |          |      |            |      |         |      |         |      |         |      |
|--|--|-----------------|-------------|----------|------|------------|------|---------|------|---------|------|---------|------|
| Application Type   | New  |                 |             |          |      |            |      |         |      |         |      |         |      |
| Code Version   | 2023   |                 |             |          |      |            |      |         |      |         |      |         |      |
| Application Status   | Approved   |                 |             |          |      |            |      |         |      |         |      |         |      |
| Comments   |  |                 |             |          |      |            |      |         |      |         |      |         |      |
| Archived   | <input type="checkbox"/>   |                 |             |          |      |            |      |         |      |         |      |         |      |
| Product Manufacturer   | GIG Windows & Doors  |                 |             |          |      |            |      |         |      |         |      |         |      |
| Address/Phone/Email  | 290 W 78 Road<br>Hialeah, FL 33014<br>(305) 558-8103<br>tony@generalimpact.com   |                 |             |          |      |            |      |         |      |         |      |         |      |
| Authorized Signature   | Jose Zuniga<br>tony@generalimpact.com  |                 |             |          |      |            |      |         |      |         |      |         |      |
| Technical Representative   |  |                 |             |          |      |            |      |         |      |         |      |         |      |
| Address/Phone/Email  |  |                 |             |          |      |            |      |         |      |         |      |         |      |
| Quality Assurance Representative                                       |  |                 |             |          |      |            |      |         |      |         |      |         |      |
| Address/Phone/Email  |  |                 |             |          |      |            |      |         |      |         |      |         |      |
| Category   | Panel Walls  |                 |             |          |      |            |      |         |      |         |      |         |      |
| Subcategory  | Storefronts  |                 |             |          |      |            |      |         |      |         |      |         |      |
| Compliance Method  | Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer<br><input type="checkbox"/> Evaluation Report - Hardcopy Received  |                 |             |          |      |            |      |         |      |         |      |         |      |
| Florida Engineer or Architect Name who developed the Evaluation Report | Walter A. Tillit Jr., P.E.   |                 |             |          |      |            |      |         |      |         |      |         |      |
| Florida License  | PE-44167   |                 |             |          |      |            |      |         |      |         |      |         |      |
| Quality Assurance Entity   | National Accreditation and Management Institute  |                 |             |          |      |            |      |         |      |         |      |         |      |
| Quality Assurance Contract Expiration Date                             | 12/31/2026   |                 |             |          |      |            |      |         |      |         |      |         |      |
| Validated By   | John W. Knezevich, PE<br><input checked="" type="checkbox"/> Validation Checklist - Hardcopy Received  |                 |             |          |      |            |      |         |      |         |      |         |      |
| Certificate of Independence  | <a href="#">FL42454_R0_COI_COI Drwg 23-213 Series 12000 GIG Windows Doors.pdf</a>  |                 |             |          |      |            |      |         |      |         |      |         |      |
| Referenced Standard and Year (of Standard)                             | <table border="0"> <thead> <tr> <th><b>Standard</b></th> <th><b>Year</b></th> </tr> </thead> <tbody> <tr> <td>AAMA 501</td> <td>2015</td> </tr> <tr> <td>ASTM E1300</td> <td>2009</td> </tr> <tr> <td>TAS 201</td> <td>1994</td> </tr> <tr> <td>TAS 202</td> <td>1994</td> </tr> <tr> <td>TAS 203</td> <td>1994</td> </tr> </tbody> </table> | <b>Standard</b> | <b>Year</b> | AAMA 501 | 2015 | ASTM E1300 | 2009 | TAS 201 | 1994 | TAS 202 | 1994 | TAS 203 | 1994 |
| <b>Standard</b>  | <b>Year</b>  |                 |             |          |      |            |      |         |      |         |      |         |      |
| AAMA 501   | 2015   |                 |             |          |      |            |      |         |      |         |      |         |      |
| ASTM E1300   | 2009   |                 |             |          |      |            |      |         |      |         |      |         |      |
| TAS 201  | 1994   |                 |             |          |      |            |      |         |      |         |      |         |      |
| TAS 202  | 1994   |                 |             |          |      |            |      |         |      |         |      |         |      |
| TAS 203  | 1994   |                 |             |          |      |            |      |         |      |         |      |         |      |
| Equivalence of Product Standards Certified By                          |  |                 |             |          |      |            |      |         |      |         |      |         |      |
| Sections from the Code   |  |                 |             |          |      |            |      |         |      |         |      |         |      |

Product Approval Method

Method 1 Option D

Date Submitted

10/02/2023

Date Validated

10/02/2023

Date Pending FBC Approval

10/03/2023

Date Approved

12/13/2023

**Summary of Products**

| FL #  | Model, Number or Name   | Description   |
|---|---|---|
| 42454.1   | High Impact Green World Fixed Glass Wall Series 12000 Large Missile Laminated & Insulated Glass | Storefront System made of Laminated and Insulated Impact Resistant Glass retained by aluminum profile frame, wet glazed.  |
| <b>Limits of Use</b><br><b>Approved for use in HVHZ:</b> Yes<br><b>Approved for use outside HVHZ:</b> Yes<br><b>Impact Resistant:</b> Yes<br><b>Design Pressure:</b> +varies/-varies<br><b>Other:</b> See Item 7 of the Evaluation Report for limitations and conditions of use |   | <b>Installation Instructions</b><br><a href="#">FL42454_R0_II_PED Drwg 23-213 Series 12000 GIG Windows Doors.pdf</a><br>Verified By: Walter A. Tillit Jr., P.E. PE 44167<br>Created by Independent Third Party: Yes<br><b>Evaluation Reports</b><br><a href="#">FL42454_R0_AE_PER Drwg 23-213 Series 12000 GIG Windows Doors.pdf</a><br>Created by Independent Third Party: Yes |

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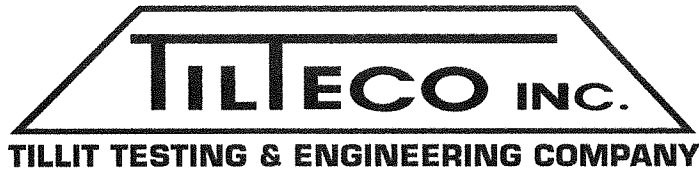
Contact Us :: [2601 Blair Stone Road, Tallahassee FL 32399](#) Phone: 850-487-1824

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**Product Approval Accepts:**





WALTER A. TILLIT, JR., P.E.

tilteco@aol.com  
FL P.E. License No. 44167  
FL C.A. License No. 0006719

## CERTIFICATE OF INDEPENDENCE

**Evaluation Report #:** 23-0919.03

**Date:** September 19, 2023

**Product Category:** Windows

**Product Subcategory:** Storefront

**Product Name:** HIGH IMPACT GREEN WORLD FIXED GLASS  
WALL SERIES 12000 LARGE MISSILE  
LAMINATED AND INSULATED GLASS

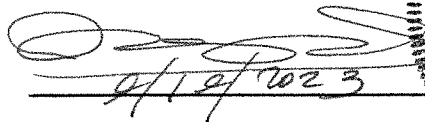
**Manufacturer Name:** GIG WINDOWS & DOORS  
290 West 78th Road  
Hialeah, FL 33014

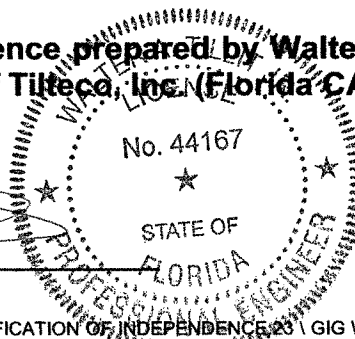
**Dear Sir (Madam):**

This is to certify that this Florida Professional Engineer, performing this evaluation does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the reports are being issued.

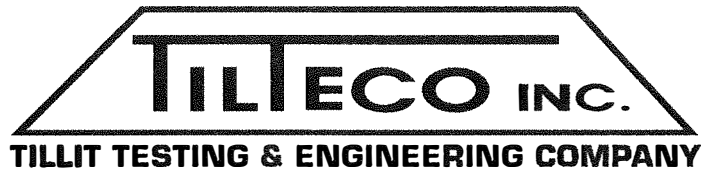
This is also to certify that this Florida Professional Engineer performing this evaluation does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

**Certificate of Independence prepared by Walter A. Tillit, Jr., P.E. (Florida License No. 44167), President of Tilteco, Inc. (Florida CA-0006719).**

  
9/19/2023



WAT\ma  
D:\TILTECO ADMON RECORDS \ CERTIFICATION OF INDEPENDENCE 23 \ GIG WINDOWS & DOORS \ HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED AND INSULATED GLASS \ EVALUATION REPORT # 23-0919.03



WALTER A. TILLIT, JR., P.E.

tilteco@aol.com  
FL P.E. License No. 44167  
FL C.A. License No. 0006719

## PRODUCT EVALUATION REPORT

**REPORT No.:** 23-0919.03

**DATE:** September 19, 2023

**PRODUCT CATEGORY:** Panel Wall

**PRODUCT SUB-CATEGORY:** Storefront

**PRODUCT NAME:** HIGH IMPACT GREEN WORLD FIXED  
GLASS WALL SERIES 12000 LARGE  
MISSILE LAMINATED AND INSULATED  
GLASS

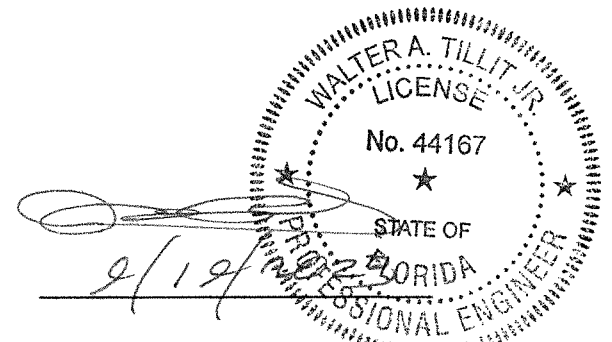
**MANUFACTURER:** GIG WINDOWS & DOORS  
290 West 78th Road  
Hialeah, FL 33014

### 1. PURPOSE OF EVALUATION:

This is a Product Evaluation Report issued by **Walter A. Tillit, Jr., P.E.** (System ID # 1906) to **GIG WINDOWS & DOORS**, based on **Rule Chapter No. 61G20-3, Method 1D** of the Florida Department of Business and Professional Regulation.

This product is being issued an Evaluation Report as described herein and has been verified for compliance in accordance with the 2023 8th Edition of the Florida Building Code, and to verify that the product is for the purpose intended at least equivalent to that required by the Code.

This Product Evaluation Report shall be subject to review and revision in case of a Building Code change that may affect its limitations and conditions.



## **2. EVIDENCE SUBMITTED:**

### **2.1. PRODUCT EVALUATION DOCUMENT (P.E.D.):**

Drawing No. 23-213, titled “HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED AND INSULATED GLASS” sheets 1 thru 51 (includes 5A, 31A, 32A, 44A) prepared by **Tilteco, Inc.**; signed and sealed by **Walter A. Tillit, Jr., P.E.**; dated **9/12/2023**. This drawing is an integral part of this Evaluation Report.

### **2.2. TEST REPORTS:**

Impact and Cyclic Tests as per protocol TAS-201, TAS-203, Uniform Static Load as per Protocol TAS 202 and AAMA 501 per sections 1626, 1609.1.2 and 2411.3.2.1.1, respectively of the Florida Building Code.

Test reports prepared by Fenestration Testing Lab Inc., Reports No.6179 & 12604, signed and sealed by Jorge A. Causo, P.E. & Idalmis Ortega, P.E.; respectively.

### **2.3. STRUCTURAL ENGINEERING CALCULATIONS:**

On “High Impact Green world fixed Glass Wall Series 12000 large Missile Laminated and Insulated Glass” for Maximum Pressure Rating vs. Maximum anchor spacing, maximum Mullion and Horizontal Span, and Maximum Glass Size, based on rational and comparative analysis, in accordance with sections 1604 and 1616 of the Florida Building Code. Calculations prepared by Tilteco, Inc., dated 05/07/2010, and 08/25/2017, 8/16/2021 and 02/28/2022, signed and sealed by Walter A. Tillit, Jr., P.E. Glass Verified per ASTM E-1300 – 9a, per section 2404.1 of The Florida Building Code.

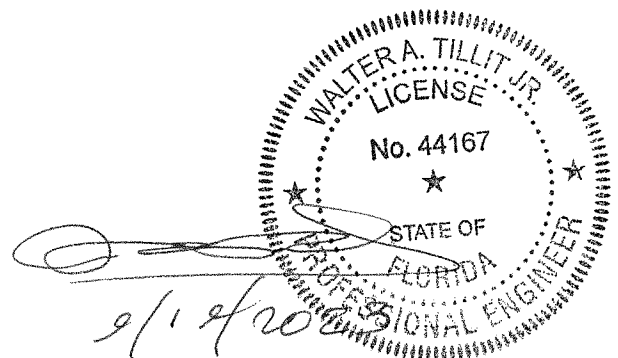
## **3. MISSILE IMPACT RESISTANCE:**

Large Missile Impact resistance is provided per TAS 201 (9 lbs., 50 feet/sec) .

## **4. WIND LOADS RESISTANCE:**

Series “High Impact Green world fixed Glass Wall Series 12000 Large Missile Laminated and Insulated Glass” has been verified to sustain wind pressures. Maximum Glass Panel Dimensions, Mullions Spans, & Horizontal Spans shall be as indicated on Product Evaluation Document (P.E.D.), Drawing No. **23-213**.

Maximum Design Pressure Rating for Mullions Head/Sill connections and Jamb Connection Maximum Fasteners Spacing for applicable substrates shall be as indicated on Product Evaluation Document (P.E.D.), Drawing No.**23-213**.



**5. INSTALLATION:**

Installation shall be performed strictly in accordance with General Notes # 1 thru 15, indicated on sheet 1 and details indicated on Product Evaluation Document (P.E.D.), drawing No. **23-212**

Gaskets and setting blocks used at installations comply with section 2411.3.4 of the Florida Building Code as specified on Bill of Materials of Product Evaluation Document (P.E.D.), drawing No. **23-213**.

**6. MATERIAL CHARACTERISTICS AND SPECIFICATIONS:**

Shall be strictly in accordance with General Notes and Components indicated on of Product Evaluation Document (P.E.D.), **Drawing No. 23-213**.

Anchor specifications shall be as indicated on Product Evaluation Document (P.E.D.), Drawing No. **23-212**.

**7. LIMITATIONS AND CONDITIONS OF USE:**

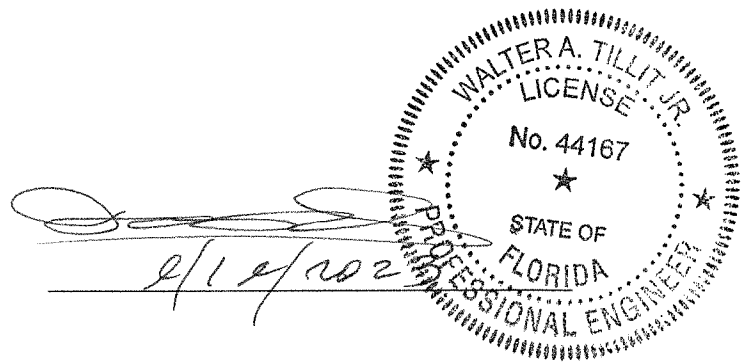
7.1. Shall be strictly in compliance with General Notes No. 1 thru 6, indicated on sheet 1 of Product Evaluation Document (P.E.D.), Drawing No. **23-213** prepared by Tilteco, Inc. and signed and sealed by Walter A. Tillit, Jr., P.E.

7.2. Product **may** be installed within HIGH VELOCITY HURRICANE ZONE as defined on section 202 of the Florida Building Code and out of it.

7.3. Product shall only be installed into substrates with limitations as indicated on Product Evaluation Document (P.E.D.), Drawing No. **23-213**.

7.4. Max design pressure ratings shall be as per schedules on Product Evaluation Document (P.E.D.) Drawing **No 23-213**.

Product Evaluation Report prepared by Walter A. Tillit, Jr., P.E. (Florida License No. 44167), President of Tilteco, Inc. (Florida CA-0006719).



The image shows a handwritten signature in black ink, which appears to read "Walter A. Tillit, Jr.", written over a horizontal line. To the right of the signature is a circular professional engineer seal. The seal contains the text "WALTER A. TILLIT JR.", "LICENSE", "No. 44167", "STATE OF FLORIDA", and "PROFESSIONAL ENGINEER" around the perimeter, with two stars on either side of the license number.

# HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED & INSULATED GLASS

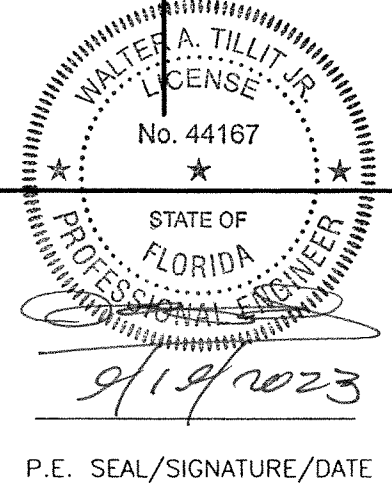
## GENERAL NOTES:

1. HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED & INSULATED GLASS, SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH **THE 2023 (8th EDITION) OF THE FLORIDA BUILDING CODE**. PRODUCT MAY BE INSTALLED WITHIN HIGH VELOCITY HURRICANE ZONES OR OUT OF IT. DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTIONS 1620 & 1609 OF THE ABOVE MENTIONED CODE, USING **ASCE 7-22** AND SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON NOTE 2 BELOW. IN ORDER TO VERIFY THE ABOVE CONDITION, ULTIMATE DESIGN WIND LOADS DETERMINED PER **ASCE 7-22** SHALL BE FIRST REDUCED TO A.S.D. DESIGN WIND LOADS BY MULTIPLYING THEM BY 0.6 IN ORDER TO COMPARE THESE W/ MAX. (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON NOTE 2 BELOW.  
  
IN ORDER TO VERIFY THAT ANCHORS ON THIS P.E.D., AS TESTED, WERE NOT OVERSTRESSED, A 33% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. FASTENERS SPACING TO WOOD HAS BEEN DETERMINED IN ACCORDANCE WITH N.D.S. 2018 AND OR AVAILABLE TEST DATA FROM MANUFACTURER.  
THIS PRODUCT'S ADEQUACY FOR IMPACT AND WIND RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1626 OF THE ABOVE MENTIONED CODE AS PER PROTOCOLS TAS-201, TAS-202, TAS-203 & AAMA 501 (PER SECTION 2411.3.2.1.1.), PER FENESTRATION TESTING LABORATORY REPORT # 6179 AND AS PER SUBMITTED STRUCTURAL CALCULATIONS, PERFORMED AS PER SECTIONS 1616 & 1604 OF THE FLORIDA BUILDING CODE. GLASS HAS BEEN VERIFIED PER ASTM E-1300, PER SECTION 2404.1 OF THE FLORIDA BUILDING CODE.
2. **MAXIMUM A.S.D. DESIGN PRESSURE RATING FOR THIS PRODUCT SHALL BE AS SHOWN ON SHEETS 5 THRU 15 & 23 FOR OPTIONAL SYSTEM # 1 AND FROM SHEETS 31 THRU 44A FOR OPTIONAL SYSTEM # 2.**
3. **THIS PRODUCT WILL NOT REQUIRE AN APPROVED HURRICANE PROTECTION DEVICE.**
4. **THIS PRODUCT IS APPROVED FOR WATER INFILTRATION AT 19.5 p.s.f.**
5. THIS PRODUCT COMPLIES WITH SECTION 2406 OF THE FLORIDA BUILDING CODE.
6. ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ASSOCIATION 6063-T6 ALLOY AND TEMPER. THE THICKNESS OF ALL EXTRUSIONS SHALL BE AS SHOWN ON SHEETS 2, 26 & 27 OF THIS DRAWING.
7. PROVIDE 1/4" OR 3/8" MAX. LOAD BEARING SHIM SPACE (TYP.), WHEN ALLOWED BY THIS DRAWING.
8. WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE BUILDING STRUCTURE. WOOD BUCKS MUST BE SOUTHERN PINE #2, G = 0.55. AND SHALL COMPLY WITH SECTIONS 2411.3.3.3 AND 2411.3.3.4 OF THE FLORIDA BUILDING CODE.  
(8.1) 2 X WOOD BUCKS MUST BE ANCHORED PROPERLY TO EXISTING STRUCTURE TO TRANSFER LOADS TO IT. ANCHORAGE IS INDEPENDENT OF GLASS WALL FRAME MUST BE SEPARATELY ANCHORED TO 2X WOOD WOOD BUCK FOLLOWING DETAILS ON THIS DRAWINGS.  
(8.2) 1X WOOD BUCK (OR ANY WOOD BUCK LESS THAN 2X) MUST BE PROPERLY ANCHORED TO EXISTING STRUCTURE TO TRANSFER LOADS TO IT. GLASS WALL FRAME ANCHOR SHALL BE USED TO ATTACH 1X WOOD BUCK TO EXISTING STRUCTURE BY DRIVING ANCHOR THRU BOTH GLASS WALL FRAME & 1X WOOD BUCK INTO EXISTING STRUCTURE W/PROPER EMBEDMENT AND EDGE DISTANCE AS SHOWN ON THIS DRAWING.  
(8.3) GLASS WALL FRAME MAY BE DIRECTLY CONNECTED TO EXISTING STRUCTURE WITH NO NEED OF WOOD BUCKS WHEN MASONRY OPENING IS NOT LARGER THAN ACTUAL GLASS WALL FRAME OVERALL DIMENSIONS. HOWEVER, SHIMS (SEE NOTE 7) MAY BE ALLOWED AT GLASS WALL FRAME ANCHOR LOCATION IF NEEDED.
9. REMAINING COMPONENTS FOR THIS PRODUCT SHALL BE AS INDICATED ON BILL OF MATERIALS, SHEETS 3 (OPTIONAL SYSTEM # 1) & 27 (OPTIONAL SYSTEM # 2) OF THIS DRAWING.
10. ALL ALUMINUM EXTRUSIONS IN CONTACT WITH STEEL, CONCRETE AND WOOD SHALL COMPLY WITH SECTION III-6 OF THE 2020 ALUMINUM DESIGN MANUAL.
11. SEE ANCHOR SCHEDULES ON SHEETS 8 THRU 13 (OPTIONAL SYSTEM # 1) AND ON SHEETS 33 THRU 43 (OPTIONAL SYSTEM # 2) FOR ANCHOR TYPE IDENTIFICATION AND SPACING.
12. SHOP DRAWINGS PREPARED BASED ON THIS APPROVAL AND TAKING INTO ACCOUNT THE SPECIFIC JOB CONDITIONS, SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AS PART OF THE PERMIT DOCUMENTS.
13. STRUCTURAL SUBSTRATES NOTED ON THIS DRAWING AS "EXISTING BY OTHERS", MUST WITHSTAND THE LOADS IMPOSED BY THIS PRODUCT.
14. PRODUCT'S MANUFACTURER LABEL SHALL BE PLACED ON A READILY VISIBLE LOCATION AT PRODUCE IN ACCORDANCE WITH SECTION 1709.5 OF THE FLORIDA BUILDING CODE. ONE LABEL SHALL BE PLACED FOR EVERY UNIT.
15. (A) THIS P.E.D. PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; I.E. WHERE THE SITE CONDITIONS DEViate FROM THE P.E.D.  
(B) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.E.D., PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.  
(C) THIS P.E.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.  
(D) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS DELEGATED ENGINEER TO THE P.E.D., SHALL SUBMIT TO THIS LATTER SITE SPECIFIC DRAWING FOR REVIEW.  
(E) ORIGINAL P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.



## INSTRUCTIONS:

- STEP 1:** DETERMINE DESIGN WIND LOAD REQUIREMENTS BASED ON WIND VELOCITY, BUILDING HEIGHT, WIND ZONE, USING APPLICABLE ASCE 7 STANDARD.
- STEP 2:** GO TO SCHEDULE ON SHEETS 5, 5A (OPTIONAL SYSTEM # 1) & 31, 31A (OPTIONAL SYSTEM # 2) TO DETERMINE MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf) CAPACITY OF DESIRED GLASS SIZE BASED ON GLASS PANEL DIMENSIONS.
- STEP 3:** DETERMINE MAXIMUM INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) FOR A GIVEN MULLION EFFECTIVE SPACING "b", ON SCHEDULE ON SHEETS 6, 7 (OPTIONAL SYSTEM # 1) & 32, 32A (OPTIONAL SYSTEM # 2) AND SELECT ANCHOR OPTION W/ A.S.D. DESIGN PRESSURE RATING EQUAL OR GREATER THAN A.S.D. DESIGN WIND LOAD SPECIFIED IN **STEP 1** USING SCHEDULES ON SHEETS 8 THRU 13 (OPTIONAL SYSTEM # 1) AND 33 THRU 43 (OPTIONAL SYSTEM # 2).
- STEP 4:** USING SCHEDULES ON SHEETS 14, 15 (OPTIONAL SYSTEM # 1) & 44, 44A (OPTIONAL SYSTEM # 2), VERIFY MAXIMUM A.S.D. DESIGN PRESSURE RATING OF HORIZONTAL MULLIONS (IF USED). FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."
- STEP 5:** THE LOWEST VALUE OF A.S.D. DESIGN PRESSURE RATINGS RESULTING FROM STEPS 2, 3 AND 4 SHALL APPLY TO THE ENTIRE SYSTEM.

**THIS DRAWING SHALL ONLY BE USED TO OBTAIN PERMITS IN THE STATE OF FLORIDA**

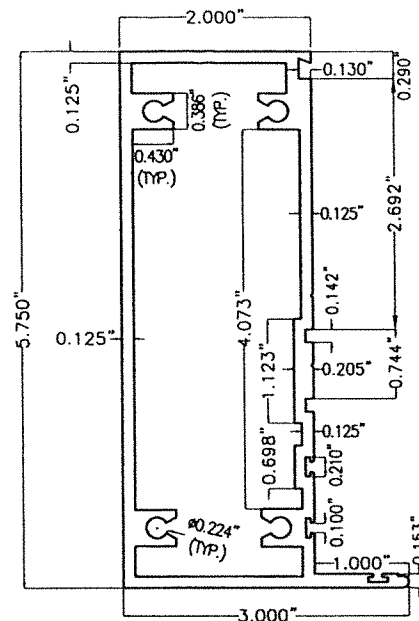
  
 WALTER A. TILLIT JR.  
 LICENSE  
 No. 44167  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 9/19/2023  
 P.E. SEAL/SIGNATURE/DATE

**FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)**

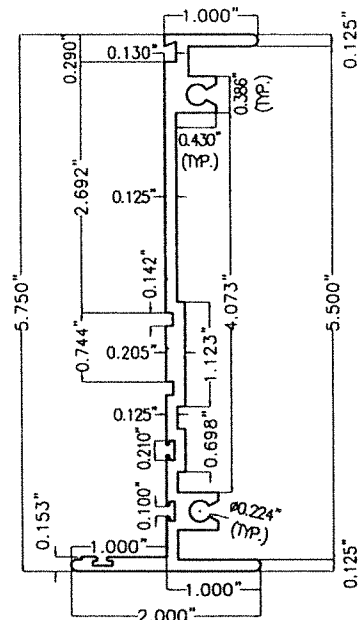
| ©2023 TILTECO, INC.<br><br>TILLIT TESTING & ENGINEERING COMPANY<br>6355 N.W. 38th. St., Ste. 305, VIRGINIA GARDENS, FL 33166<br>Phone : (305)871-1530 . Fax : (305)871-1531<br>e-mail: tilteco@aol.com<br>CA-0006719<br>WALTER A. TILLIT Jr. P.E.<br>FLORIDA Lic. # 44167   | HIGH IMPACT GREEN WORLD FIXED GLASS WALL<br>SERIES 12000 LARGE MISSILE LAMINATED &<br>INSULATED GLASS<br><br>290 WEST 78 ROAD<br>HIALEAH, FL 33014<br>PH: (954)226-5555/(305)558-8103<br>FAX: (305)558-6665<br>www.gigwindows.com | W.H.<br>DRAWN BY<br>09/12/2023<br>DATE<br>23-213<br>DRAWING No<br>SHEET 1 OF 51 |         |             |             |      |   |            |          |   |   |   |   |   |   |   |   |   |  |  |
|--|--|---|---------|-------------|-------------|------|---|------------|----------|---|---|---|---|---|---|---|---|---|--|--|
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>OLD 21-118</td> <td>09/12/23</td> <td>3</td> <td>-</td> <td>-</td> </tr> <tr> <td>2</td> <td>-</td> <td>-</td> <td>4</td> <td>-</td> <td>-</td> </tr> </tbody> </table> | REV. No  | DESCRIPTION   | DATE    | REV. No     | DESCRIPTION | DATE | 1 | OLD 21-118 | 09/12/23 | 3 | - | - | 2 | - | - | 4 | - | - |  |  |
| REV. No  | DESCRIPTION  | DATE  | REV. No | DESCRIPTION | DATE        |      |   |            |          |   |   |   |   |   |   |   |   |   |  |  |
| 1  | OLD 21-118   | 09/12/23  | 3       | -           | -           |      |   |            |          |   |   |   |   |   |   |   |   |   |  |  |
| 2  | -  | -   | 4       | -           | -           |      |   |            |          |   |   |   |   |   |   |   |   |   |  |  |

# COMPONENTS FOR HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000

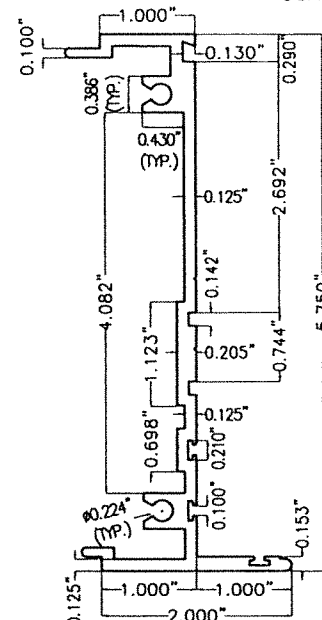
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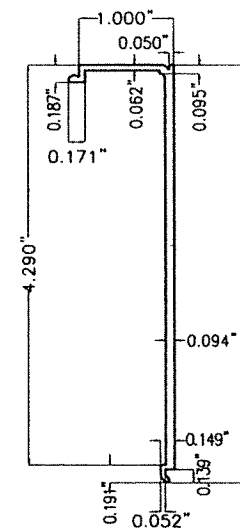
1 **FRAME JAMB, HEAD & SILL**  
(1/8" THICK)



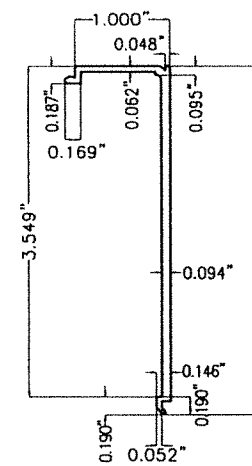
2 **FEMALE MULLION**  
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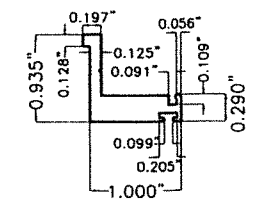
3 **MALE MULLION**  
(1/8" THICK)



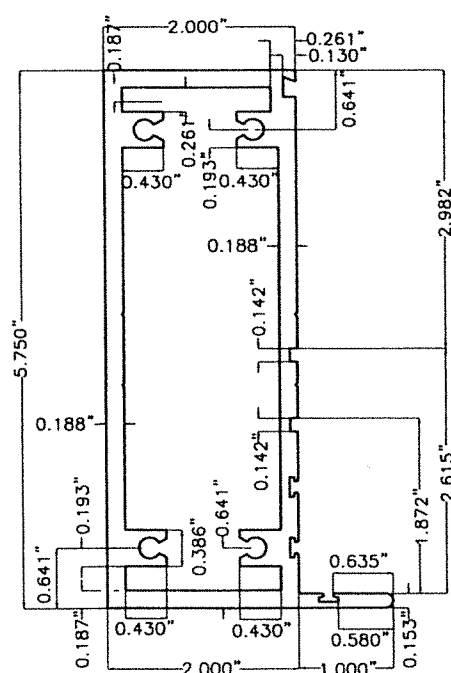
4A **INSULATED WINDOW COVER**



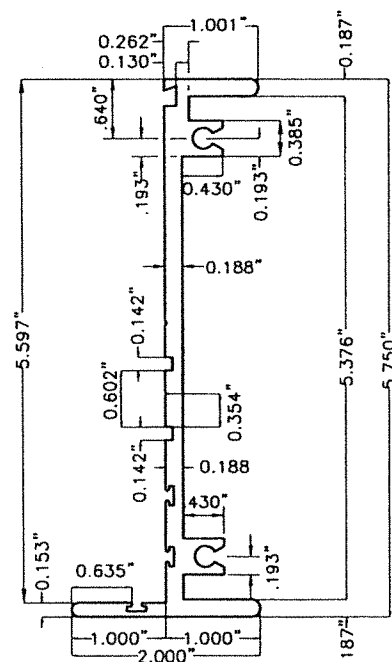
4 **LAMINATED WINDOW COVER**



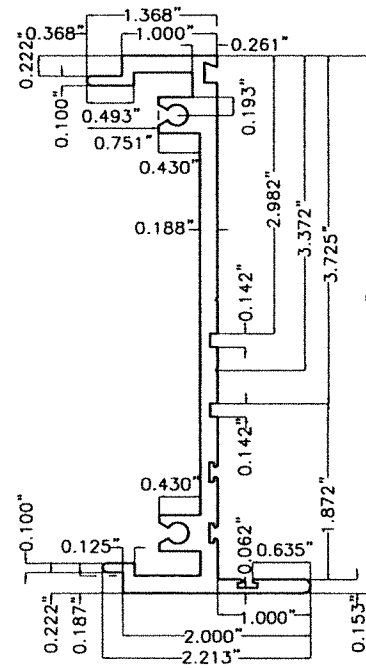
5 **GLAZING BEAD ANGLE**  
6063-T6 ALUMINUM ALLOY



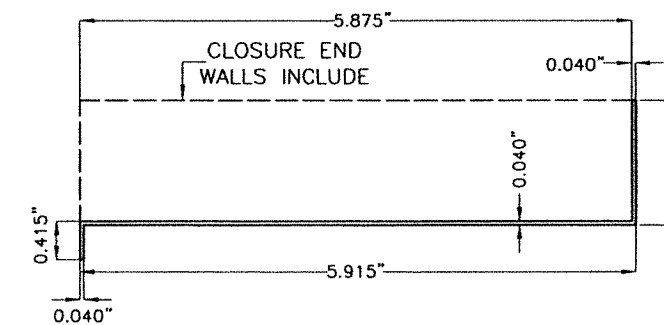
15 **FRAME JAMB, HEAD & SILL**  
(3/16" THICK)



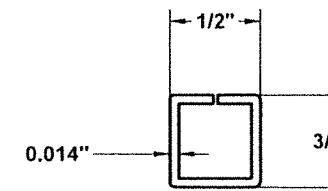
16 **FEMALE MULLION**  
(3/16" THICK)



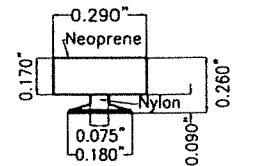
17 **MALE MULLION**  
(3/16" THICK)



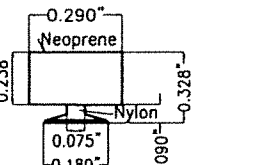
18 **SILL FLASHING**  
(OPTIONAL)  
3105-H14 ALUMINUM ALLOY



19 **INSULATED GLASS UNIT SPACER**  
NTS



6 **SOLID RUBBER GASKET**  
NEOPRENE/NYLON  
N.T.S.



6A **SOLID RUBBER GASKET**  
NEOPRENE/NYLON  
N.T.S.

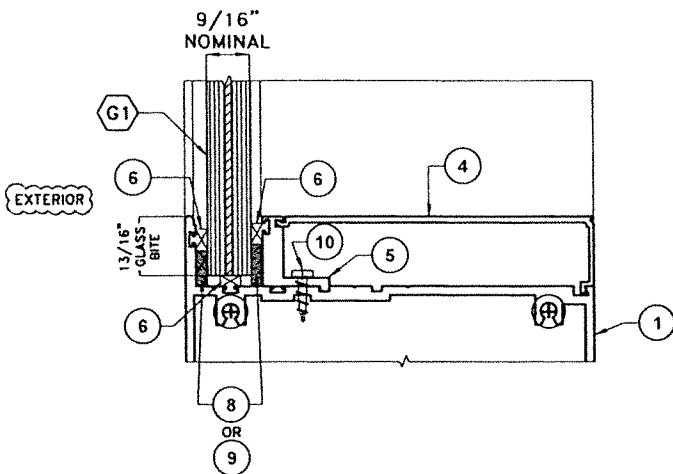
FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

## COMPONENTS: OPTIONAL SYSTEM # 1

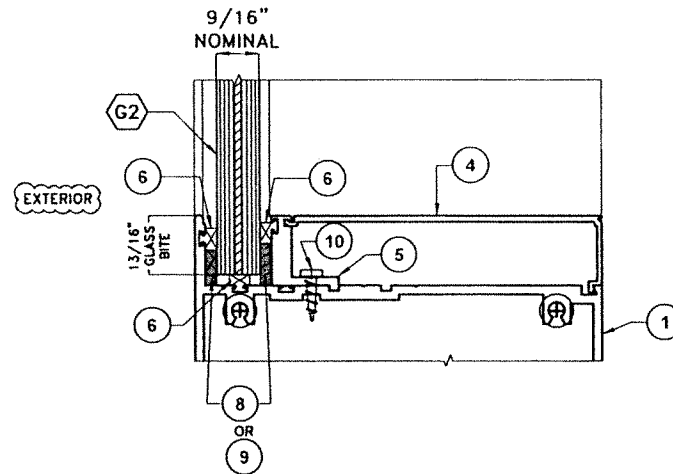
WALTER A. TILLIT JR.  
LICENSE  
No. 44167  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
P.E. SEAL/SIGNATURE/DATE

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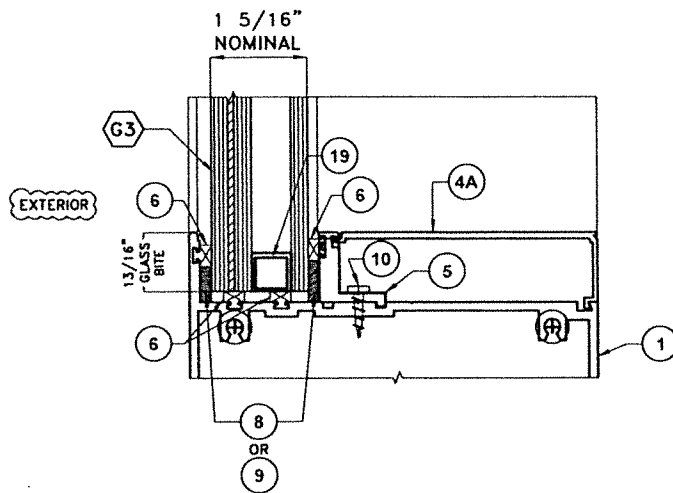
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|---|-------------|----------|--|-------------|------|
| HIGH IMPACT GREEN WORLD FIXED GLASS WALL<br>SERIES 12000 LARGE MISSILE LAMINATED &<br>INSULATED GLASS |             |          | W.H.<br>DRAWN BY   |             |      |
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| REV. No   | DESCRIPTION | DATE     | REV. No  | DESCRIPTION | DATE |
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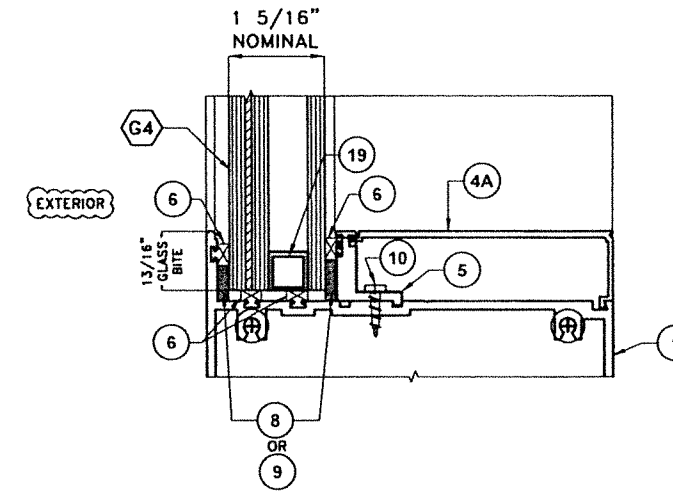
GLAZING DETAIL FOR G1



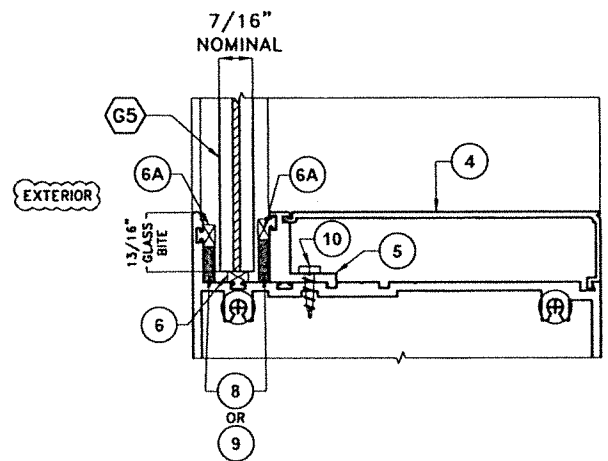
GLAZING DETAIL FOR G2



GLAZING DETAIL FOR G3



GLAZING DETAIL FOR G4



GLAZING DETAIL FOR G5

GLAZING DETAILS:  
OPTIONAL SYSTEM # 1

SCALE: 3/8" = 1"

BILL OF MATERIALS: OPTIONAL SYSTEM # 1

| ITEM # | DESCRIPTION  | DIMENSIONS & REMARKS  | MATERIAL  |
|--------|--|---|---|
| 1      | FRAME JAMB, HEAD & SILL  | 5.75"x3"x0.125" THK.  | 6063-T6 ALUMINUM                                      |
| 2      | FEMALE MULLION   | 5.75"x2"x0.125" THK.  | 6063-T6 ALUMINUM                                      |
| 3      | MALE MULLION   | 5.75"x2"x0.125" THK.  | 6063-T6 ALUMINUM                                      |
| 4      | LAMINATED WINDOW COVER   | 4.682"x1"xVARIES THK.   | 6063-T6 ALUMINUM                                      |
| 4A     | INSULATED WINDOW COVER   | 3.941"x1"xVARIES THK.   | 6063-T6 ALUMINUM                                      |
| 5      | GLAZING BEAD ANGLE   | 0.929"x0.906"xVARIES THK.   | 6063-T6 ALUMINUM                                      |
| 6      | SOLID RUBBER GASKET  | 0.260"x0.290"xVARIES THK.   | NEOPRENE/NYLON  |
| 6A     | SOLID RUBBER GASKET  | 0.328"x0.290"xVARIES THK.   | NEOPRENE/NYLON  |
| 8      | STRUCTURAL SILICONE DOW CORNING 995  | ALL AROUND GLASS  | SILICONE OPTIONAL TO 9                                |
| 9      | STRUCTURAL SILICONE DOW CORNING 795  | ALL AROUND GLASS  | SILICONE OPTIONAL TO 8                                |
| 10     | GLAZING BEAD ANGLE ASSEMBLY SCREW  | 1/4"x1" TEK SCREW @ 8" o.c.   | STEEL   |
| 11     | SPLINE ASSEMBLY SCREW  | 1/4"x2 3/4" F.H. TEK SCREW  | STEEL   |
| 11A    | ARCH SPLINE ASSEMBLY SCREW   | 1/4"x2 3/4" F.H. TEK SCREW  | STEEL   |
| 12     | JOINT DETAIL (METAL TO METAL) GASKET<br>1/16 XLP W/ RUBBER BASED PSA   | OPTIONAL TO 13 FOR INTERNAL JOINT. MANUFACTURED BY FRANK LOWE RUBBER & GASKET CO.   | CLOSED CELL POLYETHYLENE FOAM TAPE COATED IN ONE SIDE |
| 13     | STRUCTURAL SILICONE 795 DOW CORNING  | OPTIONAL TO 12 FOR INTERNAL JOINT, PLUS EXTERIOR FRAME SEALANT ALL AROUND PERIMETER | SILICONE  |
| 14     | MULLION ASSEMBLY BOLT  | 1/4"-20x2 1/2" THRU BOLT W/ NUT @ 12" O.C. (START @ 6" O.C. FROM TOP/BOTTOM)        | STAINLESS STEEL AISI 304 SERIES                       |
| 15     | FRAME JAMB, HEAD & SILL  | 5.75"x3"x0.188" THK.  | 6063-T6 ALUMINUM                                      |
| 16     | FEMALE MULLION   | 5.75"x2"x0.188" THK.  | 6063-T6 ALUMINUM                                      |
| 17     | MALE MULLION   | 5.75"x2"x0.188" THK.  | 6063-T6 ALUMINUM                                      |
| 18     | SILL FLASHING (OPTIONAL)   | 1.340" MIN.x5.915" MIN.x0.415" MIN.x0.040" THK.                                     | 3105-H14 ALUMINUM                                     |
| G1     | 9/16" NOMINAL LAMINATED GLASS<br>W/ 1/4" H.S. GLASS + 0.090" SENTRYGLAS® INTERLAYER + 1/4" H.S. GLASS.   |   | KURARAY AMERICA, INC.<br>GLASS                        |
| G2     | 9/16" NOMINAL LAMINATED GLASS<br>W/ 1/4" H.S. GLASS + 0.090" TROSIFOL® PVB INTERLAYER + 1/4" H.S. GLASS.   |   | KURARAY AMERICA, INC.<br>GLASS                        |
| G3     | 1 5/16" NOMINAL INSULATED GLASS<br>W/ 1/4" H.S. GLASS + 0.090" SENTRYGLAS® INTERLAYER + 1/4" H.S. GLASS + 1/2" AIR SPACE + 1/4" INTERIOR MONOLITHIC TEMPERED GLASS   |   | KURARAY AMERICA, INC.<br>GLASS                        |
| G4     | 1 5/16" NOMINAL INSULATED GLASS<br>W/ 1/4" H.S. GLASS + 0.090" TROSIFOL® PVB INTERLAYER + 1/4" H.S. GLASS + 1/2" AIR SPACE + 1/4" INTERIOR MONOLITHIC TEMPERED GLASS |   | KURARAY AMERICA, INC.<br>GLASS                        |
| G5     | 7/16" NOMINAL LAMINATED GLASS<br>W/ 3/16" H.S. GLASS + 0.090" TROSIFOL® PVB INTERLAYER + 3/16" H.S. GLASS.   |   | KURARAY AMERICA, INC.<br>GLASS                        |
| 19     | INSULATED GLASS UNIT SPACER  | 1/2"x 0.014" THK. (SEE SHT. 2)  | 3105-H24 ALUMINUM                                     |

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FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

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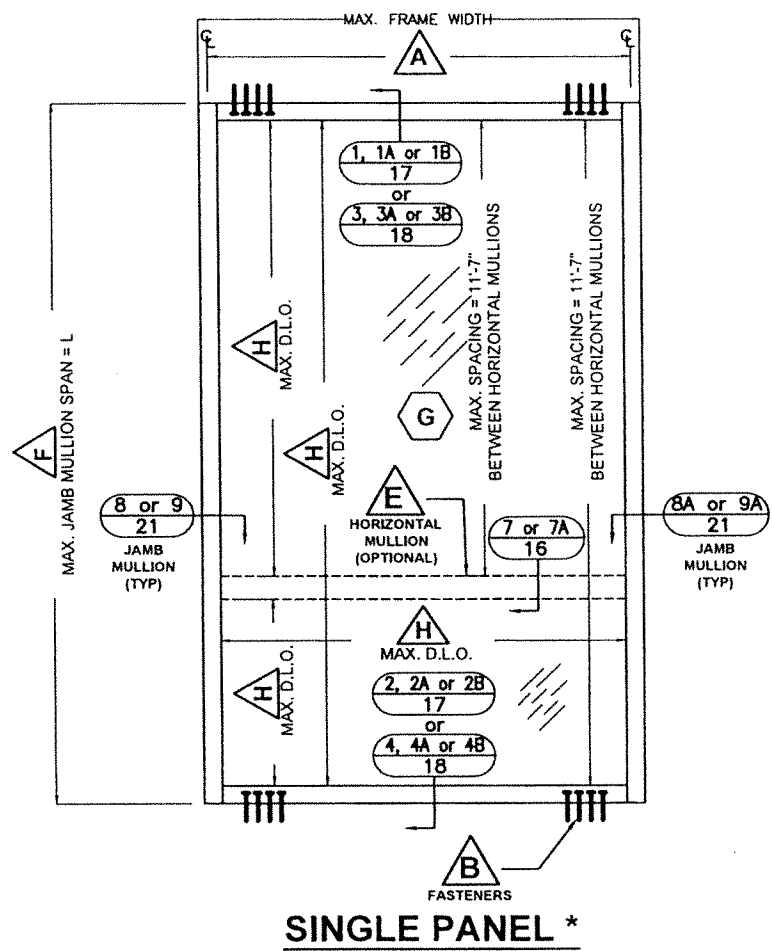
09/12/2023  
DATE

23-213  
DRAWING No

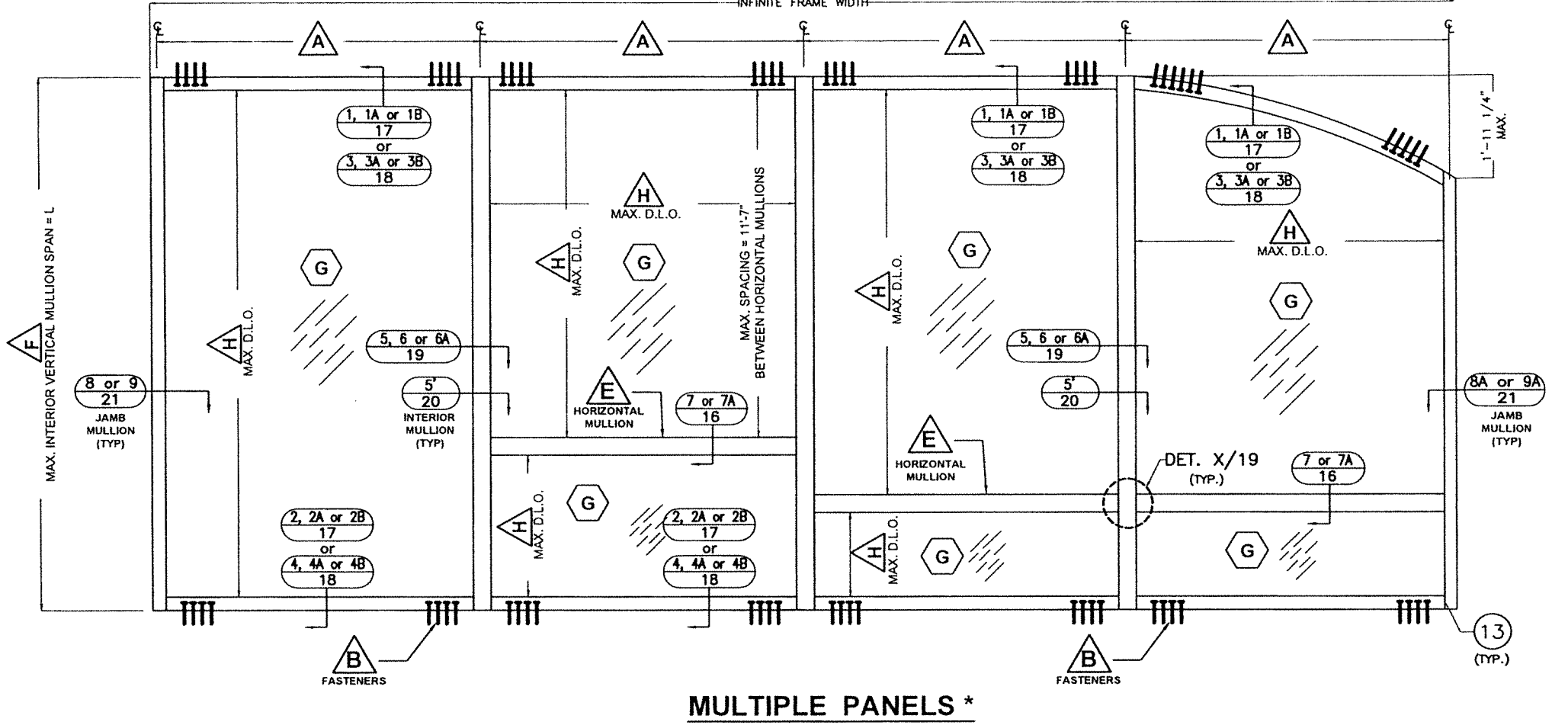
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| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

SHEET 3 OF 51

# ELEVATIONS FOR HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000: OPTIONAL SYSTEM # 1



**SINGLE PANEL \***



**MULTIPLE PANELS \***

**FOOT NOTES:**

- A** FOR MAXIMUM INTERIOR MULLION AND JAMB MULLION SPACING SEE SHEETS 6 & 7.
- B** FOR HEAD AND SILL FASTENERS QUANTITY, TYPES AND SPECS SEE SHEETS 8 THRU 13.
- E** USE OF HORIZONTAL MULLION LIMITED BY SCHEDULES ON SHEETS 14 & 15.
- F** FOR MAXIMUM INTERIOR VERTICAL MULLION AND JAMB MULLION SPAN SEE SHEETS 6 & 7.
- G** FOR GLAZING DETAILS SEE SHEET 3 AND SEE GLASS SCHEDULE ON SHEETS 5, 5A.
- H** FOR MAXIMUM D.L.O. SEE SCHEDULE ON SHEETS 5, 5A.

\* NOTE: ELEVATIONS FOR SINGLE & MULTIPLE PANELS FIXED GLASS WALL SERIES 12000 MAY BE INSTALLED ROTATED 90° FROM ABOVE SHOWN ORIENTATION.

WALTER A. TILLIT JR.  
 LICENSE  
 No. 44167  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 P.E. SEAL/SIGNATURE/DATE

|   |                                |  |                   |                       |                |
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| 290 WEST 78 ROAD<br>HIALEAH, FL 33014<br>PH: (954)226-5555/(305)558-8103<br>FAX: (305)558-6665<br>www.gigwindows.com  |                                | 99/12/2023<br>DATE   |                   |                       |                |
| 23-213<br>DRAWING No  |                                | SHEET 4 OF 51  |                   |                       |                |
| REV. No<br>1<br>2   | DESCRIPTION<br>OLD 21-118<br>- | DATE<br>09/12/23<br>-  | REV. No<br>3<br>4 | DESCRIPTION<br>-<br>- | DATE<br>-<br>- |

**MAXIMUM FRAME WIDTH "a" AND FRAME LENGTH "b" VERSUS A.S.D. DESIGN PRESSURE RATING (psf) SCHEDULE \***  
**OPTIONAL SYSTEM # 1**

| GLASS TYPE G1 |                |   |
|---------------|----------------|---|
| DIMENSION "a" | DIMENSION "b"  | MAX.A.S.D. DESIGN PRESSURE RATING (psf) |
| 18" or less   | 18" or less    | +130.0 -140.0                           |
| 18"           | 18" to 139"    | +130.0 -140.0                           |
| 20"           | 20" to 139"    | +130.0 -140.0                           |
| 22"           | 22" to 139"    | +130.0 -140.0                           |
| 24"           | 24" to 139"    | +130.0 -140.0                           |
| 26"           | 26" to 139"    | +130.0 -140.0                           |
| 28"           | 28" to 139"    | +130.0 -140.0                           |
| 30"           | 30" to 139"    | +130.0 -140.0                           |
| 32"           | 32" to 139"    | +130.0 -140.0                           |
| 34"           | 34" to 139"    | +130.0 -140.0                           |
| 36"           | 36" to 139"    | +130.0 -140.0                           |
| 38"           | 38" to 139"    | +130.0 -140.0                           |
| 40"           | 40" to 139"    | +130.0 -140.0                           |
| 42"           | 42" to 139"    | +130.0 -140.0                           |
| 44"           | 44" to 137"    | +130.0 -120.0                           |
| 46"           | 46" to 131"    | +130.0 -116.0                           |
| 48"           | 48" to 126"    | +130.0 -140.0                           |
|               | > 126" to 139" | ±20.0                                   |
| 50"           | 50" to 121"    | +130.0 -111.0                           |
| 52"           | 52" to 116"    | +130.0 -111.0                           |
| 54"           | 54" to 112"    | +130.0 -140.0                           |
|               | > 112" to 139" | ±20.0                                   |
| 56"           | 56" to 108"    | +130.0 110.0                            |
| 58"           | 58" to 104"    | +130.0 -111.0                           |
| 60"           | 60" to 98"     | +130.0 -140.0                           |
|               | > 98" to 139"  | ±20.0                                   |
| 62"           | 62" to 97"     | +130.0 -114.0                           |
| 64"           | 64" to 94"     | +130.0 -110.4                           |
| 66"           | 66" to 84"     | +130.0 -140.0                           |
|               | > 84" to 90"   | ±99.5                                   |
|               | > 90" to 139"  | ±20.0                                   |
| 68"           | 68" to 89"     | +130.0 -103.9                           |
| 70"           | 70" to 86"     | +130.0 -101.0                           |
| 72"           | 72" to 82"     | +130.0 -140.0                           |
|               | >82" to 84"    | ±91.0                                   |
|               | >84" to 139"   | ±20.0                                   |
| 74"           | 74" to 78"     | +130.0 -95.5                            |
| 76"           | 76" to 79.7"   | +130.0 -93.0                            |

| GLASS TYPE G2 |                |   |
|---------------|----------------|---|
| DIMENSION "a" | DIMENSION "b"  | MAX.A.S.D. DESIGN PRESSURE RATING (psf) |
| 18" or less   | 18" or less    | ±90.0                                   |
| 18"           | 18" to 139"    | ±90.0                                   |
| 20"           | 20" to 139"    | ±90.0                                   |
| 22"           | 22" to 139"    | ±90.0                                   |
| 24"           | 24" to 139"    | ±90.0                                   |
| 26"           | 26" to 139"    | ±90.0                                   |
| 28"           | 28" to 139"    | ±90.0                                   |
| 30"           | 30" to 139"    | ±90.0                                   |
| 32"           | 32" to 139"    | ±90.0                                   |
| 34"           | 34" to 139"    | ±90.0                                   |
| 36"           | 36" to 139"    | ±90.0                                   |
| 38"           | 38" to 132"    | ±90.0                                   |
| 40"           | 40" to 128"    | ±90.0                                   |
| 42"           | 42" to 120"    | ±90.0                                   |
|               | > 120" to 139" | ±80.0                                   |
| 44"           | 44" to 117"    | ±90.0                                   |
|               | > 117" to 139" | ±80.0                                   |
| 46"           | 46" to 112"    | ±90.0                                   |
|               | > 112" to 139" | ±80.0                                   |
| 48"           | 48" to 107"    | ±90.0                                   |
|               | > 107" to 139" | ±80.0                                   |
| 50"           | 50" to 103"    | ±90.0                                   |
| 52"           | 52" to 99"     | ±87.4                                   |
| 54"           | 54" to 95"     | ±84.1                                   |
| 56"           | 56" to 129"    | ±80.0                                   |
| 58"           | 58" to 124"    | ±80.0                                   |
| 60"           | 60" to 120"    | ±80.0                                   |
| 62"           | 62" to 116"    | ±80.0                                   |
| 64"           | 64" to 112"    | ±80.0                                   |
| 66"           | 66" to 108"    | ±79.6                                   |
| 68"           | 68" to 106"    | ±79.3                                   |
| 70"           | 70" to 103"    | ±79.3                                   |
| 72"           | 72" to 100"    | ±79.5                                   |
| 74"           | 74" to 97"     | ±79.8                                   |
| 76"           | 76" to 95"     | ±78.4                                   |
| 78"           | 78" to 92.5"   | ±76.4                                   |
| 80"           | 80" to 90"     | ±74.5                                   |
| 82"           | 82" to 88"     | ±72.6                                   |
| 84"           | 84" to 86"     | ±70.9                                   |

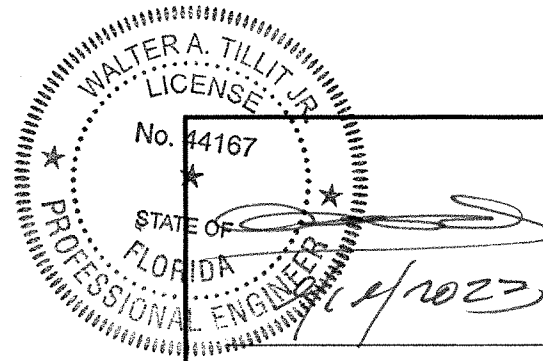
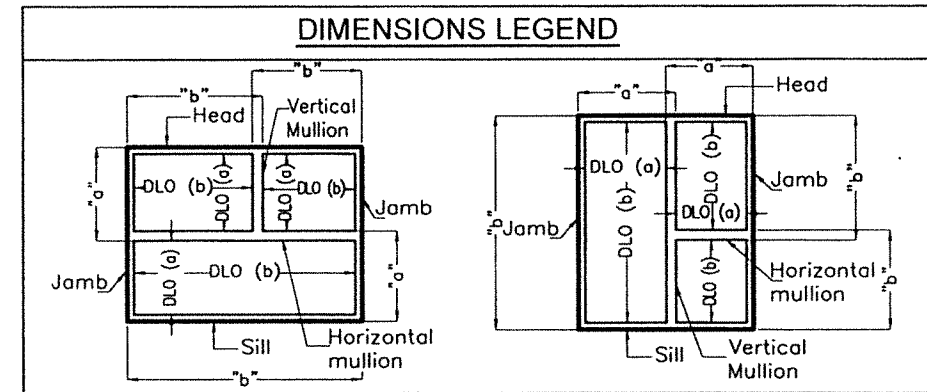
**\* DETERMINATION OF MAXIMUM DAY LIGHT OPENING (D.L.O.) AT EACH END OF GLASS GIVEN "a" & "b"**

| SIDE                         | MAX. DAY LIGHT OPENING                             |  |
|------------------------------|--|--|
|                              | (D.L.O.) Formula at vertical & horizontal mullions | (D.L.O.) Formula at jamb, head & sill frames |
| MAX. D.L.O. (a) (SHORT SIDE) | "a" - 6.00"  | "a" - 6.00"                                  |
| MAX. D.L.O. (b) (LONG SIDE)  | "b" - 6.00"  | "b" - 6.00"                                  |

**NOTE:**

1. SEE SHEET 3 FOR GLAZING DETAILS AND GLASS DESCRIPTIONS ON BILL OF MATERIALS.

**\*\* SIDE "a" IS ALWAYS EQUAL OR SHORTER THAN "b". "a", "b" ,MAY BE ORIENTED IN ANY DIRECTION.**



P.E. SEAL/SIGNATURE/DATE

**FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)**

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CA-0006719  
 WALTER A. TILLIT Jr. P.E.  
 FLORIDA Lic. # 44167

**HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED & INSULATED GLASS**



290 WEST 78 ROAD  
 HIALEAH, FL 33014  
 PH: (954)226-5555/(305)558-8103  
 FAX: (305)558-6665  
 www.gigwindows.com

W.H.  
DRAWN BY

09/12/2023  
DATE

23-213  
DRAWING No

| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
|---------|-------------|----------|---------|-------------|------|
| 1       | OLD 21-11B  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

**MAXIMUM FRAME WIDTH "a" AND FRAME LENGTH "b" VERSUS A.S.D. DESIGN PRESSURE RATING (psf) SCHEDULE \***  
**OPTIONAL SYSTEM # 1**

| GLASS TYPE <b>G3</b> |                |   |
|----------------------|----------------|---|
| DIMENSION "a"        | DIMENSION "b"  | MAX.A.S.D. DESIGN PRESSURE RATING (psf) |
| 18" or less          | 18" or less    | +130.0 -140.0                           |
| 18"                  | 18" to 139"    | +130.0 -140.0                           |
| 20"                  | 20" to 139"    | +130.0 -140.0                           |
| 22"                  | 22" to 139"    | +130.0 -140.0                           |
| 24"                  | 24" to 139"    | +130.0 -140.0                           |
| 26"                  | 26" to 139"    | +130.0 -140.0                           |
| 28"                  | 28" to 139"    | +130.0 -140.0                           |
| 30"                  | 30" to 139"    | +130.0 -140.0                           |
| 32"                  | 32" to 139"    | +130.0 -140.0                           |
| 34"                  | 34" to 139"    | +130.0 -140.0                           |
| 36"                  | 36" to 139"    | +130.0 -140.0                           |
| 38"                  | 38" to 139"    | +130.0 -140.0                           |
| 40"                  | 40" to 139"    | +130.0 -140.0                           |
| 42"                  | 42" to 139"    | +130.0 -140.0                           |
| 44"                  | 44" to 137"    | +130.0 -126.0                           |
| 46"                  | 46" to 131"    | +130.0 -121.0                           |
| 48"                  | 48" to 122"    | +130.0 -140.0                           |
|                      | > 122" to 139" | ±20.0                                   |
| 50"                  | 50" to 121"    | +130.0 -113.0                           |
| 52"                  | 52" to 116"    | +130.0 -113.0                           |
| 54"                  | 54" to 108"    | +130.0 -140.0                           |
|                      | > 108" to 139" | ±20.0                                   |
| 56"                  | 56" to 108"    | +130.0 -108.0                           |
| 58"                  | 58" to 104"    | +130.0 -117.0                           |
| 60"                  | 60" to 98"     | +130.0 -140.0                           |
|                      | > 98" to 139"  | ±20.0                                   |
| 62"                  | 62" to 96"     | +130.0 -114.0                           |
| 64"                  | 64" to 94"     | +130.0 -110.4                           |
| 66"                  | 66" to 87.5"   | +130.0 -140.0                           |
|                      | > 87.5" to 90" | ±107.1                                  |
|                      | > 90" to 139"  | ±20.0                                   |
| 68"                  | 68" to 89"     | +130.0 -103.9                           |
| 70"                  | 70" to 86"     | +130.0 -101.0                           |
| 72"                  | 72" to 80.5"   | +130.0 -140.0                           |
|                      | >80.5" to 84"  | ±98.1                                   |
|                      | >84" to 139"   | ±20.0                                   |
| 74"                  | 74" to 81"     | +130.0 -95.5                            |
| 76"                  | 76" to 79"     | +130.0 -93.0                            |

| GLASS TYPE <b>G4</b> |                  |   |
|----------------------|------------------|---|
| DIMENSION "a"        | DIMENSION "b"    | MAX.A.S.D. DESIGN PRESSURE RATING (psf) |
| 18" or less          | 18" or less      | ±80.0                                   |
| 18"                  | 18" to 139"      | ±80.0                                   |
| 20"                  | 20" to 139"      | ±80.0                                   |
| 22"                  | 22" to 139"      | ±80.0                                   |
| 24"                  | 24" to 139"      | ±80.0                                   |
| 26"                  | 26" to 139"      | ±80.0                                   |
| 28"                  | 28" to 139"      | ±80.0                                   |
| 30"                  | 30" to 139"      | ±80.0                                   |
| 32"                  | 32" to 139"      | ±80.0                                   |
| 34"                  | 34" to 139"      | ±80.0                                   |
| 36"                  | 36" to 139"      | ±80.0                                   |
| 38"                  | 38" to 139"      | ±80.0                                   |
| 40"                  | 40" to 139"      | ±80.0                                   |
| 42"                  | 42" to 139"      | ±80.0                                   |
| 44"                  | 44" to 139"      | ±80.0                                   |
| 46"                  | 46" to 139"      | ±80.0                                   |
| 48"                  | 48" to 139"      | ±80.0                                   |
| 50"                  | 50" to 139"      | ±80.0                                   |
| 52"                  | 52" to 138"      | ±80.0                                   |
| 54"                  | 54" to 133.5"    | ±80.0                                   |
| 56"                  | 56" to 129"      | ±80.0                                   |
| 58"                  | 58" to 124"      | ±80.0                                   |
| 60"                  | 60" to 120"      | ±80.0                                   |
| 62"                  | 62" to 116"      | ±80.0                                   |
| 64"                  | 64" to 112"      | ±80.0                                   |
| 66"                  | 66" to 108"      | ±80.0                                   |
|                      | > 108" to 109.5" | ±79.6                                   |
| 68"                  | 68" to 106"      | ±79.3                                   |
| 70"                  | 70" to 103"      | ±79.3                                   |
| 72"                  | 72" to 96"       | ±80.0                                   |
|                      | > 96" to 100"    | ±79.5                                   |
| 74"                  | 74" to 97"       | ±79.8                                   |
| 76"                  | 76" to 95"       | ±78.4                                   |
| 78"                  | 78" to 91"       | ±76.1                                   |
| 80"                  | 80" to 90"       | ±74.5                                   |
| 82"                  | 82" to 88"       | ±72.6                                   |
| 84"                  | 84" to 86"       | ±70.9                                   |

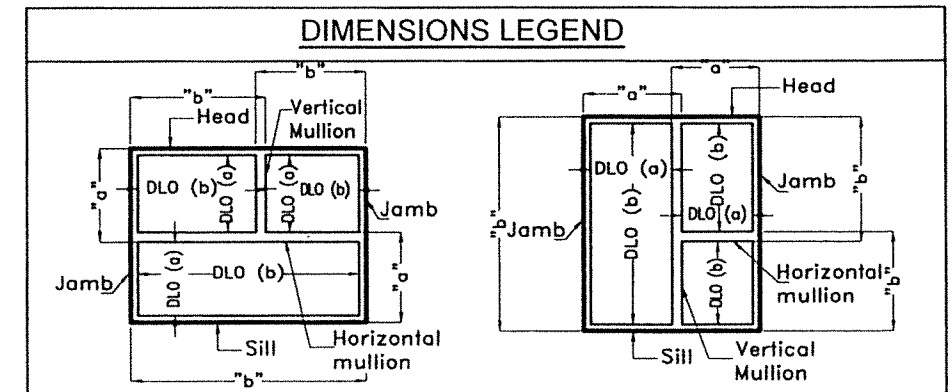
| GLASS TYPE <b>G5</b> |               |   |
|----------------------|---------------|---|
| DIMENSION "a"        | DIMENSION "b" | MAX.A.S.D. DESIGN PRESSURE RATING (psf) |
| 18" or less          | 18" or less   | ±90.0                                   |
| 18"                  | 18" to 139"   | ±90.0                                   |
| 20"                  | 20" to 139"   | ±90.0                                   |
| 22"                  | 22" to 139"   | ±90.0                                   |
| 24"                  | 24" to 139"   | ±90.0                                   |
| 26"                  | 26" to 139"   | ±90.0                                   |
| 28"                  | 28" to 139"   | ±90.0                                   |
| 30"                  | 30" to 139"   | ±90.0                                   |
| 32"                  | 32" to 139"   | ±90.0                                   |
| 34"                  | 34" to 139"   | ±90.0                                   |
| 36"                  | 36" to 139"   | ±90.0                                   |
| 38"                  | 38" to 132"   | ±90.0                                   |
| 40"                  | 40" to 128"   | ±90.0                                   |
| 42"                  | 42" to 120"   | ±90.0                                   |
| 44"                  | 44" to 117"   | ±90.0                                   |
| 46"                  | 46" to 111"   | ±90.0                                   |
| 48"                  | 48" to 107"   | ±90.0                                   |
| 50"                  | 50" to 103"   | ±90.0                                   |
| 52"                  | 52" to 99"    | ±90.0                                   |
| 54"                  | 54" to 95"    | ±84.1                                   |
| 56"                  | 56" to 91"    | ±81.1                                   |
| 58"                  | 58" to 88"    | ±78.3                                   |
| 60"                  | 60" to 85.5"  | ±75.7                                   |
| 62"                  | 62" to 83"    | ±73.3                                   |
| 64"                  | 64" to 80"    | ±71.2                                   |
| 66"                  | 66" to 78"    | ±68.8                                   |
| 68"                  | 68" to 75"    | ±66.8                                   |
| 70"                  | 70" to 73"    | ±64.3                                   |

**\* DETERMINATION OF MAXIMUM DAY LIGHT OPENING (D.L.O.) AT EACH END OF GLASS GIVEN "a" & "b"**

| SIDE                         | MAX. DAY LIGHT OPENING                             |  |
|------------------------------|--|--|
|                              | (D.L.O.) Formula at vertical & horizontal mullions | (D.L.O.) Formula at jamb, head & sill frames |
| MAX. D.L.O. (a) (SHORT SIDE) | "a" - 6.00"  | "a" - 6.00"                                  |
| MAX. D.L.O. (b) (LONG SIDE)  | "b" - 6.00"  | "b" - 6.00"                                  |

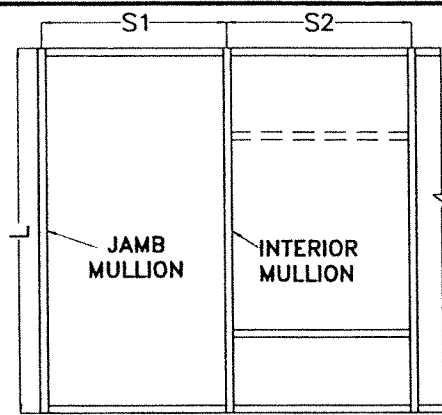
**NOTE:**  
 1. SEE SHEET 3 FOR GLAZING DETAILS AND GLASS DESCRIPTIONS ON BILL OF MATERIALS.

**\*\* SIDE "a" IS ALWAYS EQUAL OR SHORTER THAN "b". "a", "b", MAY BE ORIENTED IN ANY DIRECTION.**



WALTER A. TILLIT JR.  
 LICENSE No. 44167  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 P.E. SEAL/SIGNATURE/DATE

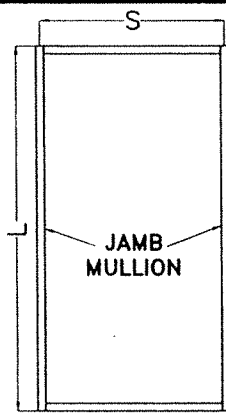
|  |             |   |                      |                  |      |
|--|-------------|---|----------------------|------------------|------|
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| <br>290 WEST 78 ROAD<br>HIALEAH, FL 33014<br>PH: (954)226-5555/(305)558-8103<br>FAX: (305)558-6665<br>www.gigwindows.com   |             | 09/12/2023<br>DATE  | 23-213<br>DRAWING No |                  |      |
| REV. No  | DESCRIPTION | DATE  | REV. No              | DESCRIPTION      | DATE |
| 1  | OLD 21-118  | 09/12/23  | 3                    | -                | -    |
| 2  | -           | -   | 4                    | -                | -    |



ELEVATION W/ INTERIOR MULLION @ MULTIPLE PANELS

"L" = MAXIMUM INTERIOR MULLION SPAN

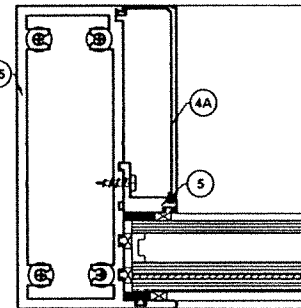
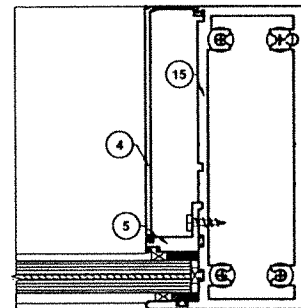
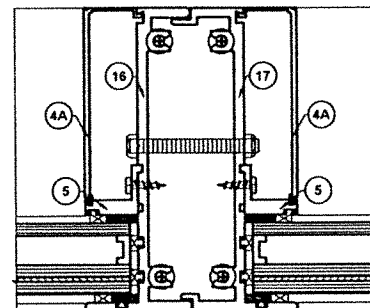
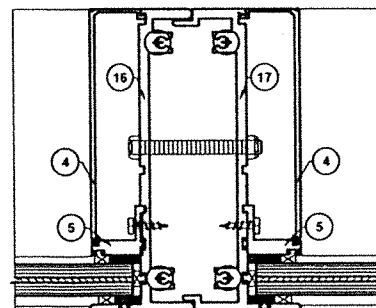
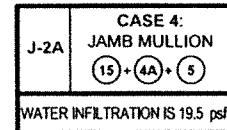
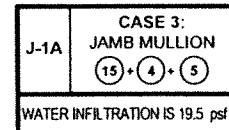
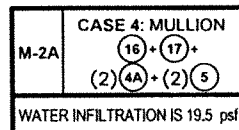
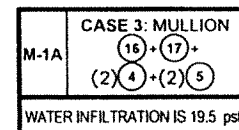
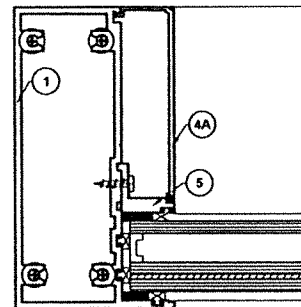
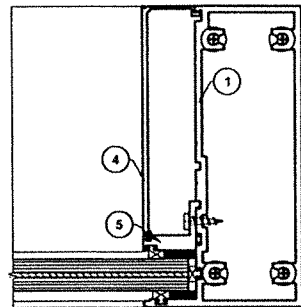
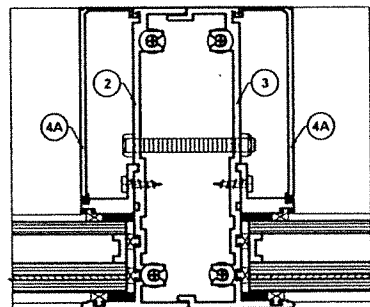
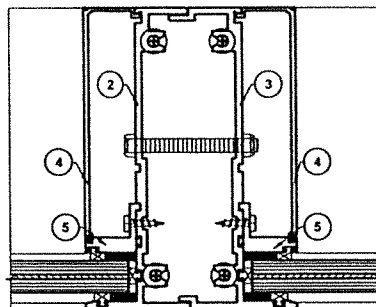
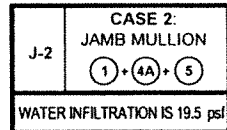
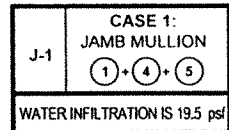
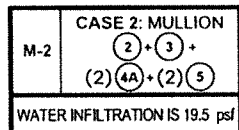
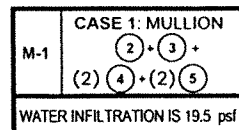
EFFECTIVE SPACING: "b" =  $\frac{S_1 + S_2}{2}$ , FOR MULTIPLE PANELS



ELEVATION W/ JAMB MULLION @ SINGLE PANEL

"L" = MAXIMUM JAMB MULLION SPAN

EFFECTIVE SPACING: "b" = S, FOR SINGLE PANEL.



OPTIONAL SYSTEM # 1

CASES DEFINITIONS

- CASE 1: M-1 INTERIOR MULLION: 1/8" THICK W/ LAMINATED GLASS (SEE DET. 5 ON SHEET 19)
- J-1 JAMB MULLION: 1/8" THICK W/ LAMINATED GLASS (SEE DET. 8 OR 8A ON SHEETS 20 & 21)
- CASE 2: M-2 INTERIOR MULLION: 1/8" THICK W/ INSULATED GLASS (SEE DET. 6 ON SHEET 19)
- J-2 JAMB MULLION: 1/8" THICK W/ INSULATED GLASS (SEE DET. 8 OR 8A ON SHEET 21)
- CASE 3: M-1A INTERIOR MULLION: 3/16" THICK W/ LAMINATED GLASS (SEE DET. 5 ON SHEET 19)
- J-1A JAMB MULLION: 3/16" THICK W/ LAMINATED GLASS (SEE DET. 8 OR 8A ON SHEETS 20 & 21)
- CASE 4: M-2A INTERIOR MULLION: 3/16" THICK W/ INSULATED GLASS (SEE DET. 6 ON SHEET 19)
- J-2A JAMB MULLION: 3/16" THICK W/ INSULATED GLASS (SEE DET. 8 OR 8A ON SHEET 21)

MAXIMUM INTERIOR MULLION & JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b"

| MAXIMUM DESIGN PRESSURE RATING | MAX. EFFECTIVE SPACING | MAXIMUM 1/8" THICK MULLION SPAN "L"(FT) |                 | MAXIMUM 3/16" THICK MULLION SPAN "L"(FT) |                 |
|--------------------------------|------------------------|---|-----------------|--|-----------------|
|                                |                        | Laminated Glass                         | Insulated Glass | Laminated Glass                          | Insulated Glass |
|                                |                        | CASE 1                                  | CASE 2          | CASE 3                                   | CASE 4          |
| "W" (psf)                      | "b" (ft-in)            | M-1/J-1                                 | M-2/J-2         | M-1AJJ-1A                                | M-2AJJ-2A       |
| ± 40.0                         | 3'-6"                  | 15'-9"                                  | 15'-9"          | 15'-9"                                   | 15'-9"          |
|                                | 4'-0"                  | 15'-9"                                  | 15'-9"          | 15'-9"                                   | 15'-9"          |
|                                | 4'-6"                  | 15'-9"                                  | 15'-6"          | 15'-9"                                   | 15'-9"          |
|                                | 5'-0"                  | 15'-4"                                  | 14'-11"         | 15'-9"                                   | 15'-8"          |
|                                | 5'-6"                  | 14'-10"                                 | 14'-6"          | 15'-7"                                   | 15'-3"          |
|                                | 6'-0"                  | 14'-5"                                  | 14'-1"          | 15'-1"                                   | 14'-9"          |
|                                | 7'-0"                  | 13'-8"                                  | 13'-4"          | 14'-4"                                   | 14'-0"          |
| ± 45.0                         | 3'-6"                  | 15'-9"                                  | 15'-9"          | 15'-9"                                   | 15'-9"          |
|                                | 4'-0"                  | 15'-9"                                  | 15'-6"          | 15'-9"                                   | 15'-9"          |
|                                | 4'-6"                  | 15'-3"                                  | 14'-10"         | 15'-9"                                   | 15'-8"          |
|                                | 5'-0"                  | 14'-9"                                  | 14'-4"          | 15'-5"                                   | 15'-1"          |
|                                | 5'-6"                  | 14'-3"                                  | 13'-11"         | 15'-0"                                   | 14'-8"          |
|                                | 6'-0"                  | 13'-10"                                 | 13'-6"          | 14'-6"                                   | 14'-3"          |
|                                | 7'-0"                  | 13'-2"                                  | 12'-10"         | 13'-10"                                  | 13'-6"          |
| ± 50.0                         | 3'-6"                  | 15'-9"                                  | 15'-7"          | 15'-9"                                   | 15'-9"          |
|                                | 4'-0"                  | 15'-4"                                  | 14'-11"         | 15'-9"                                   | 15'-8"          |
|                                | 4'-6"                  | 14'-9"                                  | 14'-4"          | 15'-5"                                   | 15'-1"          |
|                                | 5'-0"                  | 14'-3"                                  | 13'-10"         | 14'-11"                                  | 14'-7"          |
|                                | 5'-6"                  | 13'-9"                                  | 13'-5"          | 14'-5"                                   | 14'-2"          |
|                                | 6'-0"                  | 13'-5"                                  | 13'-0"          | 14'-0"                                   | 13'-9"          |
|                                | 7'-0"                  | 13'-0"                                  | 12'-8"          | 13'-8"                                   | 13'-4"          |
| ± 55.0                         | 3'-6"                  | 15'-6"                                  | 15'-1"          | 15'-9"                                   | 15'-9"          |
|                                | 4'-0"                  | 14'-10"                                 | 14'-6"          | 15'-7"                                   | 15'-3"          |
|                                | 4'-6"                  | 14'-3"                                  | 13'-11"         | 15'-0"                                   | 14'-8"          |
|                                | 5'-0"                  | 13'-9"                                  | 13'-5"          | 14'-5"                                   | 14'-2"          |
|                                | 5'-6"                  | 13'-4"                                  | 13'-0"          | 14'-0"                                   | 13'-8"          |
|                                | 6'-0"                  | 12'-11"                                 | 12'-8"          | 13'-7"                                   | 13'-4"          |
|                                | 7'-0"                  | 12'-5"                                  | 12'-4"          | 13'-3"                                   | 12'-11"         |
| ± 60.0                         | 3'-6"                  | 15'-1"                                  | 14'-8"          | 15'-9"                                   | 15'-5"          |
|                                | 4'-0"                  | 14'-5"                                  | 14'-1"          | 15'-1"                                   | 14'-9"          |
|                                | 4'-6"                  | 13'-10"                                 | 13'-6"          | 14'-6"                                   | 14'-3"          |
|                                | 5'-0"                  | 13'-5"                                  | 13'-0"          | 14'-0"                                   | 13'-9"          |
|                                | 5'-6"                  | 12'-11"                                 | 12'-8"          | 13'-7"                                   | 13'-4"          |
|                                | 6'-0"                  | 12'-5"                                  | 12'-3"          | 13'-3"                                   | 12'-11"         |
|                                | 7'-0"                  | 11'-6"                                  | 11'-4"          | 12'-10"                                  | 12'-6"          |
| ± 65.0                         | 3'-6"                  | 14'-8"                                  | 14'-4"          | 15'-5"                                   | 15'-1"          |
|                                | 4'-0"                  | 14'-0"                                  | 13'-8"          | 14'-9"                                   | 14'-5"          |
|                                | 4'-6"                  | 13'-6"                                  | 13'-2"          | 14'-2"                                   | 13'-10"         |
|                                | 5'-0"                  | 13'-0"                                  | 12'-8"          | 13'-8"                                   | 13'-4"          |
|                                | 5'-6"                  | 12'-5"                                  | 12'-4"          | 13'-3"                                   | 12'-11"         |
|                                | 6'-0"                  | 11'-11"                                 | 11'-9"          | 12'-10"                                  | 12'-6"          |
|                                | 7'-0"                  | 11'-5"                                  | 11'-4"          | 12'-4"                                   | 12'-0"          |

MAXIMUM INTERIOR MULLION & JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED)

| MAXIMUM DESIGN PRESSURE RATING | MAX. EFFECTIVE SPACING | MAXIMUM 1/8" THICK MULLION SPAN "L"(FT) |                 | MAXIMUM 3/16" THICK MULLION SPAN "L"(FT) |                 |
|--------------------------------|------------------------|---|-----------------|--|-----------------|
|                                |                        | Laminated Glass                         | Insulated Glass | Laminated Glass                          | Insulated Glass |
|                                |                        | CASE 1                                  | CASE 2          | CASE 3                                   | CASE 4          |
| "W" (psf)                      | "b" (ft-in)            | M-1/J-1                                 | M-2/J-2         | M-1AJJ-1A                                | M-2AJJ-2A       |
| ± 70.0                         | 3'-6"                  | 14'-4"                                  | 13'-11"         | 15'-0"                                   | 14'-8"          |
|                                | 4'-0"                  | 13'-8"                                  | 13'-4"          | 14'-4"                                   | 14'-0"          |
|                                | 4'-6"                  | 13'-2"                                  | 12'-10"         | 13'-10"                                  | 13'-6"          |
|                                | 5'-0"                  | 12'-7"                                  | 12'-5"          | 13'-4"                                   | 13'-0"          |
|                                | 5'-6"                  | 12'-0"                                  | 11'-10"         | 12'-11"                                  | 12'-7"          |
|                                | 6'-0"                  | 11'-6"                                  | 11'-4"          | 12'-4"                                   | 12'-0"          |
|                                | 7'-0"                  | 10'-7"                                  | 10'-6"          | 11'-5"                                   | 11'-2"          |
| ± 75.0                         | 3'-6"                  | 14'-0"                                  | 13'-8"          | 14'-8"                                   | 14'-4"          |
|                                | 4'-0"                  | 13'-5"                                  | 13'-0"          | 14'-0"                                   | 13'-9"          |
|                                | 4'-6"                  | 12'-9"                                  | 12'-6"          | 13'-6"                                   | 13'-2"          |
|                                | 5'-0"                  | 12'-2"                                  | 12'-0"          | 13'-0"                                   | 12'-9"          |
|                                | 5'-6"                  | 11'-7"                                  | 11'-6"          | 12'-5"                                   | 12'-2"          |
|                                | 6'-0"                  | 11'-1"                                  | 11'-0"          | 11'-11"                                  | 11'-7"          |
|                                | 7'-0"                  | 10'-8"                                  | 10'-7"          | 11'-5"                                   | 11'-2"          |
| ± 80.0                         | 3'-6"                  | 13'-8"                                  | 13'-4"          | 14'-4"                                   | 14'-0"          |
|                                | 4'-0"                  | 13'-1"                                  | 12'-9"          | 13'-9"                                   | 13'-5"          |
|                                | 4'-6"                  | 12'-5"                                  | 12'-3"          | 13'-3"                                   | 12'-11"         |
|                                | 5'-0"                  | 11'-9"                                  | 11'-8"          | 12'-8"                                   | 12'-4"          |
|                                | 5'-6"                  | 11'-2"                                  | 11'-1"          | 12'-1"                                   | 11'-9"          |
|                                | 6'-0"                  | 10'-0"                                  | 10'-0"          | 10'-0"                                   | 10'-0"          |
|                                | 7'-0"                  | 9'-11"                                  | 9'-10"          | 10'-0"                                   | 10'-0"          |
| ± 85.0                         | 3'-6"                  | 13'-5"                                  | 13'-1"          | 14'-1"                                   | 13'-9"          |
|                                | 4'-0"                  | 12'-9"                                  | 12'-6"          | 13'-6"                                   | 13'-2"          |
|                                | 4'-6"                  | 12'-0"                                  | 11'-11"         | 12'-11"                                  | 12'-7"          |
|                                | 5'-0"                  | 11'-5"                                  | 11'-4"          | 12'-3"                                   | 11'-11"         |
|                                | 5'-6"                  | 10'-10"                                 | 10'-9"          | 11'-8"                                   | 11'-5"          |
|                                | 6'-0"                  | 10'-0"                                  | 10'-0"          | 10'-0"                                   | 10'-0"          |
|                                | 7'-0"                  | 9'-8"                                   | 9'-7"           | 10'-0"                                   | 10'-0"          |
| ± 90.0                         | 3'-6"                  | 13'-2"                                  | 12'-10"         | 13'-10"                                  | 13'-6"          |
|                                | 4'-0"                  | 12'-5"                                  | 12'-3"          | 13'-3"                                   | 12'-11"         |
|                                | 4'-6"                  | 11'-8"                                  | 11'-7"          | 12'-7"                                   | 12'-3"          |
|                                | 5'-0"                  | 11'-1"                                  | 11'-0"          | 11'-11"                                  | 11'-7"          |
|                                | 5'-6"                  | 10'-7"                                  | 10'-6"          | 11'-4"                                   | 11'-1"          |
|                                | 6'-0"                  | 10'-0"                                  | 10'-0"          | 10'-0"                                   | 10'-0"          |
|                                | 7'-0"                  | 9'-9"                                   | 9'-8"           | 10'-0"                                   | 10'-0"          |
| ± 95.0                         | 3'-6"                  | 12'-11"                                 | 12'-7"          | 13'-7"                                   | 13'-3"          |
|                                | 4'-0"                  | 12'-0"                                  | 11'-11"         | 13'-0"                                   | 12'-8"          |
|                                | 4'-6"                  | 11'-4"                                  | 11'-3"          | 12'-3"                                   | 11'-11"         |
|                                | 5'-0"                  | 10'-9"                                  | 10'-8"          | 11'-7"                                   | 11'-4"          |
|                                | 5'-6"                  | 10'-3"                                  | 10'-2"          | 11'-1"                                   | 10'-9"          |
|                                | 6'-0"                  | 9'-10"                                  | 9'-9"           | 10'-0"                                   | 10'-0"          |
|                                | 7'-0"                  | 9'-5"                                   | 9'-4"           | 10'-0"                                   | 9'-11"          |

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FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

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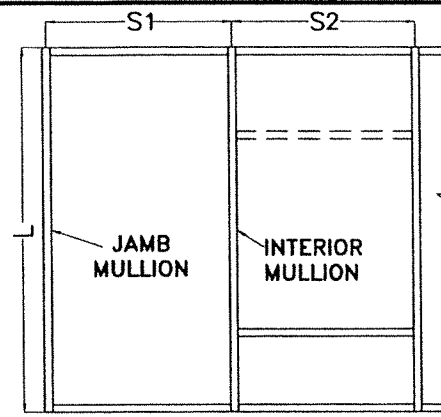
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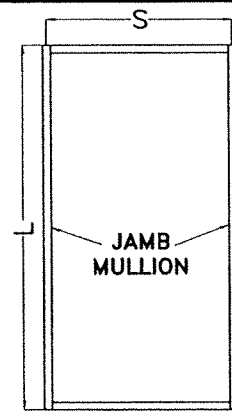
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ELEVATION W/ INTERIOR MULLION @ MULTIPLE PANELS

"L" = MAXIMUM INTERIOR MULLION SPAN

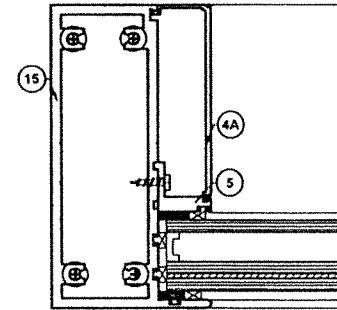
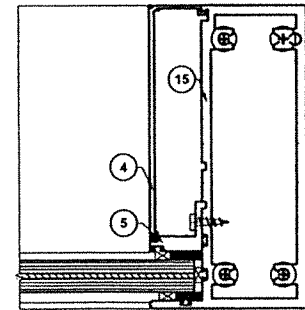
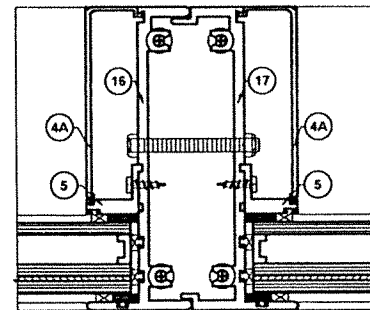
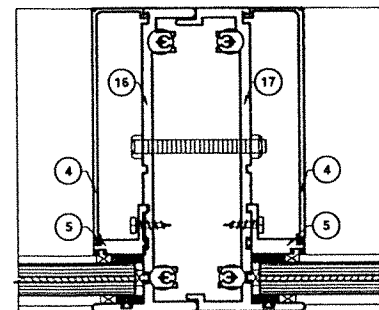
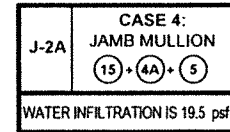
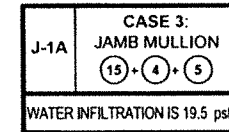
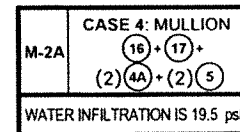
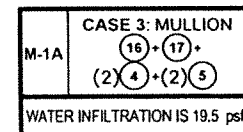
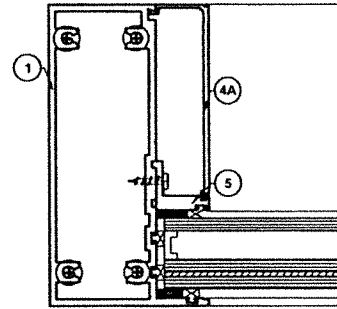
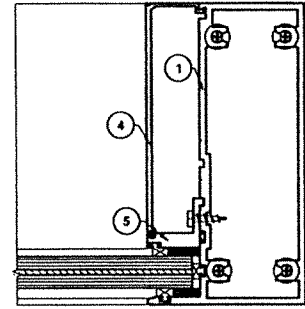
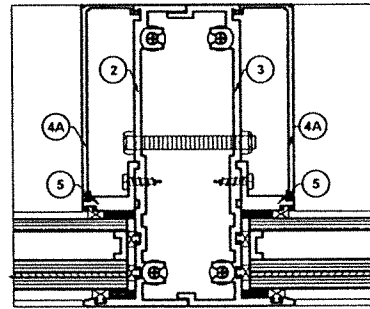
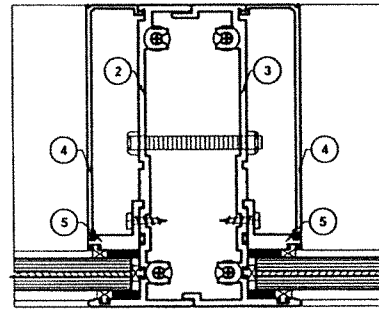
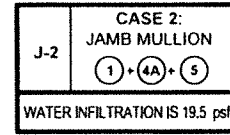
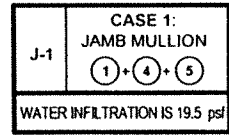
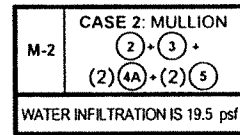
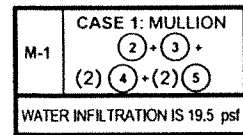
EFFECTIVE SPACING: "b" =  $\frac{S_1 + S_2}{2}$ , FOR MULTIPLE PANELS



ELEVATION W/ JAMB MULLION @ SINGLE PANEL

"L" = MAXIMUM JAMB MULLION SPAN

EFFECTIVE SPACING: "b" = S, FOR SINGLE PANEL



OPTIONAL SYSTEM # 1 (CONTINUED)

CASES DEFINITIONS

- CASE 1: M-1 INTERIOR MULLION: 1/8" THICK W/ LAMINATED GLASS (SEE DET. 5 ON SHEET 19)
- J-1 JAMB MULLION: 1/8" THICK W/ LAMINATED GLASS (SEE DET. 8 OR 8A ON SHEETS 20 & 21)
- CASE 2: M-2 INTERIOR MULLION: 1/8" THICK W/ INSULATED GLASS (SEE DET. 6 ON SHEET 19)
- J-2 JAMB MULLION: 1/8" THICK W/ INSULATED GLASS (SEE DET. 8 OR 8A ON SHEET 21)
- CASE 3: M-1A INTERIOR MULLION: 3/16" THICK W/ LAMINATED GLASS (SEE DET. 5 ON SHEET 19)
- J-1A JAMB MULLION: 3/16" THICK W/ LAMINATED GLASS (SEE DET. 8 OR 8A ON SHEETS 20 & 21)
- CASE 4: M-2A INTERIOR MULLION: 3/16" THICK W/ INSULATED GLASS (SEE DET. 6 ON SHEET 19)
- J-2A JAMB MULLION: 3/16" THICK W/ INSULATED GLASS (SEE DET. 8 OR 8A ON SHEET 21)

| MAXIMUM INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED) |                                       |   |                   |  |                     |
|---|---------------------------------------|---|-------------------|--|---------------------|
| MAXIMUM DESIGN PRESSURE RATING<br>"W" (psf)   | MAX. EFFECTIVE SPACING<br>"b" (ft-in) | MAXIMUM 1/8" THICK MULLION SPAN "L"(FT) |                   | MAXIMUM 3/16" THICK MULLION SPAN "L"(FT) |                     |
|   |                                       | Laminated Glass                         | Insulated Glass   | Laminated Glass                          | Insulated Glass     |
|   |                                       | CASE 1<br>M-1/J-1                       | CASE 2<br>M-2/J-2 | CASE 3<br>M-1A/J-1A                      | CASE 4<br>M-2A/J-2A |
| ± 100.0   | 3'-6"                                 | 12'-7"                                  | 12'-5"            | 13'-4"                                   | 13'-0"              |
|   | 4'-0"                                 | 11'-9"                                  | 11'-8"            | 12'-8"                                   | 12'-4"              |
|   | 4'-6"                                 | 11'-1"                                  | 11'-0"            | 11'-11"                                  | 11'-7"              |
|   | 5'-0"                                 | 10'-6"                                  | 10'-5"            | 11'-4"                                   | 11'-0"              |
|   | 5'-6"                                 | 10'-0"                                  | 9'-11"            | 10'-9"                                   | 10'-6"              |
|   | 6'-0"                                 | 9'-7"                                   | 9'-6"             | 10'-0"                                   | 10'-0"              |
|   | 7'-0"                                 | 9'-3"                                   | 9'-2"             | 9'-11"                                   | 9'-8"               |
| ± 105.0   | 3'-6"                                 | 12'-3"                                  | 12'-2"            | 13'-1"                                   | 12'-10"             |
|   | 4'-0"                                 | 11'-6"                                  | 11'-4"            | 12'-4"                                   | 12'-0"              |
|   | 4'-6"                                 | 10'-10"                                 | 10'-9"            | 11'-8"                                   | 11'-4"              |
|   | 5'-0"                                 | 10'-3"                                  | 10'-2"            | 11'-0"                                   | 10'-9"              |
|   | 5'-6"                                 | 9'-9"                                   | 9'-8"             | 10'-6"                                   | 10'-3"              |
|   | 6'-0"                                 | 9'-4"                                   | 9'-3"             | 10'-0"                                   | 9'-10"              |
|   | 7'-0"                                 | 8'-8"                                   | 8'-7"             | 9'-4"                                    | 9'-1"               |
| ± 110.0   | 3'-6"                                 | 12'-0"                                  | 11'-10"           | 12'-11"                                  | 12'-7"              |
|   | 4'-0"                                 | 11'-2"                                  | 11'-1"            | 12'-1"                                   | 11'-9"              |
|   | 4'-6"                                 | 10'-7"                                  | 10'-6"            | 11'-4"                                   | 11'-1"              |
|   | 5'-0"                                 | 10'-0"                                  | 9'-11"            | 10'-9"                                   | 10'-6"              |
|   | 5'-6"                                 | 9'-7"                                   | 9'-6"             | 10'-3"                                   | 10'-0"              |
|   | 6'-0"                                 | 9'-2"                                   | 9'-1"             | 9'-10"                                   | 9'-7"               |
|   | 7'-0"                                 | 8'-9"                                   | 8'-8"             | 9'-6"                                    | 9'-3"               |
| ± 115.0   | 3'-6"                                 | 11'-9"                                  | 11'-7"            | 12'-7"                                   | 12'-3"              |
|   | 4'-0"                                 | 10'-11"                                 | 10'-10"           | 11'-10"                                  | 11'-6"              |
|   | 4'-6"                                 | 10'-4"                                  | 10'-3"            | 11'-1"                                   | 10'-10"             |
|   | 5'-0"                                 | 9'-10"                                  | 9'-9"             | 10'-7"                                   | 10'-3"              |
|   | 5'-6"                                 | 9'-4"                                   | 9'-3"             | 10'-1"                                   | 9'-10"              |
|   | 6'-0"                                 | 8'-11"                                  | 8'-10"            | 9'-8"                                    | 9'-5"               |
|   | 7'-0"                                 | 8'-7"                                   | 8'-6"             | 9'-3"                                    | 9'-0"               |
| ± 120.0   | 3'-6"                                 | 11'-6"                                  | 11'-4"            | 12'-4"                                   | 12'-0"              |
|   | 4'-0"                                 | 10'-9"                                  | 10'-8"            | 11'-7"                                   | 11'-3"              |
|   | 4'-6"                                 | 10'-1"                                  | 10'-0"            | 10'-11"                                  | 10'-7"              |
|   | 5'-0"                                 | 9'-7"                                   | 9'-6"             | 10'-4"                                   | 10'-1"              |
|   | 5'-6"                                 | 9'-2"                                   | 9'-1"             | 9'-10"                                   | 9'-7"               |
|   | 6'-0"                                 | 8'-9"                                   | 8'-8"             | 9'-5"                                    | 9'-2"               |
|   | 7'-0"                                 | 8'-5"                                   | 8'-4"             | 9'-1"                                    | 8'-10"              |
| ± 125.0   | 3'-6"                                 | 11'-3"                                  | 11'-2"            | 12'-1"                                   | 11'-9"              |
|   | 4'-0"                                 | 10'-6"                                  | 10'-5"            | 11'-4"                                   | 11'-0"              |
|   | 4'-6"                                 | 9'-11"                                  | 9'-10"            | 10'-8"                                   | 10'-5"              |
|   | 5'-0"                                 | 9'-5"                                   | 9'-4"             | 10'-1"                                   | 9'-10"              |
|   | 5'-6"                                 | 9'-0"                                   | 8'-11"            | 9'-8"                                    | 9'-5"               |
|   | 6'-0"                                 | 8'-7"                                   | 8'-6"             | 9'-3"                                    | 9'-0"               |
|   | 7'-0"                                 | 8'-3"                                   | 8'-2"             | 8'-9"                                    | 8'-8"               |

| MAXIMUM INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED) |                                       |   |                   |  |                     |
|---|---------------------------------------|---|-------------------|--|---------------------|
| MAXIMUM DESIGN PRESSURE RATING<br>"W" (psf)   | MAX. EFFECTIVE SPACING<br>"b" (ft-in) | MAXIMUM 1/8" THICK MULLION SPAN "L"(FT) |                   | MAXIMUM 3/16" THICK MULLION SPAN "L"(FT) |                     |
|   |                                       | Laminated Glass                         | Insulated Glass   | Laminated Glass                          | Insulated Glass     |
|   |                                       | CASE 1<br>M-1/J-1                       | CASE 2<br>M-2/J-2 | CASE 3<br>M-1A/J-1A                      | CASE 4<br>M-2A/J-2A |
| ± 130.0   | 3'-6"                                 | 11'-0"                                  | 10'-11"           | 11'-10"                                  | 11'-7"              |
|   | 4'-0"                                 | 10'-4"                                  | 10'-3"            | 11'-1"                                   | 10'-10"             |
|   | 4'-6"                                 | 9'-9"                                   | 9'-8"             | 10'-6"                                   | 10'-2"              |
|   | 5'-0"                                 | 9'-3"                                   | 9'-2"             | 9'-11"                                   | 9'-8"               |
|   | 5'-6"                                 | 8'-9"                                   | 8'-8"             | 9'-6"                                    | 9'-3"               |
|   | 6'-0"                                 | 8'-5"                                   | 8'-4"             | 9'-1"                                    | 8'-10"              |
|   | 7'-0"                                 | 8'-1"                                   | 8'-0"             | 8'-5"                                    | 8'-5"               |
| +130.0, -135.0  | 3'-6"                                 | 10'-10"                                 | 10'-9"            | 11'-8"                                   | 11'-4"              |
|   | 4'-0"                                 | 10'-1"                                  | 10'-0"            | 10'-11"                                  | 10'-7"              |
|   | 4'-6"                                 | 9'-6"                                   | 9'-5"             | 10'-3"                                   | 10'-0"              |
|   | 5'-0"                                 | 9'-0"                                   | 9'-0"             | 9'-9"                                    | 9'-6"               |
|   | 5'-6"                                 | 8'-7"                                   | 8'-7"             | 9'-3"                                    | 9'-0"               |
|   | 6'-0"                                 | 8'-3"                                   | 8'-2"             | 8'-10"                                   | 8'-8"               |
|   | 7'-0"                                 | 7'-11"                                  | 7'-10"            | 8'-2"                                    | 8'-2"               |
| +130.0, -140.0  | 3'-6"                                 | 10'-7"                                  | 10'-6"            | 11'-5"                                   | 11'-2"              |
|   | 4'-0"                                 | 9'-11"                                  | 9'-10"            | 10'-8"                                   | 10'-5"              |
|   | 4'-6"                                 | 9'-4"                                   | 9'-3"             | 10'-1"                                   | 9'-10"              |
|   | 5'-0"                                 | 8'-11"                                  | 8'-10"            | 9'-7"                                    | 9'-4"               |
|   | 5'-6"                                 | 8'-6"                                   | 8'-5"             | 9'-1"                                    | 8'-11"              |
|   | 6'-0"                                 | 8'-1"                                   | 8'-0"             | 8'-6"                                    | 8'-6"               |
|   | 7'-0"                                 | 7'-9"                                   | 7'-10"            | 7'-10"                                   | 7'-10"              |

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| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

# MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR INTERIOR MULLION'S & JAMB MULLION'S HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 1

| MAXIMUM MULLION SPAN | EFFECTIVE SPACING | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE |             |       |       |       |       |                         |       |       |       |      |       |                                     |       |       |      |       |       |                         |       |       |       |       |       |                                |       |      |  |  |
|----------------------|-------------------|---|-------------|-------|-------|-------|-------|-------------------------|-------|-------|-------|------|-------|-------------------------------------|-------|-------|------|-------|-------|-------------------------|-------|-------|-------|-------|-------|--------------------------------|-------|------|--|--|
|                      |                   | POURED CONCRETE SUBSTRATE                                       |             |       |       |       |       |                         |       |       |       |      |       | WOOD (2) 1 1/2" Min. THK. SUBSTRATE |       |       |      |       |       |                         |       |       |       |       |       | STEEL 1/4" Min. THK. SUBSTRATE |       |      |  |  |
|                      |                   | FASTENERS TYPE A (1/4")   |             |       |       |       |       | FASTENERS TYPE B (3/8") |       |       |       |      |       | FASTENERS TYPE C (1/4")             |       |       |      |       |       | FASTENERS TYPE D (3/8") |       |       |       |       |       | FASTENERS TYPE E (3/8")        |       |      |  |  |
|                      |                   | "L" (Ft-in)   | "b" (Ft-in) | n=4   | n=6   | n=8   | n=10  | n=12                    | n=4   | n=6   | n=8   | n=10 | n=12  | n=4                                 | n=6   | n=8   | n=10 | n=12  | n=4   | n=6                     | n=8   | n=10  | n=12  | n=4   | n=6   | n=8                            | n=10  | n=12 |  |  |
| 8'-0"                | 3'-6"             | 80.8  | 121.2       | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 67.0 | 100.5 | 140.0                               | 140.0 | 140.0 | 62.9 | 94.3  | 125.7 | 140.0                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 |      |  |  |
|                      | 4'-0"             | 70.7  | 106.1       | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 58.7 | 88.0  | 140.0                               | 140.0 | 140.0 | 55.0 | 82.5  | 110.0 | 137.5                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 |      |  |  |
|                      | 4'-6"             | 62.9  | 94.3        | 125.7 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 52.1 | 78.2  | 125.7                               | 130.3 | 140.0 | 48.9 | 73.3  | 97.8  | 122.2                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 |      |  |  |
|                      | 5'-0"             | 56.6  | 84.8        | 113.1 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 46.9 | 70.4  | 113.1                               | 117.3 | 140.0 | 44.0 | 66.0  | 88.0  | 110.0                   | 132.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 |      |  |  |
|                      | 5'-6"             | 51.4  | 77.1        | 102.8 | 128.6 | 140.0 | 133.3 | 140.0                   | 140.0 | 140.0 | 140.0 | 42.7 | 64.0  | 102.8                               | 106.6 | 128.0 | 40.0 | 60.0  | 80.0  | 100.0                   | 120.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 |      |  |  |
|                      | 6'-0"             | 47.1  | 70.7        | 94.3  | 117.8 | 140.0 | 122.2 | 140.0                   | 140.0 | 140.0 | 140.0 | 39.1 | 58.7  | 94.3                                | 97.8  | 117.3 | 36.7 | 55.0  | 73.3  | 91.7                    | 110.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 |      |  |  |
|                      | 7'-0"             | 40.4  | 60.6        | 80.8  | 101.0 | 121.2 | 104.7 | 140.0                   | 140.0 | 140.0 | 140.0 | 33.5 | 50.3  | 80.8                                | 83.8  | 100.5 | 31.4 | 47.2  | 62.9  | 78.6                    | 94.3  | 130.2 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 |      |  |  |
| 8'-6"                | 3'-6"             | 76.1  | 114.1       | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 63.1  | 94.6 | 140.0 | 140.0                               | 140.0 | 59.2  | 88.8 | 118.3 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 4'-0"             | 66.5  | 99.8        | 133.1 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 55.2  | 82.8 | 133.1 | 138.0                               | 140.0 | 51.8  | 77.7 | 103.6 | 129.4 | 140.0                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 4'-6"             | 59.2  | 88.7        | 118.3 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 49.1  | 73.6 | 118.3 | 122.7                               | 140.0 | 46.0  | 69.0 | 92.0  | 115.1 | 138.1                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 5'-0"             | 53.2  | 79.9        | 106.5 | 133.1 | 140.0 | 138.0 | 140.0                   | 140.0 | 140.0 | 44.2  | 66.2 | 106.5 | 110.4                               | 132.5 | 41.4  | 62.1 | 82.8  | 103.6 | 124.3                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 5'-6"             | 48.4  | 72.6        | 96.8  | 121.0 | 140.0 | 125.4 | 140.0                   | 140.0 | 140.0 | 40.1  | 60.2 | 96.8  | 100.4                               | 120.4 | 37.7  | 56.5 | 75.3  | 94.1  | 113.0                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 6'-0"             | 44.4  | 66.5        | 88.7  | 110.9 | 133.1 | 115.0 | 140.0                   | 140.0 | 140.0 | 36.8  | 55.2 | 88.7  | 92.0                                | 110.4 | 34.5  | 51.8 | 69.0  | 86.3  | 103.6                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 6'-6"             | 41.0  | 61.4        | 81.9  | 102.4 | 122.9 | 106.1 | 140.0                   | 140.0 | 140.0 | 34.0  | 51.0 | 81.9  | 84.9                                | 101.9 | 31.9  | 47.8 | 63.7  | 79.7  | 95.6                    | 131.9 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
| 7'-0"                | 38.0              | 57.0  | 76.1        | 95.1  | 114.1 | 98.6  | 140.0 | 140.0                   | 140.0 | 31.5  | 47.3  | 76.1 | 78.9  | 94.6                                | 29.6  | 44.4  | 59.2 | 74.0  | 88.8  | 122.5                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |                                |       |      |  |  |
| 9'-0"                | 3'-6"             | 71.8  | 107.7       | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 59.6  | 89.4 | 140.0 | 140.0                               | 140.0 | 55.9  | 83.8 | 111.8 | 139.7 | 140.0                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 4'-0"             | 62.9  | 94.3        | 125.7 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 52.1  | 78.2 | 125.7 | 130.3                               | 140.0 | 48.9  | 73.3 | 97.8  | 122.2 | 140.0                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 4'-6"             | 55.9  | 83.8        | 111.7 | 139.7 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 46.3  | 69.5 | 111.7 | 115.9                               | 139.0 | 43.5  | 65.2 | 86.9  | 108.7 | 130.4                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 5'-0"             | 50.3  | 75.4        | 100.6 | 125.7 | 140.0 | 130.3 | 140.0                   | 140.0 | 140.0 | 41.7  | 62.6 | 100.6 | 104.3                               | 125.1 | 39.1  | 58.7 | 78.2  | 97.8  | 117.4                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 5'-6"             | 45.7  | 68.6        | 91.4  | 114.3 | 137.1 | 118.5 | 140.0                   | 140.0 | 140.0 | 37.9  | 56.9 | 91.4  | 94.8                                | 113.7 | 35.6  | 53.3 | 71.1  | 88.9  | 106.7                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 6'-0"             | 41.9  | 62.9        | 83.8  | 104.8 | 125.7 | 108.6 | 140.0                   | 140.0 | 140.0 | 34.8  | 52.1 | 83.8  | 86.9                                | 104.3 | 32.6  | 48.9 | 65.2  | 81.5  | 97.8                    | 135.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 6'-6"             | 38.7  | 58.0        | 77.4  | 96.7  | 116.0 | 100.2 | 140.0                   | 140.0 | 140.0 | 32.1  | 48.1 | 77.4  | 80.2                                | 96.2  | 30.1  | 45.1 | 60.2  | 75.2  | 90.3                    | 124.6 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
| 7'-0"                | 35.9              | 53.9  | 71.8        | 89.8  | 107.7 | 93.1  | 139.6 | 140.0                   | 140.0 | 29.8  | 44.7  | 71.8 | 74.5  | 89.4                                | 27.9  | 41.9  | 55.9 | 69.9  | 83.8  | 115.7                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |                                |       |      |  |  |
| 9'-6"                | 3'-6"             | 68.0  | 102.1       | 136.1 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 56.4  | 84.7 | 136.1 | 140.0                               | 140.0 | 52.9  | 79.4 | 105.9 | 132.4 | 140.0                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 4'-0"             | 59.5  | 89.3        | 119.1 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 49.4  | 74.1 | 119.1 | 123.5                               | 140.0 | 46.3  | 69.5 | 92.7  | 115.8 | 139.0                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 4'-6"             | 52.9  | 79.4        | 105.9 | 132.3 | 140.0 | 137.2 | 140.0                   | 140.0 | 140.0 | 43.9  | 65.9 | 105.9 | 109.8                               | 131.7 | 41.2  | 61.8 | 82.4  | 102.9 | 123.5                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 5'-0"             | 47.6  | 71.5        | 95.3  | 119.1 | 140.0 | 123.5 | 140.0                   | 140.0 | 140.0 | 39.5  | 59.3 | 95.3  | 98.8                                | 118.5 | 37.1  | 55.6 | 74.1  | 92.7  | 111.2                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 5'-6"             | 43.3  | 65.0        | 86.6  | 108.3 | 129.9 | 112.2 | 140.0                   | 140.0 | 140.0 | 35.9  | 53.9 | 86.6  | 89.8                                | 107.8 | 33.7  | 50.5 | 67.4  | 84.2  | 101.1                   | 139.5 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 6'-0"             | 39.7  | 59.5        | 79.4  | 99.2  | 119.1 | 102.9 | 140.0                   | 140.0 | 140.0 | 32.9  | 49.4 | 79.4  | 82.3                                | 98.8  | 30.9  | 46.3 | 61.8  | 77.2  | 92.7                    | 127.9 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 6'-6"             | 36.6  | 55.0        | 73.3  | 91.6  | 109.9 | 95.0  | 140.0                   | 140.0 | 140.0 | 30.4  | 45.6 | 73.3  | 76.0                                | 91.2  | 28.5  | 42.8 | 57.0  | 71.3  | 85.5                    | 118.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
| 7'-0"                | 34.0              | 51.0  | 68.0        | 85.1  | 102.1 | 88.2  | 132.3 | 140.0                   | 140.0 | 28.2  | 42.3  | 68.0 | 70.6  | 84.7                                | 26.5  | 39.7  | 52.9 | 66.2  | 79.4  | 109.6                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |                                |       |      |  |  |
| 10'-0"               | 3'-6"             | 64.6  | 97.0        | 129.3 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 53.6  | 80.4 | 129.3 | 134.1                               | 140.0 | 50.3  | 75.4 | 100.6 | 125.7 | 140.0                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 4'-0"             | 56.6  | 84.8        | 113.1 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 46.9  | 70.4 | 113.1 | 117.3                               | 140.0 | 44.0  | 66.0 | 88.0  | 110.0 | 132.0                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 4'-6"             | 50.3  | 75.4        | 100.6 | 125.7 | 140.0 | 130.3 | 140.0                   | 140.0 | 140.0 | 41.7  | 62.6 | 100.6 | 104.3                               | 125.1 | 39.1  | 58.7 | 78.2  | 97.8  | 117.4                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 5'-0"             | 45.3  | 67.9        | 90.5  | 113.1 | 135.8 | 117.3 | 140.0                   | 140.0 | 140.0 | 37.5  | 56.3 | 90.5  | 93.8                                | 112.6 | 35.2  | 52.8 | 70.4  | 88.0  | 105.6                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 5'-6"             | 41.1  | 61.7        | 82.3  | 102.8 | 123.4 | 106.6 | 140.0                   | 140.0 | 140.0 | 34.1  | 51.2 | 82.3  | 85.3                                | 102.4 | 32.0  | 48.0 | 64.0  | 80.0  | 96.0                    | 132.5 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 6'-0"             | 37.7  | 56.6        | 75.4  | 94.3  | 113.1 | 97.7  | 140.0                   | 140.0 | 140.0 | 31.3  | 46.9 | 75.4  | 78.2                                | 93.8  | 29.3  | 44.0 | 58.7  | 73.3  | 88.0                    | 121.5 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 6'-6"             | 34.8  | 52.2        | 69.6  | 87.0  | 104.4 | 90.2  | 135.3                   | 140.0 | 140.0 | 28.9  | 43.3 | 69.6  | 72.2                                | 86.6  | 27.1  | 40.6 | 54.2  | 67.7  | 81.2                    | 112.1 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
| 7'-0"                | 32.3              | 48.5  | 64.6        | 80.8  | 97.0  | 83.8  | 125.7 | 140.0                   | 140.0 | 26.8  | 40.2  | 64.6 | 67.0  | 80.4                                | 25.1  | 37.7  | 50.3 | 62.9  | 75.4  | 104.1                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |                                |       |      |  |  |
| 10'-6"               | 3'-6"             | 61.6  | 92.4        | 123.1 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 51.1  | 76.6 | 123.1 | 127.7                               | 140.0 | 47.9  | 71.9 | 95.8  | 119.8 | 140.0                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 4'-0"             | 53.9  | 80.8        | 107.7 | 134.7 | 140.0 | 139.6 | 140.0                   | 140.0 | 140.0 | 44.7  | 67.0 | 107.7 | 111.7                               | 134.1 | 41.9  | 62.9 | 83.8  | 104.8 | 125.7                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 4'-6"             | 47.9  | 71.8        | 95.8  | 119.7 | 140.0 | 124.1 | 140.0                   | 140.0 | 140.0 | 39.7  | 59.6 | 95.8  | 99.3                                | 119.2 | 37.3  | 55.9 | 74.5  | 93.1  | 111.8                   | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 5'-0"             | 43.1  | 64.6        | 86.2  | 107.7 | 129.3 | 111.7 | 140.0                   | 140.0 | 140.0 | 35.7  | 53.6 | 86.2  | 89.4                                | 107.2 | 33.5  | 50.3 | 67.1  | 83.8  | 100.6                   | 138.8 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 5'-6"             | 39.2  | 58.8        | 78.4  | 97.9  | 117.5 | 101.5 | 140.0                   | 140.0 | 140.0 | 32.5  | 48.7 | 78.4  | 81.2                                | 97.5  | 30.5  | 45.7 | 61.0  | 76.2  | 91.4                    | 126.2 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 6'-0"             | 35.9  | 53.9        | 71.8  | 89.8  | 107.7 | 93.1  | 139.6                   | 140.0 | 140.0 | 29.8  | 44.7 | 71.8  | 74.5                                | 89.4  | 27.9  | 41.9 | 55.9  | 69.9  | 83.8                    | 115.7 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          |       |      |  |  |
|                      | 6'-6"             | 33.2  | 49.7        | 66.3  | 82.9  | 99.5  | 85.9  | 128.9                   | 140.0 | 140.0 | 27.5  | 41.2 | 66.3  | 68.7                                | 82.5  | 25.8  | 38.7 | 51.6  | 64.5  | 77.4                    | 106.8 | 140.0 | 140.0 | 140.0 | 140.0 | 1                              |       |      |  |  |

# MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR INTERIOR MULLION'S & JAMB MULLION'S HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 1

## FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

- A - 1/4"Ø DEWALT INC., ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min.  $f_c = 2,730$  ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B - 3/8"Ø DEWALT INC., WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min.  $f_c = 3,0$  ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C - 1/4"Ø DEWALT INC., ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HHH THRU BOLT W/ NUT & LOCK WASHER.

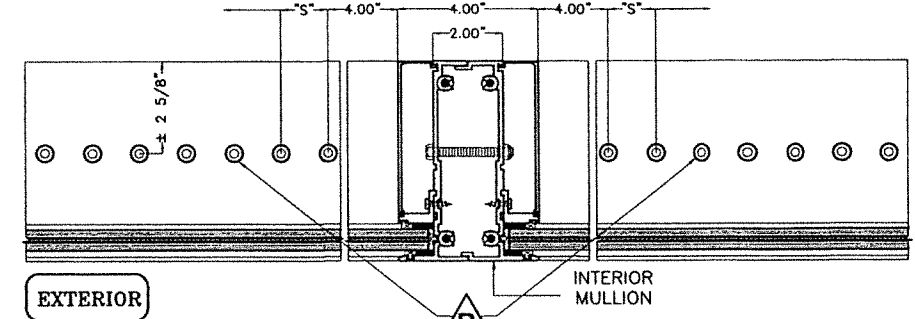
| MAXIMUM MULLION SPAN | EFFECTIVE SPACING | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE (CONTINUED) |      |       |       |       |       |                          |       |       |       |      |      |                                     |       |       |      |      |      |                          |       |       |       |       |       |                          |  |  |  |  |  |
|----------------------|-------------------|---|------|-------|-------|-------|-------|--------------------------|-------|-------|-------|------|------|-------------------------------------|-------|-------|------|------|------|--------------------------|-------|-------|-------|-------|-------|--------------------------|--|--|--|--|--|
|                      |                   | POURED CONCRETE SUBSTRATE   |      |       |       |       |       |                          |       |       |       |      |      | WOOD (2) 1 1/2" Min. THK. SUBSTRATE |       |       |      |      |      |                          |       |       |       |       |       | STEEL 1/4" Min. THK.     |  |  |  |  |  |
|                      |                   | FASTENERS TYPE A (1/4"Ø)  |      |       |       |       |       | FASTENERS TYPE B (3/8"Ø) |       |       |       |      |      | FASTENERS TYPE C (1/4"Ø)            |       |       |      |      |      | FASTENERS TYPE D (3/8"Ø) |       |       |       |       |       | FASTENERS TYPE E (3/8"Ø) |  |  |  |  |  |
| "L" (Ft-in)          | "b" (Ft-in)       | n=4   | n=6  | n=8   | n=10  | n=12  | n=4   | n=6                      | n=8   | n=10  | n=12  | n=4  | n=6  | n=8                                 | n=10  | n=12  | n=4  | n=6  | n=8  | n=10                     | n=12  | n=4   | n=6   | n=8   | n=10  | n=12                     |  |  |  |  |  |
| 11'-6"               | 3'-6"             | 56.2  | 84.3 | 112.4 | 140.0 | 140.0 | 140.0 | 140.0                    | 140.0 | 140.0 | 140.0 | 46.6 | 69.9 | 112.4                               | 116.6 | 139.9 | 43.7 | 65.6 | 87.5 | 109.3                    | 131.2 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 4'-0"             | 49.2  | 73.8 | 98.4  | 123.0 | 140.0 | 140.0 | 140.0                    | 140.0 | 140.0 | 140.0 | 40.8 | 61.2 | 98.4                                | 102.0 | 122.4 | 38.3 | 57.4 | 76.5 | 95.7                     | 114.8 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 4'-6"             | 43.7  | 65.6 | 87.4  | 109.3 | 131.2 | 113.3 | 140.0                    | 140.0 | 140.0 | 140.0 | 36.3 | 54.4 | 87.4                                | 90.7  | 108.8 | 34.0 | 51.0 | 68.0 | 85.0                     | 102.1 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 5'-0"             | 39.3  | 59.0 | 78.7  | 98.4  | 118.0 | 102.0 | 140.0                    | 140.0 | 140.0 | 140.0 | 32.6 | 49.0 | 78.7                                | 81.6  | 97.9  | 30.6 | 45.9 | 61.2 | 76.5                     | 91.8  | 126.8 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 5'-6"             | 35.8  | 53.7 | 71.5  | 89.4  | 107.3 | 92.7  | 139.1                    | 140.0 | 140.0 | 140.0 | 29.7 | 44.5 | 71.5                                | 74.2  | 89.0  | 27.8 | 41.7 | 55.7 | 69.6                     | 83.5  | 115.2 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 6'-0"             | 32.8  | 49.2 | 65.6  | 82.0  | 98.4  | 85.0  | 127.5                    | 140.0 | 140.0 | 140.0 | 27.2 | 40.8 | 65.6                                | 68.0  | 81.6  | 25.5 | 38.3 | 51.0 | 63.8                     | 76.5  | 105.6 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 7'-0"             | 28.1  | 42.2 | 56.2  | 70.3  | 84.3  | 72.8  | 109.3                    | 140.0 | 140.0 | 140.0 | 23.3 | 35.0 | 56.2                                | 58.3  | 69.9  | 21.9 | 32.8 | 43.7 | 54.7                     | 65.6  | 90.5  | 135.8 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
| 12'-0"               | 3'-6"             | 53.9  | 80.8 | 107.7 | 134.7 | 140.0 | 139.6 | 140.0                    | 140.0 | 140.0 | 140.0 | 44.7 | 67.0 | 107.7                               | 111.7 | 134.1 | 41.9 | 62.9 | 83.8 | 104.8                    | 125.7 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 4'-0"             | 47.1  | 70.7 | 94.3  | 117.8 | 140.0 | 122.2 | 140.0                    | 140.0 | 140.0 | 140.0 | 39.1 | 58.7 | 94.3                                | 97.8  | 117.3 | 36.7 | 55.0 | 73.3 | 91.7                     | 110.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 4'-6"             | 41.9  | 62.9 | 83.8  | 104.8 | 125.7 | 108.6 | 140.0                    | 140.0 | 140.0 | 140.0 | 34.8 | 52.1 | 83.8                                | 86.9  | 104.3 | 32.6 | 48.9 | 65.2 | 81.5                     | 97.8  | 135.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 5'-0"             | 37.7  | 56.6 | 75.4  | 94.3  | 113.1 | 97.7  | 140.0                    | 140.0 | 140.0 | 140.0 | 31.3 | 46.9 | 75.4                                | 78.2  | 93.8  | 29.3 | 44.0 | 58.7 | 73.3                     | 88.0  | 121.5 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 5'-6"             | 34.3  | 51.4 | 68.6  | 85.7  | 102.8 | 88.9  | 133.3                    | 140.0 | 140.0 | 140.0 | 28.4 | 42.7 | 68.6                                | 71.1  | 85.3  | 26.7 | 40.0 | 53.3 | 66.7                     | 80.0  | 110.4 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 6'-0"             | 31.4  | 47.1 | 62.9  | 78.6  | 94.3  | 81.4  | 122.2                    | 140.0 | 140.0 | 140.0 | 26.1 | 39.1 | 62.9                                | 65.2  | 78.2  | 24.4 | 36.7 | 48.9 | 61.1                     | 73.3  | 101.2 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 7'-0"             | 26.9  | 40.4 | 53.9  | 67.3  | 80.8  | 69.8  | 104.7                    | 139.6 | 140.0 | 140.0 | 22.3 | 33.5 | 53.9                                | 55.9  | 67.0  | 21.0 | 31.4 | 41.9 | 52.4                     | 62.9  | 86.8  | 130.2 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
| 12'-6"               | 3'-6"             | 51.7  | 77.6 | 103.4 | 129.3 | 140.0 | 134.0 | 140.0                    | 140.0 | 140.0 | 140.0 | 42.9 | 64.3 | 103.4                               | 107.2 | 128.7 | 40.2 | 60.4 | 80.5 | 100.6                    | 120.7 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 4'-0"             | 45.3  | 67.9 | 90.5  | 113.1 | 135.8 | 117.3 | 140.0                    | 140.0 | 140.0 | 140.0 | 37.5 | 56.3 | 90.5                                | 93.8  | 112.6 | 35.2 | 52.8 | 70.4 | 88.0                     | 105.6 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 4'-6"             | 40.2  | 60.3 | 80.4  | 100.6 | 120.7 | 104.3 | 140.0                    | 140.0 | 140.0 | 140.0 | 33.4 | 50.0 | 80.4                                | 83.4  | 100.1 | 31.3 | 46.9 | 62.6 | 78.2                     | 93.9  | 129.6 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 5'-0"             | 36.2  | 54.3 | 72.4  | 90.5  | 108.6 | 93.8  | 140.0                    | 140.0 | 140.0 | 140.0 | 30.0 | 45.0 | 72.4                                | 75.1  | 90.1  | 28.2 | 42.2 | 56.3 | 70.4                     | 84.5  | 116.6 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 5'-6"             | 32.9  | 49.4 | 65.8  | 82.3  | 98.7  | 85.3  | 127.9                    | 140.0 | 140.0 | 140.0 | 27.3 | 40.9 | 65.8                                | 68.2  | 81.9  | 25.6 | 38.4 | 51.2 | 64.0                     | 76.8  | 106.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 6'-0"             | 30.2  | 45.3 | 60.3  | 75.4  | 90.5  | 78.2  | 117.3                    | 140.0 | 140.0 | 140.0 | 25.0 | 37.5 | 60.3                                | 62.6  | 75.1  | 23.5 | 35.2 | 46.9 | 58.7                     | 70.4  | 97.2  | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 7'-0"             | 25.9  | 38.8 | 51.7  | 64.6  | 77.6  | 67.0  | 100.5                    | 134.0 | 140.0 | 140.0 | 21.4 | 32.2 | 51.7                                | 53.6  | 64.3  | 20.1 | 30.2 | 40.2 | 50.3                     | 60.4  | 83.3  | 124.9 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
| 13'-0"               | 3'-6"             | 49.7  | 74.6 | 99.5  | 124.3 | 140.0 | 128.9 | 140.0                    | 140.0 | 140.0 | 140.0 | 41.2 | 61.9 | 99.5                                | 103.1 | 123.7 | 38.7 | 58.0 | 77.4 | 96.7                     | 116.1 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 4'-0"             | 43.5  | 65.3 | 87.0  | 108.8 | 130.5 | 112.8 | 140.0                    | 140.0 | 140.0 | 140.0 | 36.1 | 54.1 | 87.0                                | 90.2  | 108.3 | 33.9 | 50.8 | 67.7 | 84.6                     | 101.6 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 4'-6"             | 38.7  | 58.0 | 77.4  | 96.7  | 116.0 | 100.2 | 140.0                    | 140.0 | 140.0 | 140.0 | 32.1 | 48.1 | 77.4                                | 80.2  | 96.2  | 30.1 | 45.1 | 60.2 | 75.2                     | 90.3  | 124.6 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 5'-0"             | 34.8  | 52.2 | 69.6  | 87.0  | 104.4 | 90.2  | 135.3                    | 140.0 | 140.0 | 140.0 | 28.9 | 43.3 | 69.6                                | 72.2  | 86.6  | 27.1 | 40.6 | 54.2 | 67.7                     | 81.2  | 112.1 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 5'-6"             | 31.6  | 47.5 | 63.3  | 79.1  | 94.9  | 82.0  | 123.0                    | 140.0 | 140.0 | 140.0 | 26.2 | 39.4 | 63.3                                | 65.6  | 78.7  | 24.6 | 36.9 | 49.2 | 61.6                     | 73.9  | 101.9 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 6'-0"             | 29.0  | 43.5 | 58.0  | 72.5  | 87.0  | 75.2  | 112.8                    | 140.0 | 140.0 | 140.0 | 24.1 | 36.1 | 58.0                                | 60.2  | 72.2  | 22.6 | 33.9 | 45.1 | 56.4                     | 67.7  | 93.4  | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 7'-0"             | 26.8  | 40.2 | 53.6  | 66.9  | 80.3  | 69.4  | 104.1                    | 138.8 | 140.0 | 140.0 | 22.2 | 33.3 | 53.6                                | 55.5  | 66.6  | 20.8 | 31.2 | 41.7 | 52.1                     | 62.5  | 86.3  | 129.4 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
| 13'-6"               | 3'-6"             | 47.9  | 71.8 | 95.8  | 119.7 | 140.0 | 124.1 | 140.0                    | 140.0 | 140.0 | 140.0 | 39.7 | 59.6 | 95.8                                | 99.3  | 119.2 | 37.3 | 55.9 | 74.5 | 93.1                     | 111.8 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 4'-0"             | 41.9  | 62.9 | 83.8  | 104.8 | 125.7 | 108.6 | 140.0                    | 140.0 | 140.0 | 140.0 | 34.8 | 52.1 | 83.8                                | 86.9  | 104.3 | 32.6 | 48.9 | 65.2 | 81.5                     | 97.8  | 135.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 4'-6"             | 37.2  | 55.9 | 74.5  | 93.1  | 111.7 | 96.5  | 140.0                    | 140.0 | 140.0 | 140.0 | 30.9 | 46.3 | 74.5                                | 77.2  | 92.7  | 29.0 | 43.5 | 58.0 | 72.4                     | 86.9  | 120.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 5'-0"             | 33.5  | 50.3 | 67.0  | 83.8  | 100.6 | 86.9  | 130.3                    | 140.0 | 140.0 | 140.0 | 27.8 | 41.7 | 67.0                                | 69.5  | 83.4  | 26.1 | 39.1 | 52.2 | 65.2                     | 78.2  | 108.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 5'-6"             | 30.5  | 45.7 | 60.9  | 76.2  | 91.4  | 79.0  | 118.5                    | 140.0 | 140.0 | 140.0 | 25.3 | 37.9 | 60.9                                | 63.2  | 75.8  | 23.7 | 35.6 | 47.4 | 59.3                     | 71.1  | 98.2  | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 6'-0"             | 27.9  | 41.9 | 55.9  | 69.8  | 83.8  | 72.4  | 108.6                    | 140.0 | 140.0 | 140.0 | 23.2 | 34.8 | 55.9                                | 57.9  | 69.5  | 21.7 | 32.6 | 43.5 | 54.3                     | 65.2  | 90.0  | 135.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 7'-0"             | 25.8  | 38.7 | 51.6  | 64.5  | 77.4  | 66.8  | 100.2                    | 133.7 | 140.0 | 140.0 | 21.4 | 32.1 | 51.6                                | 53.5  | 64.2  | 20.1 | 30.1 | 40.1 | 50.2                     | 60.2  | 83.1  | 124.6 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
| 14'-0"               | 3'-6"             | 46.2  | 69.3 | 92.4  | 115.4 | 138.5 | 119.7 | 140.0                    | 140.0 | 140.0 | 140.0 | 38.3 | 57.5 | 92.4                                | 95.8  | 114.9 | 35.9 | 53.9 | 71.9 | 89.8                     | 107.8 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 4'-0"             | 40.4  | 60.6 | 80.8  | 101.0 | 121.2 | 104.7 | 140.0                    | 140.0 | 140.0 | 140.0 | 33.5 | 50.3 | 80.8                                | 83.8  | 100.5 | 31.4 | 47.2 | 62.9 | 78.6                     | 94.3  | 130.2 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 4'-6"             | 35.9  | 53.9 | 71.8  | 89.8  | 107.7 | 93.1  | 139.6                    | 140.0 | 140.0 | 140.0 | 29.8 | 44.7 | 71.8                                | 74.5  | 89.4  | 27.9 | 41.9 | 55.9 | 69.9                     | 83.8  | 115.7 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 5'-0"             | 32.3  | 48.5 | 64.6  | 80.8  | 97.0  | 83.8  | 125.7                    | 140.0 | 140.0 | 140.0 | 26.8 | 40.2 | 64.6                                | 67.0  | 80.4  | 25.1 | 37.7 | 50.3 | 62.9                     | 75.4  | 104.1 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 5'-6"             | 29.4  | 44.1 | 58.8  | 73.5  | 88.2  | 76.2  | 114.2                    | 140.0 | 140.0 | 140.0 | 24.4 | 36.6 | 58.8                                | 60.9  | 73.1  | 22.9 | 34.3 | 45.7 | 57.2                     | 68.6  | 94.7  | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 6'-0"             | 26.9  | 40.4 | 53.9  | 67.3  | 80.8  | 69.8  | 104.7                    | 139.6 | 140.0 | 140.0 | 22.3 | 33.5 | 53.9                                | 55.9  | 67.0  | 21.0 | 31.4 | 41.9 | 52.4                     | 62.9  | 86.8  | 130.2 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 7'-0"             | 24.9  | 37.3 | 49.7  | 62.2  | 74.6  | 64.4  | 96.7                     | 128.9 | 140.0 | 140.0 | 20.6 | 30.9 | 49.7                                | 51.6  | 61.9  | 19.3 | 29.0 | 38.7 | 48.4                     | 58.0  | 80.1  | 120.1 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
| 14'-6"               | 3'-6"             | 44.6  | 66.9 | 89.2  | 111.5 | 133.8 | 115.6 | 140.0                    | 140.0 | 140.0 | 140.0 | 37.0 | 55.5 | 89.2                                | 92.5  | 110.9 | 34.7 | 52.0 | 69.4 | 86.7                     | 104.1 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 4'-0"             | 39.0  | 58.5 | 78.0  | 97.5  | 117.0 | 101.1 | 140.0                    | 140.0 | 140.0 | 140.0 | 32.4 | 48.5 | 78.0                                | 80.9  | 97.1  | 30.4 | 45.5 | 60.7 | 75.9                     | 91.1  | 125.7 | 140.0 | 140.0 | 140.0 | 140.0                    |  |  |  |  |  |
|                      | 4'-6"             | 34.7  | 52.0 | 69.4  | 86.7  | 104.0 | 89.9  | 134.8                    | 140.0 |       |       |      |      |                                     |       |       |      |      |      |                          |       |       |       |       |       |                          |  |  |  |  |  |

# MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR INTERIOR MULLION'S & JAMB MULLION'S HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 1

## FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

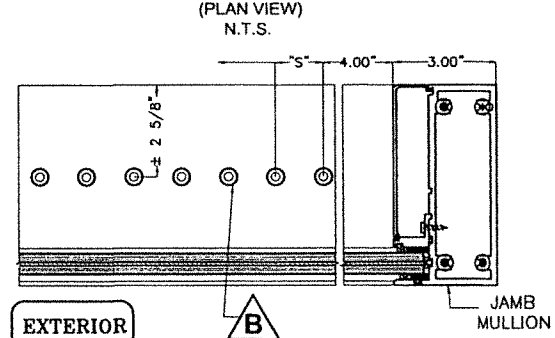
- A** - 1/4"Ø DEWALT INC., ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. f<sub>c</sub> = 2.730 ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B** - 3/8"Ø DEWALT INC., WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. f<sub>c</sub> = 3.0 ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C** - 1/4"Ø DEWALT INC., ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D** - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E** - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HHB THRU BOLT W/ NUT & LOCK WASHER.

| MAXIMUM MULLION SPAN | EFFECTIVE SPACING | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE (CONTINUED) |      |      |       |                          |       |       |       |                          |       |      |      |                                     |      |       |      |                          |      |      |       |                      |       |       |       |       |
|----------------------|-------------------|---|------|------|-------|--------------------------|-------|-------|-------|--------------------------|-------|------|------|-------------------------------------|------|-------|------|--------------------------|------|------|-------|----------------------|-------|-------|-------|-------|
|                      |                   | POURED CONCRETE SUBSTRATE   |      |      |       |                          |       |       |       |                          |       |      |      | WOOD (2) 1 1/2" Min. THK. SUBSTRATE |      |       |      |                          |      |      |       | STEEL 1/4" Min. THK. |       |       |       |       |
|                      |                   | FASTENERS TYPE A (1/4"Ø)  |      |      |       | FASTENERS TYPE B (3/8"Ø) |       |       |       | FASTENERS TYPE C (1/4"Ø) |       |      |      | FASTENERS TYPE D (3/8"Ø)            |      |       |      | FASTENERS TYPE E (3/8"Ø) |      |      |       |                      |       |       |       |       |
| "L" (Ft-In)          | "b" (Ft-In)       | n=4   | n=6  | n=8  | n=10  | n=12                     | n=4   | n=6   | n=8   | n=10                     | n=12  | n=4  | n=6  | n=8                                 | n=10 | n=12  | n=4  | n=6                      | n=8  | n=10 | n=12  | n=4                  | n=6   | n=8   | n=10  | n=12  |
| 15' - 0"             | 3' - 6"           | 43.1  | 64.6 | 86.2 | 107.7 | 129.3                    | 111.7 | 140.0 | 140.0 | 140.0                    | 140.0 | 35.7 | 53.6 | 86.2                                | 89.4 | 107.2 | 33.5 | 50.3                     | 67.1 | 83.8 | 100.6 | 138.8                | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 4' - 0"           | 37.7  | 56.6 | 75.4 | 94.3  | 113.1                    | 97.7  | 140.0 | 140.0 | 140.0                    | 140.0 | 31.3 | 46.9 | 75.4                                | 78.2 | 93.8  | 29.3 | 44.0                     | 58.7 | 73.3 | 88.0  | 121.5                | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 4' - 6"           | 33.5  | 50.3 | 67.0 | 83.8  | 100.6                    | 86.9  | 130.3 | 140.0 | 140.0                    | 140.0 | 27.8 | 41.7 | 67.0                                | 69.5 | 83.4  | 26.1 | 39.1                     | 52.2 | 65.2 | 78.2  | 108.0                | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 0"           | 30.2  | 45.3 | 60.3 | 75.4  | 90.5                     | 78.2  | 117.3 | 140.0 | 140.0                    | 140.0 | 25.0 | 37.5 | 60.3                                | 62.6 | 75.1  | 23.5 | 35.2                     | 46.9 | 58.7 | 70.4  | 97.2                 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 6"           | 27.4  | 41.1 | 54.9 | 68.6  | 82.3                     | 71.1  | 106.6 | 140.0 | 140.0                    | 140.0 | 22.7 | 34.1 | 54.9                                | 56.9 | 68.2  | 21.3 | 32.0                     | 42.7 | 53.3 | 64.0  | 88.3                 | 132.5 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 0"           | 25.1  | 37.7 | 50.3 | 62.9  | 75.4                     | 65.2  | 97.7  | 130.3 | 140.0                    | 140.0 | 20.9 | 31.3 | 50.3                                | 52.1 | 62.6  | 19.6 | 29.3                     | 39.1 | 48.9 | 58.7  | 81.0                 | 121.5 | 140.0 | 140.0 | 140.0 |
|                      | 7' - 0"           | 23.2  | 34.8 | 46.4 | 58.0  | 69.6                     | 60.1  | 90.2  | 120.3 | 140.0                    | 140.0 | 19.2 | 28.9 | 46.4                                | 48.1 | 57.7  | 18.1 | 27.1                     | 36.1 | 45.1 | 54.2  | 74.8                 | 112.1 | 140.0 | 140.0 | 140.0 |
| 15' - 6"             | 3' - 6"           | 41.7  | 62.6 | 83.4 | 104.3 | 125.1                    | 108.1 | 140.0 | 140.0 | 140.0                    | 140.0 | 34.6 | 51.9 | 83.4                                | 86.5 | 103.8 | 32.4 | 48.7                     | 64.9 | 81.1 | 97.3  | 134.4                | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 4' - 0"           | 36.5  | 54.7 | 73.0 | 91.2  | 109.5                    | 94.6  | 140.0 | 140.0 | 140.0                    | 140.0 | 30.3 | 45.4 | 73.0                                | 75.7 | 90.8  | 28.4 | 42.6                     | 56.8 | 71.0 | 85.2  | 117.6                | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 4' - 6"           | 32.4  | 48.7 | 64.9 | 81.1  | 97.3                     | 84.1  | 126.1 | 140.0 | 140.0                    | 140.0 | 26.9 | 40.4 | 64.9                                | 67.3 | 80.7  | 25.2 | 37.9                     | 50.5 | 63.1 | 75.7  | 104.5                | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 0"           | 29.2  | 43.8 | 58.4 | 73.0  | 87.6                     | 75.7  | 113.5 | 140.0 | 140.0                    | 140.0 | 24.2 | 36.3 | 58.4                                | 60.5 | 72.7  | 22.7 | 34.1                     | 45.4 | 56.8 | 68.1  | 94.0                 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 6"           | 26.5  | 39.8 | 53.1 | 66.4  | 79.6                     | 68.8  | 103.2 | 137.6 | 140.0                    | 140.0 | 22.0 | 33.0 | 53.1                                | 55.0 | 66.0  | 20.6 | 31.0                     | 41.3 | 51.6 | 61.9  | 85.5                 | 128.2 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 0"           | 24.3  | 36.5 | 48.7 | 60.8  | 73.0                     | 63.1  | 94.6  | 126.1 | 140.0                    | 140.0 | 20.2 | 30.3 | 48.7                                | 50.5 | 60.5  | 18.9 | 28.4                     | 37.9 | 47.3 | 56.8  | 78.4                 | 117.6 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 6"           | 22.5  | 33.7 | 44.9 | 56.1  | 67.4                     | 58.2  | 87.3  | 116.4 | 140.0                    | 140.0 | 18.6 | 27.9 | 44.9                                | 46.6 | 55.9  | 17.5 | 26.2                     | 34.9 | 43.7 | 52.4  | 72.3                 | 108.5 | 140.0 | 140.0 | 140.0 |
| 7' - 0"              | 20.9              | 31.3  | 41.7 | 52.1 | 62.6  | 54.0                     | 81.1  | 108.1 | 135.1 | 140.0                    | 17.3  | 25.9 | 41.7 | 43.2                                | 51.9 | 16.2  | 24.3 | 32.4                     | 40.6 | 48.7 | 67.2  | 100.8                | 134.4 | 140.0 | 140.0 |       |
| 15' - 9"             | 3' - 6"           | 41.0  | 61.6 | 82.1 | 102.6 | 123.1                    | 106.4 | 140.0 | 140.0 | 140.0                    | 140.0 | 34.0 | 51.1 | 82.1                                | 85.1 | 102.1 | 31.9 | 47.9                     | 63.9 | 79.8 | 95.8  | 132.2                | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 4' - 0"           | 35.9  | 53.9 | 71.8 | 89.8  | 107.7                    | 93.1  | 139.6 | 140.0 | 140.0                    | 140.0 | 29.8 | 44.7 | 71.8                                | 74.5 | 89.4  | 27.9 | 41.9                     | 55.9 | 69.9 | 83.8  | 115.7                | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 4' - 6"           | 31.9  | 47.9 | 63.8 | 79.8  | 95.8                     | 82.7  | 124.1 | 140.0 | 140.0                    | 140.0 | 26.5 | 39.7 | 63.8                                | 66.2 | 79.4  | 24.8 | 37.3                     | 49.7 | 62.1 | 74.5  | 102.8                | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 0"           | 28.7  | 43.1 | 57.5 | 71.8  | 86.2                     | 74.5  | 111.7 | 140.0 | 140.0                    | 140.0 | 23.8 | 35.7 | 57.5                                | 59.6 | 71.5  | 22.4 | 33.5                     | 44.7 | 55.9 | 67.1  | 92.6                 | 138.8 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 6"           | 26.1  | 39.2 | 52.2 | 65.3  | 78.4                     | 67.7  | 101.5 | 135.4 | 140.0                    | 140.0 | 21.7 | 32.5 | 52.2                                | 54.2 | 65.0  | 20.3 | 30.5                     | 40.6 | 50.8 | 61.0  | 84.1                 | 126.2 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 0"           | 23.9  | 35.9 | 47.9 | 59.9  | 71.8                     | 62.1  | 93.1  | 124.1 | 140.0                    | 140.0 | 19.9 | 29.8 | 47.9                                | 49.7 | 59.6  | 18.6 | 27.9                     | 37.3 | 46.6 | 55.9  | 77.1                 | 115.7 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 6"           | 22.1  | 33.2 | 44.2 | 55.3  | 66.3                     | 57.3  | 85.9  | 114.6 | 140.0                    | 140.0 | 18.3 | 27.5 | 44.2                                | 45.8 | 55.0  | 17.2 | 25.8                     | 34.4 | 43.0 | 51.6  | 71.2                 | 106.8 | 140.0 | 140.0 | 140.0 |
| 7' - 0"              | 20.5              | 30.8  | 41.0 | 51.3 | 61.6  | 53.2                     | 79.8  | 106.4 | 133.0 | 140.0                    | 17.0  | 25.5 | 41.0 | 42.6                                | 51.1 | 16.0  | 24.0 | 31.9                     | 39.9 | 47.9 | 66.1  | 99.2                 | 132.2 | 140.0 | 140.0 |       |



**"n" FASTENERS**  
n = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, EQUALLY INSTALLED AT EACH SIDE OF INTERIOR MULLION

### SILL OR HEAD CONNECTION DETAIL @ INTERIOR MULLION



**"n/2" FASTENERS**  
n/2 = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, INSTALLED AT ONE SIDE OF JAMB MULLION

### SILL OR HEAD CONNECTION DETAIL @ JAMB MULLION

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

WALTER A. TILLIT JR.  
LICENSE  
No. 44167  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
*Walter A. Tillit Jr.*  
10/23

P.E. SEAL/SIGNATURE/DATE

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**TILTECO INC.**  
TILLIT TESTING & ENGINEERING COMPANY  
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166  
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e-mail: tilteco@aol.com

CA-0006719  
WALTER A. TILLIT Jr. P.E.  
FLORIDA Lic. # 44167

| <b>HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED &amp; INSULATED GLASS</b>   |             |          |         |             |      | W.H.<br>DRAWN BY   |             |      |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |
|--|-------------|----------|---------|-------------|------|--------------------|-------------|------|---------|-------------|------|---|------------|----------|---|---|---|---|---|---|---|---|---|----------------------|
| <p>290 WEST 78 ROAD<br/>HIALEAH, FL 33014<br/>PH: (954)226-5555/(305)558-8103<br/>FAX: (305)558-6665<br/>www.gigwindows.com</p>  |             |          |         |             |      | 09/12/2023<br>DATE |             |      |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> <tr> <td>1</td> <td>OLD 21-118</td> <td>09/12/23</td> <td>3</td> <td>-</td> <td>-</td> </tr> <tr> <td>2</td> <td>-</td> <td>-</td> <td>4</td> <td>-</td> <td>-</td> </tr> </table> |             |          |         |             |      | REV. No            | DESCRIPTION | DATE | REV. No | DESCRIPTION | DATE | 1 | OLD 21-118 | 09/12/23 | 3 | - | - | 2 | - | - | 4 | - | - | 23-213<br>DRAWING No |
| REV. No  | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |                    |             |      |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |
| 1  | OLD 21-118  | 09/12/23 | 3       | -           | -    |                    |             |      |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |
| 2  | -           | -        | 4       | -           | -    |                    |             |      |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |
|  |             |          |         |             |      | SHEET 10 OF 51     |             |      |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |

# MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR INTERIOR MULLION'S & JAMB MULLION'S HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 1

### FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

- A - 1/4"Ø DEWALT INC., ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. f<sub>c</sub> = 2.730 ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B - 3/8"Ø DEWALT INC., WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. f<sub>c</sub> = 3.0 ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C - 1/4"Ø DEWALT INC., ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HMB THRU BOLT W/ NUT & LOCK WASHER.

| MAXIMUM MULLION SPAN | EFFECTIVE SPACING<br>"L" (Ft-in) | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. LOAD BEARINGSHIM SPACE |      |       |       |       |       |                          |       |       |      |      |       |                              |       |      |       |                          |       |       |       |                                |       |       |      |
|----------------------|----------------------------------|---|------|-------|-------|-------|-------|--------------------------|-------|-------|------|------|-------|------------------------------|-------|------|-------|--------------------------|-------|-------|-------|--------------------------------|-------|-------|------|
|                      |                                  | POURED CONCRETE SUBSTRATE   |      |       |       |       |       |                          |       |       |      |      |       | WOOD (2) 2" x THK. SUBSTRATE |       |      |       |                          |       |       |       | STEEL 1/4" Min. THK. SUBSTRATE |       |       |      |
|                      |                                  | FASTENERS TYPE A (1/4"Ø)  |      |       |       |       |       | FASTENERS TYPE B (3/8"Ø) |       |       |      |      |       | FASTENERS TYPE C (1/4"Ø)     |       |      |       | FASTENERS TYPE D (3/8"Ø) |       |       |       | FASTENERS TYPE E (3/8"Ø)       |       |       |      |
|                      |                                  | n=4   | n=6  | n=8   | n=10  | n=12  | n=4   | n=6                      | n=8   | n=10  | n=12 | n=4  | n=6   | n=8                          | n=10  | n=12 | n=4   | n=6                      | n=8   | n=10  | n=12  | n=4                            | n=6   | n=8   | n=10 |
| 8' - 0" OR LESS      | 3' - 6"                          | 58.7  | 88.0 | 117.4 | 140.0 | 140.0 | 140.0 | 140.0                    | 140.0 | 140.0 | 58.7 | 88.0 | 117.4 | 140.0                        | 140.0 | 62.9 | 94.3  | 125.7                    | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 |      |
|                      | 4' - 0"                          | 51.4  | 77.0 | 102.7 | 128.4 | 140.0 | 140.0 | 140.0                    | 140.0 | 140.0 | 51.4 | 77.0 | 102.7 | 128.4                        | 140.0 | 55.0 | 82.5  | 110.0                    | 137.5 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 |      |
|                      | 4' - 6"                          | 45.7  | 68.5 | 91.3  | 114.1 | 137.0 | 135.1 | 140.0                    | 140.0 | 140.0 | 45.7 | 68.5 | 91.3  | 114.1                        | 137.0 | 48.9 | 73.3  | 97.8                     | 122.2 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 |      |
|                      | 5' - 0"                          | 41.1  | 61.6 | 82.2  | 102.7 | 123.3 | 121.6 | 140.0                    | 140.0 | 140.0 | 41.1 | 61.6 | 82.2  | 102.7                        | 123.3 | 44.0 | 66.0  | 88.0                     | 110.0 | 132.0 | 138.5 | 140.0                          | 140.0 | 140.0 |      |
|                      | 5' - 6"                          | 37.4  | 56.0 | 74.7  | 93.4  | 112.1 | 110.5 | 140.0                    | 140.0 | 140.0 | 37.4 | 56.0 | 74.7  | 93.4                         | 112.1 | 40.0 | 60.0  | 80.0                     | 100.0 | 120.0 | 125.9 | 140.0                          | 140.0 | 140.0 |      |
|                      | 6' - 0"                          | 34.2  | 51.4 | 68.5  | 85.6  | 102.7 | 101.3 | 140.0                    | 140.0 | 140.0 | 34.2 | 51.4 | 68.5  | 85.6                         | 102.7 | 36.7 | 55.0  | 73.3                     | 91.7  | 110.0 | 115.4 | 140.0                          | 140.0 | 140.0 |      |
|                      | 6' - 6"                          | 31.6  | 47.4 | 63.2  | 79.0  | 94.8  | 93.5  | 140.0                    | 140.0 | 140.0 | 31.6 | 47.4 | 63.2  | 79.0                         | 94.8  | 33.9 | 50.8  | 67.7                     | 84.6  | 101.6 | 106.5 | 140.0                          | 140.0 | 140.0 |      |
| 7' - 0"              | 29.3                             | 44.0  | 58.7 | 73.4  | 88.0  | 86.8  | 130.3 | 140.0                    | 140.0 | 29.3  | 44.0 | 58.7 | 73.4  | 88.0                         | 31.4  | 47.2 | 62.9  | 78.6                     | 94.3  | 98.9  | 140.0 | 140.0                          | 140.0 |       |      |
| 8' - 6"              | 3' - 6"                          | 55.2  | 82.9 | 110.5 | 138.1 | 140.0 | 140.0 | 140.0                    | 140.0 | 140.0 | 55.2 | 82.9 | 110.5 | 138.1                        | 140.0 | 59.2 | 88.8  | 118.3                    | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 |      |
|                      | 4' - 0"                          | 48.3  | 72.5 | 96.7  | 120.8 | 140.0 | 140.0 | 140.0                    | 140.0 | 48.3  | 72.5 | 96.7 | 120.8 | 140.0                        | 51.8  | 77.7 | 103.6 | 129.4                    | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 |       |      |
|                      | 4' - 6"                          | 43.0  | 64.5 | 85.9  | 107.4 | 128.9 | 127.1 | 140.0                    | 140.0 | 140.0 | 43.0 | 64.5 | 85.9  | 107.4                        | 128.9 | 46.0 | 69.0  | 92.0                     | 115.1 | 138.1 | 140.0 | 140.0                          | 140.0 | 140.0 |      |
|                      | 5' - 0"                          | 38.7  | 58.0 | 77.3  | 96.7  | 116.0 | 114.4 | 140.0                    | 140.0 | 140.0 | 38.7 | 58.0 | 77.3  | 96.7                         | 116.0 | 41.4 | 62.1  | 82.8                     | 103.6 | 124.3 | 130.3 | 140.0                          | 140.0 | 140.0 |      |
|                      | 5' - 6"                          | 35.2  | 52.7 | 70.3  | 87.9  | 105.5 | 104.0 | 140.0                    | 140.0 | 140.0 | 35.2 | 52.7 | 70.3  | 87.9                         | 105.5 | 37.7 | 56.5  | 75.3                     | 94.1  | 113.0 | 118.5 | 140.0                          | 140.0 | 140.0 |      |
|                      | 6' - 0"                          | 32.2  | 48.3 | 64.5  | 80.6  | 96.7  | 95.4  | 140.0                    | 140.0 | 140.0 | 32.2 | 48.3 | 64.5  | 80.6                         | 96.7  | 34.5 | 51.8  | 69.0                     | 86.3  | 103.6 | 108.6 | 140.0                          | 140.0 | 140.0 |      |
|                      | 6' - 6"                          | 29.7  | 44.6 | 59.5  | 74.4  | 89.2  | 88.0  | 132.0                    | 140.0 | 140.0 | 29.7 | 44.6 | 59.5  | 74.4                         | 89.2  | 31.9 | 47.8  | 63.7                     | 79.7  | 95.6  | 100.3 | 140.0                          | 140.0 | 140.0 |      |
| 7' - 0"              | 27.6                             | 41.4  | 55.2 | 69.1  | 82.9  | 81.7  | 122.6 | 140.0                    | 140.0 | 27.6  | 41.4 | 55.2 | 69.1  | 82.9                         | 29.6  | 44.4 | 59.2  | 74.0                     | 88.8  | 93.1  | 139.7 | 140.0                          | 140.0 |       |      |
| 9' - 0"              | 3' - 6"                          | 52.2  | 78.3 | 104.4 | 130.4 | 140.0 | 140.0 | 140.0                    | 140.0 | 140.0 | 52.2 | 78.3 | 104.4 | 130.4                        | 140.0 | 55.9 | 83.8  | 111.8                    | 139.7 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 |      |
|                      | 4' - 0"                          | 45.7  | 68.5 | 91.3  | 114.1 | 137.0 | 135.1 | 140.0                    | 140.0 | 140.0 | 45.7 | 68.5 | 91.3  | 114.1                        | 137.0 | 48.9 | 73.3  | 97.8                     | 122.2 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 |      |
|                      | 4' - 6"                          | 40.6  | 60.9 | 81.2  | 101.5 | 121.7 | 120.1 | 140.0                    | 140.0 | 140.0 | 40.6 | 60.9 | 81.2  | 101.5                        | 121.7 | 43.5 | 65.2  | 86.9                     | 108.7 | 130.4 | 136.8 | 140.0                          | 140.0 | 140.0 |      |
|                      | 5' - 0"                          | 36.5  | 54.8 | 73.0  | 91.3  | 109.6 | 108.1 | 140.0                    | 140.0 | 140.0 | 36.5 | 54.8 | 73.0  | 91.3                         | 109.6 | 39.1 | 58.7  | 78.2                     | 97.8  | 117.4 | 123.1 | 140.0                          | 140.0 | 140.0 |      |
|                      | 5' - 6"                          | 33.2  | 49.8 | 66.4  | 83.0  | 99.6  | 98.3  | 140.0                    | 140.0 | 140.0 | 33.2 | 49.8 | 66.4  | 83.0                         | 99.6  | 35.6 | 53.3  | 71.1                     | 88.9  | 106.7 | 111.9 | 140.0                          | 140.0 | 140.0 |      |
|                      | 6' - 0"                          | 30.4  | 45.7 | 60.9  | 76.1  | 91.3  | 90.1  | 135.1                    | 140.0 | 140.0 | 30.4 | 45.7 | 60.9  | 76.1                         | 91.3  | 32.6 | 48.9  | 65.2                     | 81.5  | 97.8  | 102.6 | 140.0                          | 140.0 | 140.0 |      |
|                      | 6' - 6"                          | 28.1  | 42.1 | 56.2  | 70.2  | 84.3  | 83.1  | 124.7                    | 140.0 | 140.0 | 28.1 | 42.1 | 56.2  | 70.2                         | 84.3  | 30.1 | 45.1  | 60.2                     | 75.2  | 90.3  | 94.7  | 140.0                          | 140.0 | 140.0 |      |
| 7' - 0"              | 26.1                             | 39.1  | 52.2 | 65.2  | 78.3  | 77.2  | 115.8 | 140.0                    | 140.0 | 26.1  | 39.1 | 52.2 | 65.2  | 78.3                         | 27.9  | 41.9 | 55.9  | 69.9                     | 83.8  | 87.9  | 131.9 | 140.0                          | 140.0 |       |      |
| 9' - 6"              | 3' - 6"                          | 49.4  | 74.1 | 98.9  | 123.6 | 140.0 | 140.0 | 140.0                    | 140.0 | 140.0 | 49.4 | 74.1 | 98.9  | 123.6                        | 140.0 | 52.9 | 79.4  | 105.9                    | 132.4 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 |      |
|                      | 4' - 0"                          | 43.3  | 64.9 | 86.5  | 108.1 | 129.8 | 128.0 | 140.0                    | 140.0 | 140.0 | 43.3 | 64.9 | 86.5  | 108.1                        | 129.8 | 46.3 | 69.5  | 92.7                     | 115.8 | 139.0 | 140.0 | 140.0                          | 140.0 | 140.0 |      |
|                      | 4' - 6"                          | 38.4  | 57.7 | 76.9  | 96.1  | 115.3 | 113.8 | 140.0                    | 140.0 | 140.0 | 38.4 | 57.7 | 76.9  | 96.1                         | 115.3 | 41.2 | 61.8  | 82.4                     | 102.9 | 123.5 | 129.6 | 140.0                          | 140.0 | 140.0 |      |
|                      | 5' - 0"                          | 34.6  | 51.9 | 69.2  | 86.5  | 103.8 | 102.4 | 140.0                    | 140.0 | 140.0 | 34.6 | 51.9 | 69.2  | 86.5                         | 103.8 | 37.1 | 55.6  | 74.1                     | 92.7  | 111.2 | 116.6 | 140.0                          | 140.0 | 140.0 |      |
|                      | 5' - 6"                          | 31.5  | 47.2 | 62.9  | 78.6  | 94.4  | 93.1  | 139.6                    | 140.0 | 140.0 | 31.5 | 47.2 | 62.9  | 78.6                         | 94.4  | 33.7 | 50.5  | 67.4                     | 84.2  | 101.1 | 106.0 | 140.0                          | 140.0 | 140.0 |      |
|                      | 6' - 0"                          | 28.8  | 43.3 | 57.7  | 72.1  | 86.5  | 85.3  | 128.0                    | 140.0 | 140.0 | 28.8 | 43.3 | 57.7  | 72.1                         | 86.5  | 30.9 | 46.3  | 61.8                     | 77.2  | 92.7  | 97.2  | 140.0                          | 140.0 | 140.0 |      |
|                      | 6' - 6"                          | 26.6  | 39.9 | 53.2  | 66.5  | 79.8  | 78.8  | 118.1                    | 140.0 | 140.0 | 26.6 | 39.9 | 53.2  | 66.5                         | 79.8  | 28.5 | 42.8  | 57.0                     | 71.3  | 85.5  | 89.7  | 134.6                          | 140.0 | 140.0 |      |
| 7' - 0"              | 24.7                             | 37.1  | 49.4 | 61.8  | 74.1  | 73.1  | 109.7 | 140.0                    | 140.0 | 24.7  | 37.1 | 49.4 | 61.8  | 74.1                         | 26.5  | 39.7 | 52.9  | 66.2                     | 79.4  | 83.3  | 125.0 | 140.0                          | 140.0 |       |      |
| 10' - 0"             | 3' - 6"                          | 47.0  | 70.4 | 93.9  | 117.4 | 140.0 | 139.0 | 140.0                    | 140.0 | 140.0 | 47.0 | 70.4 | 93.9  | 117.4                        | 140.0 | 50.3 | 75.4  | 100.6                    | 125.7 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 |      |
|                      | 4' - 0"                          | 41.1  | 61.6 | 82.2  | 102.7 | 123.3 | 121.6 | 140.0                    | 140.0 | 140.0 | 41.1 | 61.6 | 82.2  | 102.7                        | 123.3 | 44.0 | 66.0  | 88.0                     | 110.0 | 132.0 | 138.5 | 140.0                          | 140.0 | 140.0 |      |
|                      | 4' - 6"                          | 36.5  | 54.8 | 73.0  | 91.3  | 109.6 | 108.1 | 140.0                    | 140.0 | 140.0 | 36.5 | 54.8 | 73.0  | 91.3                         | 109.6 | 39.1 | 58.7  | 78.2                     | 97.8  | 117.4 | 123.1 | 140.0                          | 140.0 | 140.0 |      |
|                      | 5' - 0"                          | 32.9  | 49.3 | 65.7  | 82.2  | 98.6  | 97.3  | 140.0                    | 140.0 | 140.0 | 32.9 | 49.3 | 65.7  | 82.2                         | 98.6  | 35.2 | 52.8  | 70.4                     | 88.0  | 105.6 | 110.8 | 140.0                          | 140.0 | 140.0 |      |
|                      | 5' - 6"                          | 29.9  | 44.8 | 59.8  | 74.7  | 89.6  | 88.4  | 132.6                    | 140.0 | 140.0 | 29.9 | 44.8 | 59.8  | 74.7                         | 89.6  | 32.0 | 48.0  | 64.0                     | 80.0  | 96.0  | 100.7 | 140.0                          | 140.0 | 140.0 |      |
|                      | 6' - 0"                          | 27.4  | 41.1 | 54.8  | 68.5  | 82.2  | 81.1  | 121.6                    | 140.0 | 140.0 | 27.4 | 41.1 | 54.8  | 68.5                         | 82.2  | 29.3 | 44.0  | 58.7                     | 73.3  | 88.0  | 92.3  | 138.5                          | 140.0 | 140.0 |      |
|                      | 6' - 6"                          | 25.3  | 37.9 | 50.6  | 63.2  | 75.9  | 74.8  | 112.2                    | 140.0 | 140.0 | 25.3 | 37.9 | 50.6  | 63.2                         | 75.9  | 27.1 | 40.6  | 54.2                     | 67.7  | 81.2  | 85.2  | 127.8                          | 140.0 | 140.0 |      |
| 7' - 0"              | 23.5                             | 35.2  | 47.0 | 58.7  | 70.4  | 69.5  | 104.2 | 139.0                    | 140.0 | 23.5  | 35.2 | 47.0 | 58.7  | 70.4                         | 25.1  | 37.7 | 50.3  | 62.9                     | 75.4  | 79.1  | 118.7 | 140.0                          | 140.0 |       |      |
| 10' - 6"             | 3' - 6"                          | 44.7  | 67.1 | 89.4  | 111.8 | 134.2 | 132.3 | 140.0                    | 140.0 | 140.0 | 44.7 | 67.1 | 89.4  | 111.8                        | 134.2 | 47.9 | 71.9  | 95.8                     | 119.8 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 |      |
|                      | 4' - 0"                          | 39.1  | 58.7 | 78.3  | 97.8  | 117.4 | 115.8 | 140.0                    | 140.0 | 140.0 | 39.1 | 58.7 | 78.3  | 97.8                         | 117.4 | 41.9 | 62.9  | 83.8                     | 104.8 | 125.7 | 131.9 | 140.0                          | 140.0 | 140.0 |      |
|                      | 4' - 6"                          | 34.8  | 52.2 | 69.6  | 87.0  | 104.4 | 102.9 | 140.0                    | 140.0 | 140.0 | 34.8 | 52.2 | 69.6  | 87.0                         | 104.4 | 37.3 | 55.9  | 74.5                     | 93.1  | 111.8 | 117.2 | 140.0                          | 140.0 | 140.0 |      |
|                      | 5' - 0"                          | 31.3  | 47.0 | 62.6  | 78.3  | 93.9  | 92.6  | 139.0                    | 140.0 | 140.0 | 31.3 | 47.0 | 62.6  | 78.3                         | 93.9  | 33.5 | 50.3  | 67.1                     | 83.8  | 100.6 | 105.5 | 140.0                          | 140.0 | 140.0 |      |
|                      | 5' - 6"                          | 28.5  | 42.7 | 56.9  | 71.1  | 85.4  | 84.2  | 126.3                    | 140.0 | 140.0 | 28.5 | 42.7 | 56.9  | 71.1                         | 85.4  | 30.5 | 45.7  | 61.0                     | 76.2  | 91.4  | 95.9  | 140.0                          | 140.0 | 140.0 |      |
|                      | 6' - 0"                          | 26.1  | 39.1 | 52.2  | 65.2  | 78.3  | 77.2  | 115.8                    | 140.0 | 140.0 | 26.1 | 39.1 | 52.2  | 65.2                         | 78.3  | 27.9 | 41.9  | 55.9                     | 69.9  | 83.8  | 87.9  | 131.9                          | 140.0 | 140.0 |      |
|                      | 6' - 6"                          | 24.1  | 36.1 | 48.2  | 60.2  | 72.2  | 71.3  | 106.9                    | 140.0 | 140.0 | 24.1 | 36.1 | 48.2  | 60.2                         | 72.2  | 25.8 | 38.7  | 51.6                     | 64.5  | 77.4  | 81.2  | 121.7                          | 140.0 | 140.0 |      |
| 7' - 0"              | 22.4                             |   |      |       |       |       |       |                          |       |       |      |      |       |                              |       |      |       |                          |       |       |       |                                |       |       |      |

# MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR INTERIOR MULLION'S & JAMB MULLION'S HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 1

## FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

**A** - 1/4"Ø DEWALT INC., ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min.  $f_c = 2.730$  ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.

**B** - 3/8"Ø DEWALT INC., WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min.  $f_c = 3.0$  ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.

**C** - 1/4"Ø DEWALT INC., ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.

**D** - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.

**E** - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HBB THRU BOLT W/ NUT & LOCK WASHER.

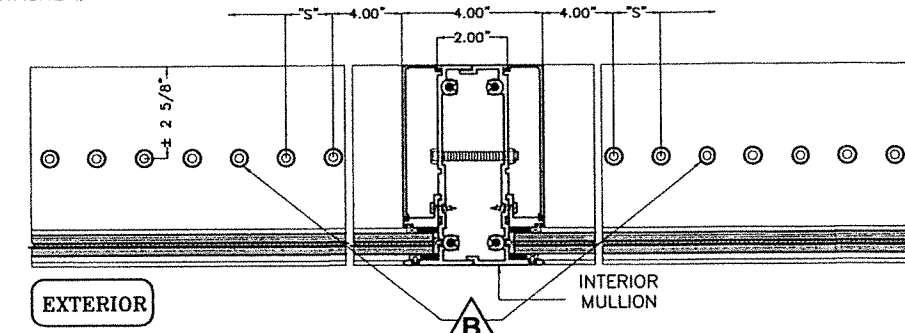
| MAXIMUM MULLION SPAN<br>"L" (Ft-in) | EFFECTIVE SPACING<br>"b" (Ft-in) | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. LOAD BEARING SHIM SPACE (CONTINUED) |      |      |       |       |       |                          |       |       |       |      |      |                              |       |       |      |                          |       |       |       |                          |       |       |       |       |
|-------------------------------------|----------------------------------|--|------|------|-------|-------|-------|--------------------------|-------|-------|-------|------|------|------------------------------|-------|-------|------|--------------------------|-------|-------|-------|--------------------------|-------|-------|-------|-------|
|                                     |                                  | POURED CONCRETE SUBSTRATE  |      |      |       |       |       |                          |       |       |       |      |      | WOOD (2) 2" x THK. SUBSTRATE |       |       |      |                          |       |       |       | STEEL 1/4" Min. THK.     |       |       |       |       |
|                                     |                                  | FASTENERS TYPE A (1/4"Ø)   |      |      |       |       |       | FASTENERS TYPE B (3/8"Ø) |       |       |       |      |      | FASTENERS TYPE C (1/4"Ø)     |       |       |      | FASTENERS TYPE D (3/8"Ø) |       |       |       | FASTENERS TYPE E (3/8"Ø) |       |       |       |       |
|                                     |                                  | n=4  | n=6  | n=8  | n=10  | n=12  | n=4   | n=6                      | n=8   | n=10  | n=12  | n=4  | n=6  | n=8                          | n=10  | n=12  | n=4  | n=6                      | n=8   | n=10  | n=12  | n=4                      | n=6   | n=8   | n=10  | n=12  |
| 11' - 6"                            | 3' - 6"                          | 40.8   | 61.2 | 81.7 | 102.1 | 122.5 | 120.8 | 140.0                    | 140.0 | 140.0 | 140.0 | 40.8 | 61.2 | 81.7                         | 102.1 | 122.5 | 43.7 | 65.6                     | 87.5  | 109.3 | 131.2 | 137.6                    | 140.0 | 140.0 | 140.0 | 140.0 |
|                                     | 4' - 0"                          | 35.7   | 53.6 | 71.5 | 89.3  | 107.2 | 105.7 | 140.0                    | 140.0 | 140.0 | 140.0 | 35.7 | 53.6 | 71.5                         | 89.3  | 107.2 | 38.3 | 57.4                     | 76.5  | 95.7  | 114.8 | 120.4                    | 140.0 | 140.0 | 140.0 | 140.0 |
|                                     | 4' - 6"                          | 31.8   | 47.6 | 63.5 | 79.4  | 95.3  | 94.0  | 140.0                    | 140.0 | 140.0 | 140.0 | 31.8 | 47.6 | 63.5                         | 79.4  | 95.3  | 34.0 | 51.0                     | 68.0  | 85.0  | 102.1 | 107.0                    | 140.0 | 140.0 | 140.0 | 140.0 |
|                                     | 5' - 0"                          | 28.6   | 42.9 | 57.2 | 71.5  | 85.7  | 84.6  | 126.9                    | 140.0 | 140.0 | 140.0 | 28.6 | 42.9 | 57.2                         | 71.5  | 85.7  | 30.6 | 45.9                     | 61.2  | 76.5  | 91.8  | 96.3                     | 140.0 | 140.0 | 140.0 | 140.0 |
|                                     | 5' - 6"                          | 26.0   | 39.0 | 52.0 | 65.0  | 78.0  | 76.9  | 115.3                    | 140.0 | 140.0 | 140.0 | 26.0 | 39.0 | 52.0                         | 65.0  | 78.0  | 27.8 | 41.7                     | 55.7  | 69.6  | 83.5  | 87.6                     | 131.4 | 140.0 | 140.0 | 140.0 |
|                                     | 6' - 0"                          | 23.8   | 35.7 | 47.6 | 59.5  | 71.5  | 70.5  | 105.7                    | 140.0 | 140.0 | 140.0 | 23.8 | 35.7 | 47.6                         | 59.5  | 71.5  | 25.5 | 38.3                     | 51.0  | 63.8  | 76.5  | 80.3                     | 120.4 | 140.0 | 140.0 | 140.0 |
|                                     | 6' - 6"                          | 22.0   | 33.0 | 44.0 | 55.0  | 66.0  | 65.1  | 97.6                     | 130.1 | 140.0 | 140.0 | 22.0 | 33.0 | 44.0                         | 55.0  | 66.0  | 23.6 | 35.3                     | 47.1  | 58.9  | 70.7  | 74.1                     | 111.2 | 140.0 | 140.0 | 140.0 |
| 7' - 0"                             | 20.4                             | 30.6   | 40.8 | 51.0 | 61.2  | 60.4  | 90.6  | 120.8                    | 140.0 | 140.0 | 20.4  | 30.6 | 40.8 | 51.0                         | 61.2  | 21.9  | 32.8 | 43.7                     | 54.7  | 65.6  | 68.8  | 103.2                    | 137.6 | 140.0 | 140.0 |       |
| 12' - 0"                            | 3' - 6"                          | 39.1   | 58.7 | 78.3 | 97.8  | 117.4 | 115.8 | 140.0                    | 140.0 | 140.0 | 39.1  | 58.7 | 78.3 | 97.8                         | 117.4 | 41.9  | 62.9 | 83.8                     | 104.8 | 125.7 | 131.9 | 140.0                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 4' - 0"                          | 34.2   | 51.4 | 68.5 | 85.6  | 102.7 | 101.3 | 140.0                    | 140.0 | 140.0 | 34.2  | 51.4 | 68.5 | 85.6                         | 102.7 | 36.7  | 55.0 | 73.3                     | 91.7  | 110.0 | 115.4 | 140.0                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 4' - 6"                          | 30.4   | 45.7 | 60.9 | 76.1  | 91.3  | 90.1  | 135.1                    | 140.0 | 140.0 | 30.4  | 45.7 | 60.9 | 76.1                         | 91.3  | 32.6  | 48.9 | 65.2                     | 81.5  | 97.8  | 102.6 | 140.0                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 5' - 0"                          | 27.4   | 41.1 | 54.8 | 68.5  | 82.2  | 81.1  | 121.6                    | 140.0 | 140.0 | 27.4  | 41.1 | 54.8 | 68.5                         | 82.2  | 29.3  | 44.0 | 58.7                     | 73.3  | 88.0  | 92.3  | 138.5                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 5' - 6"                          | 24.9   | 37.4 | 49.8 | 62.3  | 74.7  | 73.7  | 110.5                    | 140.0 | 140.0 | 24.9  | 37.4 | 49.8 | 62.3                         | 74.7  | 26.7  | 40.0 | 53.3                     | 66.7  | 80.0  | 83.9  | 125.9                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 6' - 0"                          | 22.8   | 34.2 | 45.7 | 57.1  | 68.5  | 67.5  | 101.3                    | 135.1 | 140.0 | 22.8  | 34.2 | 45.7 | 57.1                         | 68.5  | 24.4  | 36.7 | 48.9                     | 61.1  | 73.3  | 76.9  | 115.4                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 6' - 6"                          | 21.1   | 31.6 | 42.1 | 52.7  | 63.2  | 62.4  | 93.5                     | 124.7 | 140.0 | 21.1  | 31.6 | 42.1 | 52.7                         | 63.2  | 22.6  | 33.9 | 45.1                     | 56.4  | 67.7  | 71.0  | 106.5                    | 140.0 | 140.0 | 140.0 |       |
| 7' - 0"                             | 19.6                             | 29.3   | 39.1 | 48.9 | 58.7  | 57.9  | 86.8  | 115.8                    | 140.0 | 19.6  | 29.3  | 39.1 | 48.9 | 58.7                         | 21.0  | 31.4  | 41.9 | 52.4                     | 62.9  | 65.9  | 98.9  | 131.9                    | 140.0 | 140.0 |       |       |
| 12' - 6"                            | 3' - 6"                          | 37.6   | 56.3 | 75.1 | 93.9  | 112.7 | 111.2 | 140.0                    | 140.0 | 140.0 | 37.6  | 56.3 | 75.1 | 93.9                         | 112.7 | 40.2  | 60.4 | 80.5                     | 100.6 | 120.7 | 126.6 | 140.0                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 4' - 0"                          | 32.9   | 49.3 | 65.7 | 82.2  | 98.6  | 97.3  | 140.0                    | 140.0 | 140.0 | 32.9  | 49.3 | 65.7 | 82.2                         | 98.6  | 35.2  | 52.8 | 70.4                     | 88.0  | 105.6 | 110.8 | 140.0                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 4' - 6"                          | 29.2   | 43.8 | 58.4 | 73.0  | 87.7  | 86.5  | 129.7                    | 140.0 | 140.0 | 29.2  | 43.8 | 58.4 | 73.0                         | 87.7  | 31.3  | 46.9 | 62.6                     | 78.2  | 93.9  | 98.5  | 140.0                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 5' - 0"                          | 26.3   | 39.4 | 52.6 | 65.7  | 78.9  | 77.8  | 116.7                    | 140.0 | 140.0 | 26.3  | 39.4 | 52.6 | 65.7                         | 78.9  | 28.2  | 42.2 | 56.3                     | 70.4  | 84.5  | 88.6  | 132.9                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 5' - 6"                          | 23.9   | 35.9 | 47.8 | 59.8  | 71.7  | 70.7  | 106.1                    | 140.0 | 140.0 | 23.9  | 35.9 | 47.8 | 59.8                         | 71.7  | 25.6  | 38.4 | 51.2                     | 64.0  | 76.8  | 80.6  | 120.9                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 6' - 0"                          | 21.9   | 32.9 | 43.8 | 54.8  | 65.7  | 64.8  | 97.3                     | 129.7 | 140.0 | 21.9  | 32.9 | 43.8 | 54.8                         | 65.7  | 23.5  | 35.2 | 46.9                     | 58.7  | 70.4  | 73.9  | 110.8                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 6' - 6"                          | 20.2   | 30.3 | 40.5 | 50.6  | 60.7  | 59.9  | 89.8                     | 119.7 | 140.0 | 20.2  | 30.3 | 40.5 | 50.6                         | 60.7  | 21.7  | 32.5 | 43.3                     | 54.2  | 65.0  | 68.2  | 102.3                    | 136.4 | 140.0 | 140.0 |       |
| 7' - 0"                             | 18.1                             | 27.1   | 36.1 | 45.2 | 54.2  | 53.4  | 80.2  | 106.9                    | 133.6 | 140.0 | 18.1  | 27.1 | 36.1 | 45.2                         | 54.2  | 19.3  | 29.0 | 38.7                     | 48.4  | 58.0  | 60.9  | 91.3                     | 121.7 | 140.0 | 140.0 |       |
| 13' - 0"                            | 3' - 6"                          | 36.1   | 54.2 | 72.2 | 90.3  | 108.4 | 106.9 | 140.0                    | 140.0 | 140.0 | 36.1  | 54.2 | 72.2 | 90.3                         | 108.4 | 38.7  | 58.0 | 77.4                     | 96.7  | 116.1 | 121.7 | 140.0                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 4' - 0"                          | 31.6   | 47.4 | 63.2 | 79.0  | 94.8  | 93.5  | 140.0                    | 140.0 | 140.0 | 31.6  | 47.4 | 63.2 | 79.0                         | 94.8  | 33.9  | 50.8 | 67.7                     | 84.6  | 101.6 | 106.5 | 140.0                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 4' - 6"                          | 28.1   | 42.1 | 56.2 | 70.2  | 84.3  | 83.1  | 124.7                    | 140.0 | 140.0 | 28.1  | 42.1 | 56.2 | 70.2                         | 84.3  | 30.1  | 45.1 | 60.2                     | 75.2  | 90.3  | 94.7  | 140.0                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 5' - 0"                          | 25.3   | 37.9 | 50.6 | 63.2  | 75.9  | 74.8  | 112.2                    | 140.0 | 140.0 | 25.3  | 37.9 | 50.6 | 63.2                         | 75.9  | 27.1  | 40.6 | 54.2                     | 67.7  | 81.2  | 85.2  | 127.8                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 5' - 6"                          | 23.0   | 34.5 | 46.0 | 57.5  | 69.0  | 68.0  | 102.0                    | 136.0 | 140.0 | 23.0  | 34.5 | 46.0 | 57.5                         | 69.0  | 24.6  | 36.9 | 49.2                     | 61.6  | 73.9  | 77.5  | 116.2                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 6' - 0"                          | 21.1   | 31.6 | 42.1 | 52.7  | 63.2  | 62.4  | 93.5                     | 124.7 | 140.0 | 21.1  | 31.6 | 42.1 | 52.7                         | 63.2  | 22.6  | 33.9 | 45.1                     | 56.4  | 67.7  | 71.0  | 106.5                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 6' - 6"                          | 18.7   | 28.1 | 37.5 | 46.8  | 56.2  | 55.4  | 83.1                     | 110.8 | 138.6 | 140.0 | 18.7 | 28.1 | 37.5                         | 46.8  | 56.2  | 20.1 | 30.1                     | 40.1  | 50.2  | 60.2  | 63.1                     | 94.7  | 126.3 | 140.0 | 140.0 |
| 7' - 0"                             | 17.4                             | 26.1   | 34.8 | 43.5 | 52.2  | 51.5  | 77.2  | 102.9                    | 128.7 | 140.0 | 17.4  | 26.1 | 34.8 | 43.5                         | 52.2  | 18.6  | 27.9 | 37.3                     | 46.6  | 55.9  | 58.6  | 87.9                     | 117.2 | 140.0 | 140.0 |       |
| 13' - 6"                            | 3' - 6"                          | 34.8   | 52.2 | 69.6 | 87.0  | 104.4 | 102.9 | 140.0                    | 140.0 | 140.0 | 34.8  | 52.2 | 69.6 | 87.0                         | 104.4 | 37.3  | 55.9 | 74.5                     | 93.1  | 111.8 | 117.2 | 140.0                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 4' - 0"                          | 30.4   | 45.7 | 60.9 | 76.1  | 91.3  | 90.1  | 135.1                    | 140.0 | 140.0 | 30.4  | 45.7 | 60.9 | 76.1                         | 91.3  | 32.6  | 48.9 | 65.2                     | 81.5  | 97.8  | 102.6 | 140.0                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 4' - 6"                          | 27.1   | 40.6 | 54.1 | 67.6  | 81.2  | 80.1  | 120.1                    | 140.0 | 140.0 | 27.1  | 40.6 | 54.1 | 67.6                         | 81.2  | 29.0  | 43.5 | 58.0                     | 72.4  | 86.9  | 91.2  | 136.8                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 5' - 0"                          | 24.3   | 36.5 | 48.7 | 60.9  | 73.0  | 72.1  | 108.1                    | 140.0 | 140.0 | 24.3  | 36.5 | 48.7 | 60.9                         | 73.0  | 26.1  | 39.1 | 52.2                     | 65.2  | 78.2  | 82.1  | 123.1                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 5' - 6"                          | 22.1   | 33.2 | 44.3 | 55.3  | 66.4  | 65.5  | 98.3                     | 131.0 | 140.0 | 22.1  | 33.2 | 44.3 | 55.3                         | 66.4  | 23.7  | 35.6 | 47.4                     | 59.3  | 71.1  | 74.6  | 111.9                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 6' - 0"                          | 18.9   | 28.3 | 37.8 | 47.2  | 56.7  | 55.9  | 83.9                     | 111.8 | 139.8 | 140.0 | 18.9 | 28.3 | 37.8                         | 47.2  | 56.7  | 20.2 | 30.4                     | 40.5  | 50.6  | 60.7  | 63.7                     | 95.5  | 127.3 | 140.0 | 140.0 |
|                                     | 6' - 6"                          | 17.4   | 26.2 | 34.9 | 43.6  | 52.3  | 51.6  | 77.4                     | 103.2 | 129.0 | 140.0 | 17.4 | 26.2 | 34.9                         | 43.6  | 52.3  | 18.7 | 28.0                     | 37.4  | 46.7  | 56.0  | 58.8                     | 88.2  | 117.6 | 140.0 | 140.0 |
| 7' - 0"                             | 16.2                             | 24.3   | 32.4 | 40.5 | 48.6  | 47.9  | 71.9  | 95.8                     | 119.8 | 140.0 | 16.2  | 24.3 | 32.4 | 40.5                         | 48.6  | 17.3  | 26.0 | 34.7                     | 43.4  | 52.0  | 54.6  | 81.9                     | 109.2 | 136.4 | 140.0 |       |
| 14' - 6"                            | 3' - 6"                          | 32.4   | 48.6 | 64.8 | 81.0  | 97.2  | 95.8  | 140.0                    | 140.0 | 140.0 | 32.4  | 48.6 | 64.8 | 81.0                         | 97.2  | 34.7  | 52.0 | 69.4                     | 86.7  | 104.1 | 109.2 | 140.0                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 4' - 0"                          | 28.3   | 42.5 | 56.7 | 70.8  | 85.0  | 83.9  | 125.8                    | 140.0 | 140.0 | 28.3  | 42.5 | 56.7 | 70.8                         | 85.0  | 30.4  | 45.5 | 60.7                     | 75.9  | 91.1  | 95.5  | 140.0                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 4' - 6"                          | 25.2   | 37.8 | 50.4 | 63.0  | 75.6  | 74.5  | 111.8                    | 140.0 | 140.0 | 25.2  | 37.8 | 50.4 | 63.0                         | 75.6  | 27.0  | 40.5 | 54.0                     | 67.4  | 80.9  | 84.9  | 127.3                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 5' - 0"                          | 22.7   | 34.0 | 45.3 | 56.7  | 68.0  | 67.1  | 100.6                    | 134.2 | 140.0 | 22.7  | 34.0 | 45.3 | 56.7                         | 68.0  | 24.3  | 36.4 | 48.6                     | 60.7  | 72.8  | 76.4  | 114.6                    | 140.0 | 140.0 | 140.0 |       |
|                                     | 5' - 6"                          | 19.9   | 29.9 | 39.8 | 49.8  | 59.8  | 59.0  | 88.4                     | 117.9 | 140.0 | 19.9  | 29.9 | 39.8 | 49.8                         | 59.8  | 21.3  |      |                          |       |       |       |                          |       |       |       |       |

# MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR INTERIOR MULLION'S & JAMB MULLION'S HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 1

## FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

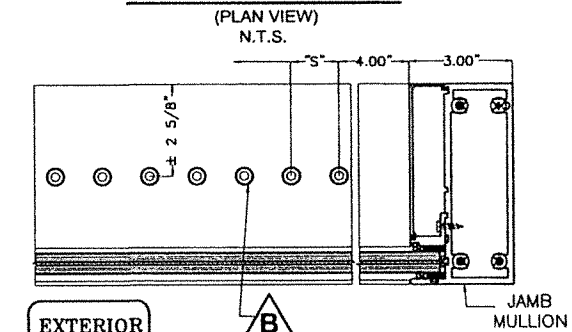
- A** - 1/4"Ø DEWALT INC., ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. f<sub>c</sub> = 2,730 ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B** - 3/8"Ø DEWALT INC., WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. f<sub>c</sub> = 3,0 ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C** - 1/4"Ø DEWALT INC., ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D** - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E** - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HHB THRU BOLT W/ NUT & LOCK WASHER.

| MAXIMUM MULLION SPAN | EFFECTIVE SPACING | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. LOAD BEARING SHIM SPACE (CONTINUED) |      |      |      |                          |      |       |       |                          |       |      |      |                              |      |      |      |                          |      |      |       |                      |       |       |       |
|----------------------|-------------------|--|------|------|------|--------------------------|------|-------|-------|--------------------------|-------|------|------|------------------------------|------|------|------|--------------------------|------|------|-------|----------------------|-------|-------|-------|
|                      |                   | POURED CONCRETE SUBSTRATE  |      |      |      |                          |      |       |       |                          |       |      |      | WOOD (2) 2" x THK. SUBSTRATE |      |      |      |                          |      |      |       | STEEL 1/4" Min. THK. |       |       |       |
|                      |                   | FASTENERS TYPE A (1/4"Ø)   |      |      |      | FASTENERS TYPE B (3/8"Ø) |      |       |       | FASTENERS TYPE C (1/4"Ø) |       |      |      | FASTENERS TYPE D (3/8"Ø)     |      |      |      | FASTENERS TYPE E (3/8"Ø) |      |      |       |                      |       |       |       |
|                      |                   | n=4  | n=6  | n=8  | n=10 | n=12                     | n=4  | n=6   | n=8   | n=10                     | n=12  | n=4  | n=6  | n=8                          | n=10 | n=12 | n=4  | n=6                      | n=8  | n=10 | n=12  | n=4                  | n=6   | n=8   | n=10  |
| 15' - 0"             | 3' - 6"           | 31.3   | 47.0 | 62.6 | 78.3 | 93.9                     | 92.6 | 139.0 | 140.0 | 140.0                    | 140.0 | 31.3 | 47.0 | 62.6                         | 78.3 | 93.9 | 33.5 | 50.3                     | 67.1 | 83.8 | 100.6 | 105.5                | 140.0 | 140.0 | 140.0 |
|                      | 4' - 0"           | 27.4   | 41.1 | 54.8 | 68.5 | 82.2                     | 81.1 | 121.6 | 140.0 | 140.0                    | 140.0 | 27.4 | 41.1 | 54.8                         | 68.5 | 82.2 | 29.3 | 44.0                     | 58.7 | 73.3 | 88.0  | 92.3                 | 138.5 | 140.0 | 140.0 |
|                      | 4' - 6"           | 24.3   | 36.5 | 48.7 | 60.9 | 73.0                     | 72.1 | 108.1 | 140.0 | 140.0                    | 140.0 | 24.3 | 36.5 | 48.7                         | 60.9 | 73.0 | 26.1 | 39.1                     | 52.2 | 65.2 | 78.2  | 82.1                 | 123.1 | 140.0 | 140.0 |
|                      | 5' - 0"           | 21.2   | 31.8 | 42.4 | 53.0 | 63.6                     | 62.8 | 94.1  | 125.5 | 140.0                    | 140.0 | 21.2 | 31.8 | 42.4                         | 53.0 | 63.6 | 22.7 | 34.1                     | 45.4 | 56.8 | 68.1  | 71.5                 | 107.2 | 140.0 | 140.0 |
|                      | 5' - 6"           | 19.3   | 28.9 | 38.6 | 48.2 | 57.8                     | 57.0 | 85.6  | 114.1 | 140.0                    | 140.0 | 19.3 | 28.9 | 38.6                         | 48.2 | 57.8 | 20.6 | 31.0                     | 41.3 | 51.6 | 61.9  | 65.0                 | 97.5  | 130.0 | 140.0 |
|                      | 6' - 0"           | 17.7   | 26.5 | 35.3 | 44.2 | 53.0                     | 52.3 | 78.4  | 104.6 | 130.7                    | 140.0 | 17.7 | 26.5 | 35.3                         | 44.2 | 53.0 | 18.9 | 28.4                     | 37.9 | 47.3 | 56.8  | 59.6                 | 89.3  | 119.1 | 140.0 |
|                      | 6' - 6"           | 16.3   | 24.5 | 32.6 | 40.8 | 48.9                     | 48.3 | 72.4  | 96.5  | 120.7                    | 140.0 | 16.3 | 24.5 | 32.6                         | 40.8 | 48.9 | 17.5 | 26.2                     | 34.9 | 43.7 | 52.4  | 55.0                 | 82.5  | 110.0 | 137.5 |
| 7' - 0"              | 15.1              | 22.7   | 30.3 | 37.9 | 45.4 | 44.8                     | 67.2 | 89.6  | 112.1 | 134.5                    | 15.1  | 22.7 | 30.3 | 37.9                         | 45.4 | 16.2 | 24.3 | 32.4                     | 40.6 | 48.7 | 51.1  | 76.6                 | 102.1 | 127.6 |       |
| 15' - 6"             | 3' - 6"           | 30.3   | 45.4 | 60.6 | 75.7 | 90.9                     | 89.6 | 134.5 | 140.0 | 140.0                    | 140.0 | 30.3 | 45.4 | 60.6                         | 75.7 | 90.9 | 32.4 | 48.7                     | 64.9 | 81.1 | 97.3  | 102.1                | 140.0 | 140.0 | 140.0 |
|                      | 4' - 0"           | 26.5   | 39.8 | 53.0 | 66.3 | 79.5                     | 78.4 | 117.7 | 140.0 | 140.0                    | 140.0 | 26.5 | 39.8 | 53.0                         | 66.3 | 79.5 | 28.4 | 42.6                     | 56.8 | 71.0 | 85.2  | 89.3                 | 134.0 | 140.0 | 140.0 |
|                      | 4' - 6"           | 23.2   | 34.8 | 46.4 | 58.0 | 69.6                     | 68.6 | 102.9 | 137.2 | 140.0                    | 140.0 | 23.2 | 34.8 | 46.4                         | 58.0 | 69.6 | 24.8 | 37.3                     | 49.7 | 62.1 | 74.5  | 78.2                 | 117.2 | 140.0 | 140.0 |
|                      | 5' - 0"           | 20.9   | 31.3 | 41.7 | 52.2 | 62.6                     | 61.8 | 92.6  | 123.5 | 140.0                    | 140.0 | 20.9 | 31.3 | 41.7                         | 52.2 | 62.6 | 22.4 | 33.5                     | 44.7 | 55.9 | 67.1  | 70.3                 | 105.5 | 140.0 | 140.0 |
|                      | 5' - 6"           | 19.0   | 28.5 | 37.9 | 47.4 | 56.9                     | 56.1 | 84.2  | 112.3 | 140.0                    | 140.0 | 19.0 | 28.5 | 37.9                         | 47.4 | 56.9 | 20.3 | 30.5                     | 40.6 | 50.8 | 61.0  | 63.9                 | 95.9  | 127.9 | 140.0 |
|                      | 6' - 0"           | 17.4   | 26.1 | 34.8 | 43.5 | 52.2                     | 51.5 | 77.2  | 102.9 | 128.7                    | 140.0 | 17.4 | 26.1 | 34.8                         | 43.5 | 52.2 | 18.6 | 27.9                     | 37.3 | 46.6 | 55.9  | 58.6                 | 87.9  | 117.2 | 140.0 |
|                      | 6' - 6"           | 16.1   | 24.1 | 32.1 | 40.1 | 48.2                     | 47.5 | 71.3  | 95.0  | 118.8                    | 140.0 | 16.1 | 24.1 | 32.1                         | 40.1 | 48.2 | 17.2 | 25.8                     | 34.4 | 43.0 | 51.6  | 54.1                 | 81.2  | 108.2 | 135.3 |
| 7' - 0"              | 14.9              | 22.4   | 29.8 | 37.3 | 44.7 | 44.1                     | 66.2 | 88.2  | 110.3 | 132.3                    | 14.9  | 22.4 | 29.8 | 37.3                         | 44.7 | 16.0 | 24.0 | 31.9                     | 39.9 | 47.9 | 50.2  | 75.4                 | 100.5 | 125.6 |       |
| 15' - 9"             | 3' - 6"           | 29.8   | 44.7 | 59.6 | 74.5 | 89.4                     | 88.2 | 132.3 | 140.0 | 140.0                    | 140.0 | 29.8 | 44.7 | 59.6                         | 74.5 | 89.4 | 31.9 | 47.9                     | 63.9 | 79.8 | 95.8  | 100.5                | 140.0 | 140.0 | 140.0 |
|                      | 4' - 0"           | 26.1   | 39.1 | 52.2 | 65.2 | 78.3                     | 77.2 | 115.8 | 140.0 | 140.0                    | 140.0 | 26.1 | 39.1 | 52.2                         | 65.2 | 78.3 | 27.9 | 41.9                     | 55.9 | 69.9 | 83.8  | 87.9                 | 131.9 | 140.0 | 140.0 |
|                      | 4' - 6"           | 23.2   | 34.8 | 46.4 | 58.0 | 69.6                     | 68.6 | 102.9 | 137.2 | 140.0                    | 140.0 | 23.2 | 34.8 | 46.4                         | 58.0 | 69.6 | 24.8 | 37.3                     | 49.7 | 62.1 | 74.5  | 78.2                 | 117.2 | 140.0 | 140.0 |
|                      | 5' - 0"           | 20.9   | 31.3 | 41.7 | 52.2 | 62.6                     | 61.8 | 92.6  | 123.5 | 140.0                    | 140.0 | 20.9 | 31.3 | 41.7                         | 52.2 | 62.6 | 22.4 | 33.5                     | 44.7 | 55.9 | 67.1  | 70.3                 | 105.5 | 140.0 | 140.0 |
|                      | 5' - 6"           | 19.0   | 28.5 | 37.9 | 47.4 | 56.9                     | 56.1 | 84.2  | 112.3 | 140.0                    | 140.0 | 19.0 | 28.5 | 37.9                         | 47.4 | 56.9 | 20.3 | 30.5                     | 40.6 | 50.8 | 61.0  | 63.9                 | 95.9  | 127.9 | 140.0 |
|                      | 6' - 0"           | 17.4   | 26.1 | 34.8 | 43.5 | 52.2                     | 51.5 | 77.2  | 102.9 | 128.7                    | 140.0 | 17.4 | 26.1 | 34.8                         | 43.5 | 52.2 | 18.6 | 27.9                     | 37.3 | 46.6 | 55.9  | 58.6                 | 87.9  | 117.2 | 140.0 |
|                      | 6' - 6"           | 16.1   | 24.1 | 32.1 | 40.1 | 48.2                     | 47.5 | 71.3  | 95.0  | 118.8                    | 140.0 | 16.1 | 24.1 | 32.1                         | 40.1 | 48.2 | 17.2 | 25.8                     | 34.4 | 43.0 | 51.6  | 54.1                 | 81.2  | 108.2 | 135.3 |
| 7' - 0"              | 14.9              | 22.4   | 29.8 | 37.3 | 44.7 | 44.1                     | 66.2 | 88.2  | 110.3 | 132.3                    | 14.9  | 22.4 | 29.8 | 37.3                         | 44.7 | 16.0 | 24.0 | 31.9                     | 39.9 | 47.9 | 50.2  | 75.4                 | 100.5 | 125.6 |       |



"n" FASTENERS  
n = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, EQUALLY INSTALLED AT EACH SIDE OF INTERIOR MULLION

### SILL OR HEAD CONNECTION DETAIL @ INTERIOR MULLION



"n/2" FASTENERS  
n/2 = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, INSTALLED AT ONE SIDE OF JAMB MULLION

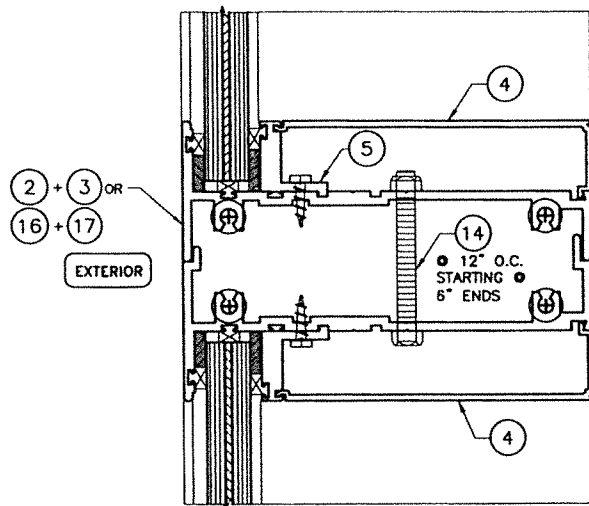
### SILL OR HEAD CONNECTION DETAIL @ JAMB MULLION

WALTER A. TILLIT JR.  
LICENSE  
No. 44167  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
12/19/2023  
P.E. SEAL/SIGNATURE/DATE

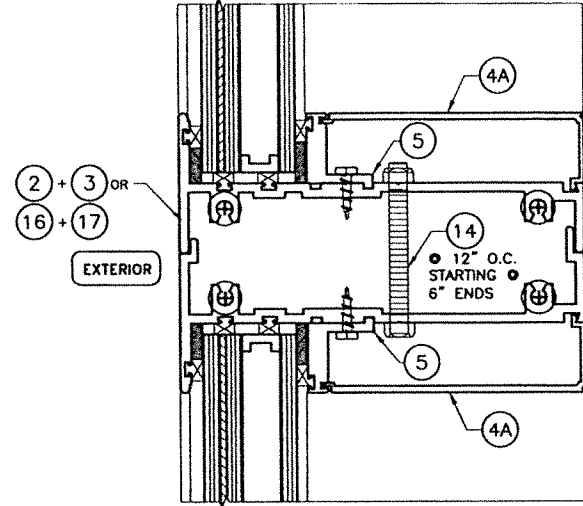
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**TILTECO INC.**  
TILLIT TESTING & ENGINEERING COMPANY  
6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33166  
Phone : (305)871-1530 . Fax : (305)871-1531  
e-mail: tilteco@aol.com  
CA-0006719  
WALTER A. TILLIT Jr. P.E.  
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| <b>HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED &amp; INSULATED GLASS</b>                                   |  | W.H. DRAWN BY        |
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| REV. No    DESCRIPTION    DATE    REV. No    DESCRIPTION    DATE<br>1    OLD 21-118    09/12/23    3    -    -<br>2    -    -    4    -    - |  | 23-213<br>DRAWING No |
|  |  | SHEET 13 OF 51       |

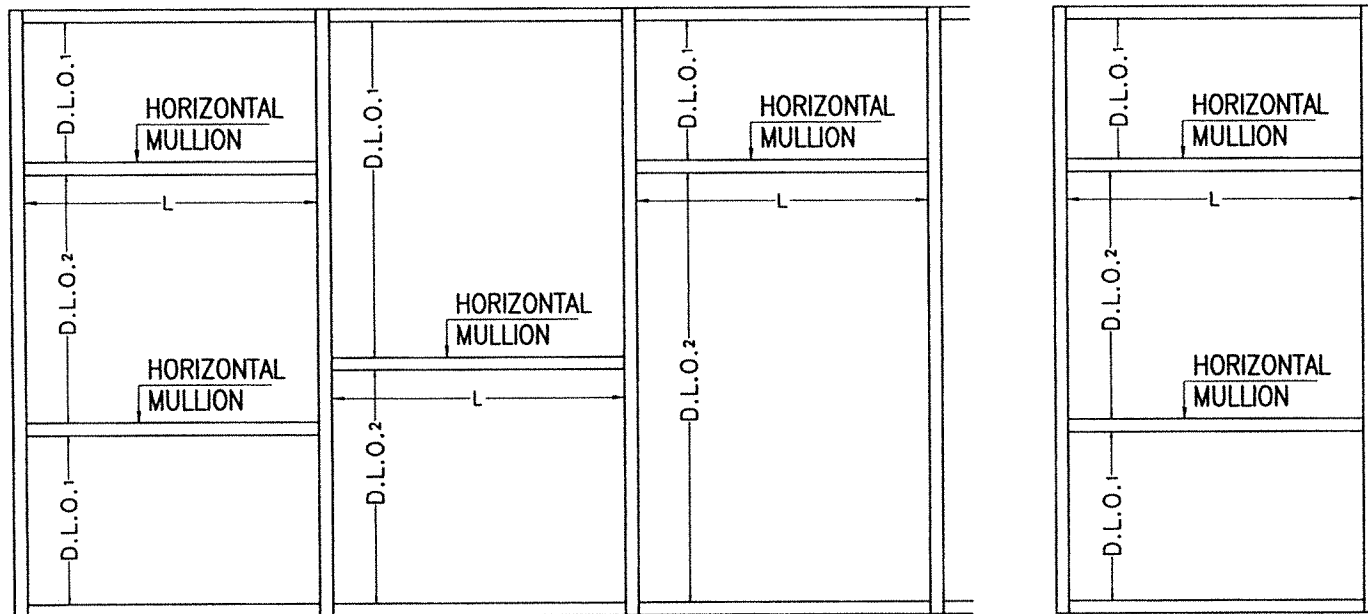


LAMINATED GLASS CASE



INSULATED GLASS CASE

**SECTION AT HORIZONTAL MULLIONS: OPTIONAL SYSTEM # 1**



MULTIPLE PANELS

SINGLE PANEL

**ELEVATIONS W/ HORIZONTAL MULLIONS: OPTIONAL SYSTEM # 1**

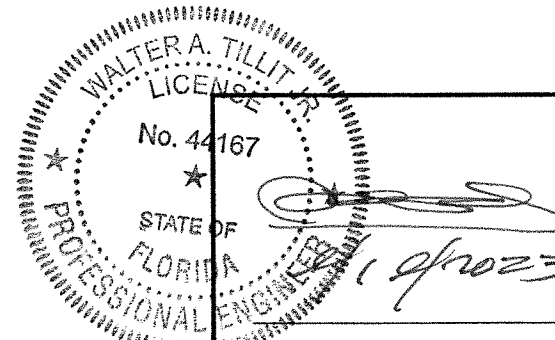
"L" = MAXIMUM HORIZONTAL MULLION SPAN

"D.L.O." = HORIZONTAL MULLION MAX. EFFECTIVE DAY LIGHT OPENING =  $\frac{D.L.O.1 + D.L.O.2}{2}$

| MAXIMUM HORIZONTAL MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) |  |  |
|--|--|--|
| MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)  | MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in) | MAXIMUM 1/8" & 3/16" THICK HORIZONTAL MULLION SPAN |
|  |  | LAMINATED/INSULATED GLASS "L" (Ft)                 |
| ± 40.0   | 2' - 0"  | 7' - 0"  |
|  | 2' - 6"  | 7' - 0"  |
|  | 3' - 0"  | 7' - 0"  |
|  | 3' - 6"  | 7' - 0"  |
|  | 4' - 0"  | 7' - 0"  |
|  | 4' - 6"  | 7' - 0"  |
|  | 5' - 0"  | 7' - 0"  |
|  | 5' - 6"  | 7' - 0"  |
| ± 45.0   | 2' - 0"  | 7' - 0"  |
|  | 2' - 6"  | 7' - 0"  |
|  | 3' - 0"  | 7' - 0"  |
|  | 3' - 6"  | 7' - 0"  |
|  | 4' - 0"  | 7' - 0"  |
|  | 4' - 6"  | 7' - 0"  |
|  | 5' - 0"  | 7' - 0"  |
|  | 5' - 6"  | 7' - 0"  |
| ± 50.0   | 2' - 0"  | 7' - 0"  |
|  | 2' - 6"  | 7' - 0"  |
|  | 3' - 0"  | 7' - 0"  |
|  | 3' - 6"  | 7' - 0"  |
|  | 4' - 0"  | 7' - 0"  |
|  | 4' - 6"  | 7' - 0"  |
|  | 5' - 0"  | 7' - 0"  |
|  | 5' - 6"  | 7' - 0"  |
| ± 55.0   | 2' - 0"  | 7' - 0"  |
|  | 2' - 6"  | 7' - 0"  |
|  | 3' - 0"  | 7' - 0"  |
|  | 3' - 6"  | 7' - 0"  |
|  | 4' - 0"  | 7' - 0"  |
|  | 4' - 6"  | 7' - 0"  |
|  | 5' - 0"  | 7' - 0"  |
|  | 5' - 6"  | 7' - 0"  |

| MAXIMUM HORIZONTAL MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) (CONTINUED) |  |  |
|--|--|--|
| MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)  | MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in) | MAXIMUM 1/8" & 3/16" THICK HORIZONTAL MULLION SPAN |
|  |  | LAMINATED/INSULATED GLASS "L" (Ft)                 |
| ± 60.0   | 2' - 0"  | 7' - 0"  |
|  | 2' - 6"  | 7' - 0"  |
|  | 3' - 0"  | 7' - 0"  |
|  | 3' - 6"  | 7' - 0"  |
|  | 4' - 0"  | 7' - 0"  |
|  | 4' - 6"  | 7' - 0"  |
|  | 5' - 0"  | 7' - 0"  |
|  | 5' - 6"  | 7' - 0"  |
| ± 65.0   | 2' - 0"  | 7' - 0"  |
|  | 2' - 6"  | 7' - 0"  |
|  | 3' - 0"  | 7' - 0"  |
|  | 3' - 6"  | 7' - 0"  |
|  | 4' - 0"  | 7' - 0"  |
|  | 4' - 6"  | 7' - 0"  |
|  | 5' - 0"  | 7' - 0"  |
|  | 5' - 6"  | 7' - 0"  |
| ± 70.0   | 2' - 0"  | 7' - 0"  |
|  | 2' - 6"  | 7' - 0"  |
|  | 3' - 0"  | 7' - 0"  |
|  | 3' - 6"  | 7' - 0"  |
|  | 4' - 0"  | 7' - 0"  |
|  | 4' - 6"  | 7' - 0"  |
|  | 5' - 0"  | 7' - 0"  |
|  | 5' - 6"  | 7' - 0"  |
| ± 75.0   | 2' - 0"  | 7' - 0"  |
|  | 2' - 6"  | 7' - 0"  |
|  | 3' - 0"  | 7' - 0"  |
|  | 3' - 6"  | 7' - 0"  |
|  | 4' - 0"  | 7' - 0"  |
|  | 4' - 6"  | 7' - 0"  |
|  | 5' - 0"  | 7' - 0"  |
|  | 5' - 6"  | 7' - 0"  |

| MAXIMUM HORIZONTAL MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) (CONTINUED) |  |  |
|--|--|--|
| MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf)  | MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in) | MAXIMUM 1/8" & 3/16" THICK HORIZONTAL MULLION SPAN |
|  |  | LAMINATED/INSULATED GLASS "L" (Ft)                 |
| ± 80.0   | 2' - 0"  | 7' - 0"  |
|  | 2' - 6"  | 7' - 0"  |
|  | 3' - 0"  | 7' - 0"  |
|  | 3' - 6"  | 7' - 0"  |
|  | 4' - 0"  | 7' - 0"  |
|  | 4' - 6"  | 7' - 0"  |
|  | 5' - 0"  | 7' - 0"  |
|  | 5' - 6"  | 7' - 0"  |
| ± 85.0   | 2' - 0"  | 7' - 0"  |
|  | 2' - 6"  | 7' - 0"  |
|  | 3' - 0"  | 7' - 0"  |
|  | 3' - 6"  | 7' - 0"  |
|  | 4' - 0"  | 7' - 0"  |
|  | 4' - 6"  | 7' - 0"  |
|  | 5' - 0"  | 7' - 0"  |
|  | 5' - 6"  | 7' - 0"  |
| ± 90.0   | 2' - 0"  | 7' - 0"  |
|  | 2' - 6"  | 7' - 0"  |
|  | 3' - 0"  | 7' - 0"  |
|  | 3' - 6"  | 7' - 0"  |
|  | 4' - 0"  | 7' - 0"  |
|  | 4' - 6"  | 7' - 0"  |
|  | 5' - 0"  | 7' - 0"  |
|  | 5' - 6"  | 7' - 0"  |
| ± 95.0   | 2' - 0"  | 7' - 0"  |
|  | 2' - 6"  | 7' - 0"  |
|  | 3' - 0"  | 7' - 0"  |
|  | 3' - 6"  | 7' - 0"  |
|  | 4' - 0"  | 7' - 0"  |
|  | 4' - 6"  | 7' - 0"  |
|  | 5' - 0"  | 7' - 0"  |
|  | 5' - 6"  | 7' - 0"  |



P.E. SEAL/SIGNATURE/DATE

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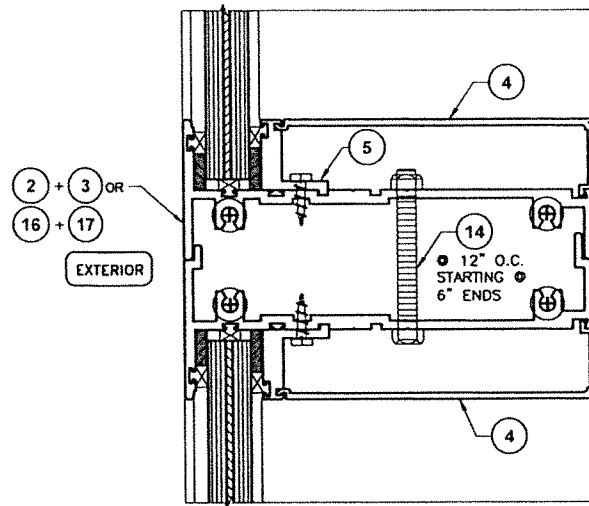
W.H.  
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09/12/2023  
DATE

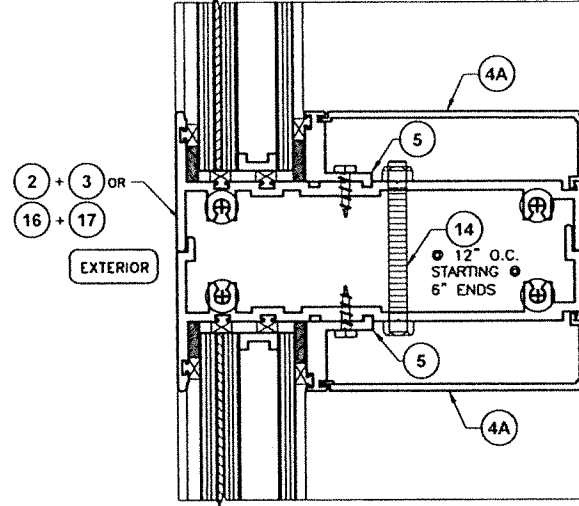
23-213  
DRAWING No

| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
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| 2       | -           | -        | 4       | -           | -    |

SHEET 14 OF 51

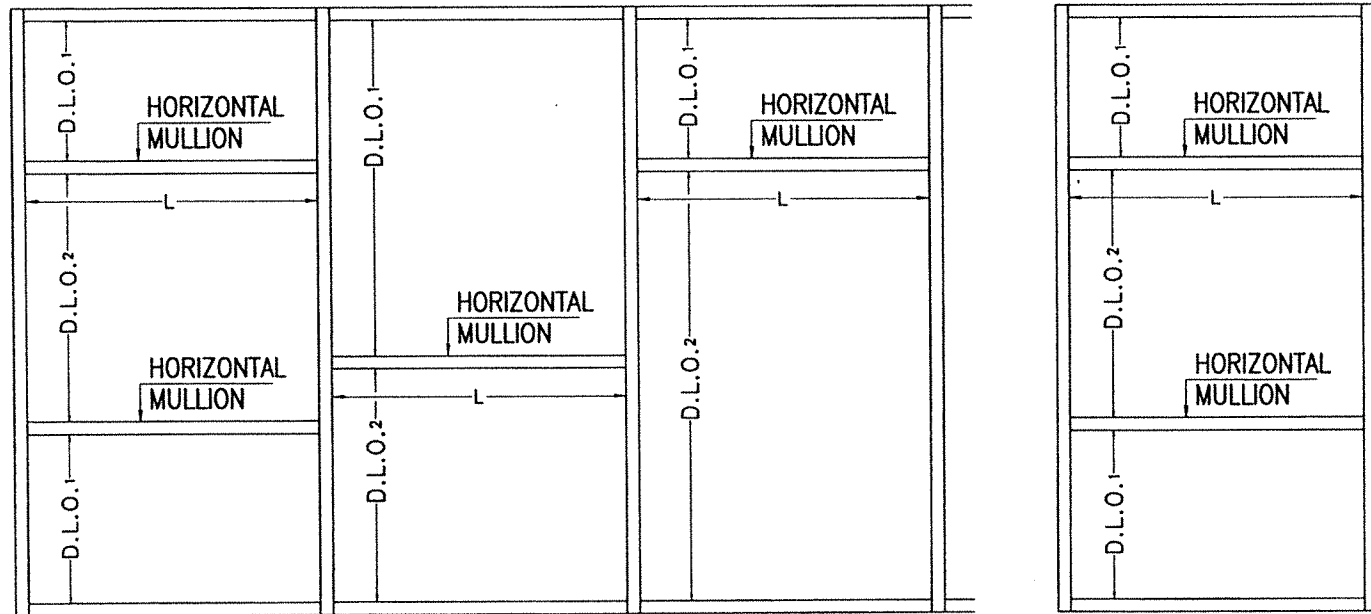


LAMINATED GLASS CASE



INSULATED GLASS CASE

**SECTION AT HORIZONTAL MULLIONS: OPTIONAL SYSTEM # 1**



MULTIPLE PANELS

SINGLE PANEL

**ELEVATIONS W/ HORIZONTAL MULLIONS: OPTIONAL SYSTEM # 1**

"L" = MAXIMUM HORIZONTAL MULLION SPAN

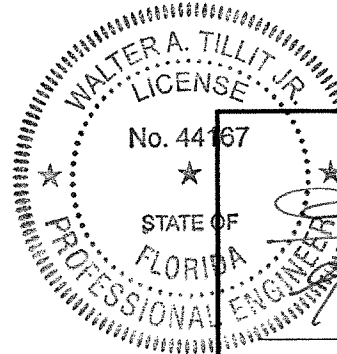
"D.L.O." = HORIZONTAL MULLION EFFECTIVE DAY LIGHT OPENING =  $\frac{D.L.O.1 + D.L.O.2}{2}$

MAXIMUM HORIZONTAL SPAN "L"(FT)  
SCHEDULE FOR A GIVEN HORIZONTAL MULLION  
EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D.  
DESIGN PRESSURE RATING (psf) (CONTINUED)

| MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf) | MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft+in) | MAXIMUM 1/8" & 3/16" THICK HORIZONTAL RAILS SPAN |          |
|---|--|--|----------|
|   |  | LAMINATED INSULATED GLASS                        | "L" (Ft) |
| ± 100.0                                     | 2'-0"  | 7'-0"  | 7'-0"    |
|   | 2'-6"  | 7'-0"  | 7'-0"    |
|   | 3'-0"  | 7'-0"  | 7'-0"    |
|   | 3'-6"  | 7'-0"  | 7'-0"    |
|   | 4'-0"  | 7'-0"  | 7'-0"    |
|   | 4'-6"  | 7'-0"  | 7'-0"    |
|   | 5'-0"  | 7'-0"  | 7'-0"    |
|   | 6'-0"  | 6'-3"  | 7'-0"    |
| ± 105.0                                     | 2'-0"  | 7'-0"  | 7'-0"    |
|   | 2'-6"  | 7'-0"  | 7'-0"    |
|   | 3'-0"  | 7'-0"  | 7'-0"    |
|   | 3'-6"  | 7'-0"  | 7'-0"    |
|   | 4'-0"  | 7'-0"  | 7'-0"    |
|   | 4'-6"  | 7'-0"  | 7'-0"    |
|   | 5'-0"  | 7'-0"  | 7'-0"    |
|   | 6'-0"  | 6'-0"  | 7'-0"    |
| ± 110.0                                     | 2'-0"  | 7'-0"  | 7'-0"    |
|   | 2'-6"  | 7'-0"  | 7'-0"    |
|   | 3'-0"  | 7'-0"  | 7'-0"    |
|   | 3'-6"  | 7'-0"  | 7'-0"    |
|   | 4'-0"  | 7'-0"  | 7'-0"    |
|   | 4'-6"  | 7'-0"  | 7'-0"    |
|   | 5'-0"  | 6'-10"   | 7'-0"    |
|   | 6'-0"  | 5'-8"  | 7'-0"    |
| ± 115.0                                     | 2'-0"  | 7'-0"  | 7'-0"    |
|   | 2'-6"  | 7'-0"  | 7'-0"    |
|   | 3'-0"  | 7'-0"  | 7'-0"    |
|   | 3'-6"  | 7'-0"  | 7'-0"    |
|   | 4'-0"  | 7'-0"  | 7'-0"    |
|   | 4'-6"  | 7'-0"  | 7'-0"    |
|   | 5'-0"  | 6'-6"  | 7'-0"    |
|   | 6'-0"  | 5'-5"  | 7'-0"    |

MAXIMUM HORIZONTAL SPAN "L"(FT)  
SCHEDULE FOR A GIVEN HORIZONTAL MULLION  
EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D.  
DESIGN PRESSURE RATING (psf) (CONTINUED)

| MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf) | MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft+in) | MAXIMUM 1/8" & 3/16" THICK HORIZONTAL RAILS SPAN |          |
|---|--|--|----------|
|   |  | LAMINATED INSULATED GLASS                        | "L" (Ft) |
| ± 120.0                                     | 2'-0"  | 7'-0"  | 7'-0"    |
|   | 2'-6"  | 7'-0"  | 7'-0"    |
|   | 3'-0"  | 7'-0"  | 7'-0"    |
|   | 3'-6"  | 7'-0"  | 7'-0"    |
|   | 4'-0"  | 7'-0"  | 7'-0"    |
|   | 4'-6"  | 6'-11"   | 7'-0"    |
|   | 5'-0"  | 6'-3"  | 7'-0"    |
|   | 6'-0"  | 5'-3"  | 7'-0"    |
| ± 125.0                                     | 2'-0"  | 7'-0"  | 7'-0"    |
|   | 2'-6"  | 7'-0"  | 7'-0"    |
|   | 3'-0"  | 7'-0"  | 7'-0"    |
|   | 3'-6"  | 7'-0"  | 7'-0"    |
|   | 4'-0"  | 7'-0"  | 7'-0"    |
|   | 4'-6"  | 6'-8"  | 7'-0"    |
|   | 5'-0"  | 6'-0"  | 7'-0"    |
|   | 6'-0"  | 5'-0"  | 7'-0"    |
| ± 130.0                                     | 2'-0"  | 7'-0"  | 7'-0"    |
|   | 2'-6"  | 7'-0"  | 7'-0"    |
|   | 3'-0"  | 7'-0"  | 7'-0"    |
|   | 3'-6"  | 7'-0"  | 7'-0"    |
|   | 4'-0"  | 7'-0"  | 7'-0"    |
|   | 4'-6"  | 6'-5"  | 7'-0"    |
|   | 5'-0"  | 5'-9"  | 7'-0"    |
|   | 6'-0"  | 4'-10"   | 7'-0"    |
| +130.0,- 135.0                              | 2'-0"  | 7'-0"  | 7'-0"    |
|   | 2'-6"  | 7'-0"  | 7'-0"    |
|   | 3'-0"  | 7'-0"  | 7'-0"    |
|   | 3'-6"  | 7'-0"  | 7'-0"    |
|   | 4'-0"  | 6'-11"   | 7'-0"    |
|   | 4'-6"  | 6'-2"  | 7'-0"    |
|   | 5'-0"  | 5'-7"  | 7'-0"    |
|   | 6'-0"  | 4'-8"  | 7'-0"    |
| +130.0,- 140.0                              | 2'-0"  | 7'-0"  | 7'-0"    |
|   | 2'-6"  | 7'-0"  | 7'-0"    |
|   | 3'-0"  | 7'-0"  | 7'-0"    |
|   | 3'-6"  | 7'-0"  | 7'-0"    |
|   | 4'-0"  | 6'-8"  | 7'-0"    |
|   | 4'-6"  | 6'-0"  | 7'-0"    |
|   | 5'-0"  | 5'-4"  | 7'-0"    |
|   | 6'-0"  | 4'-6"  | 7'-0"    |



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FLORIDA Lic. # 44167

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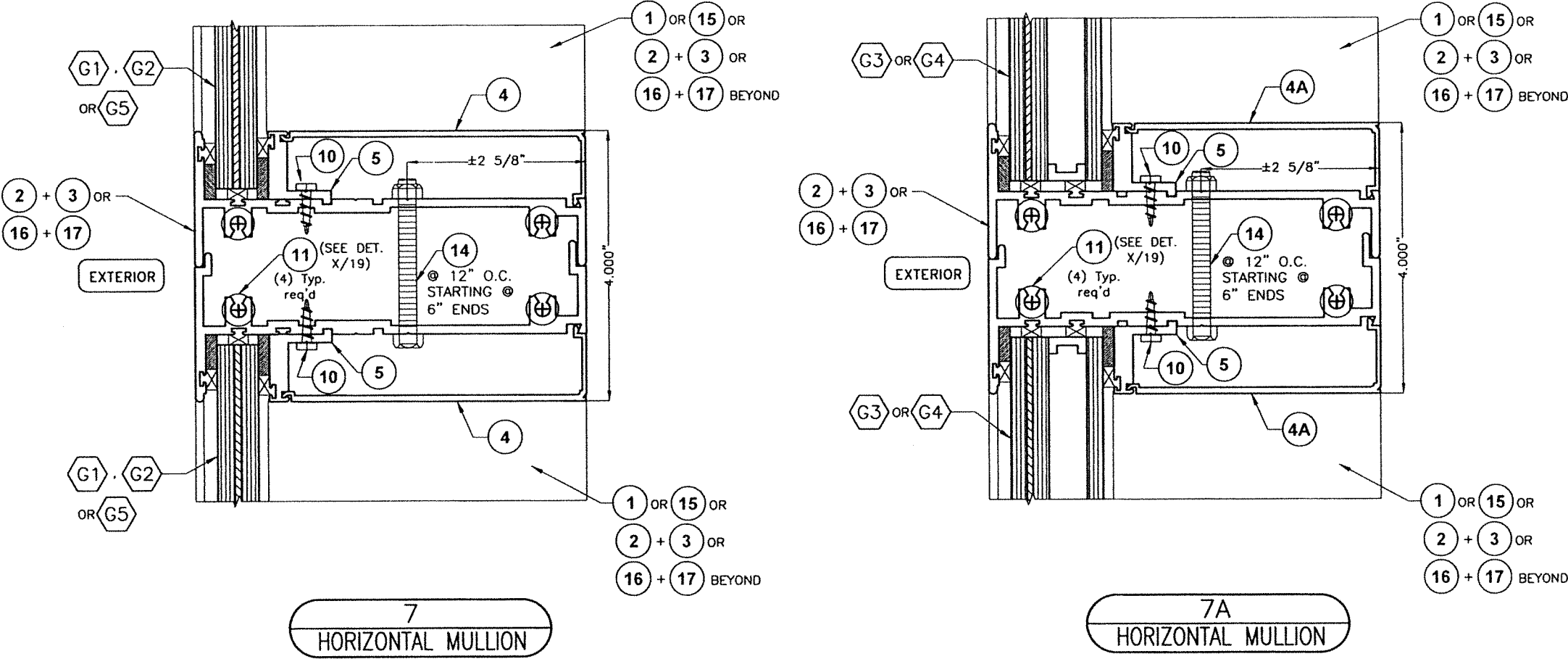
09/12/2023  
DATE

23-213  
DRAWING No

| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
|---------|-------------|----------|---------|-------------|------|
| 1       | OLD 21-11B  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

# HORIZONTAL MULLION DETAILS

## OPTIONAL SYSTEM # 1



WALTER A. TILLIT JR.  
LICENSE  
No. 44167  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
12/2023

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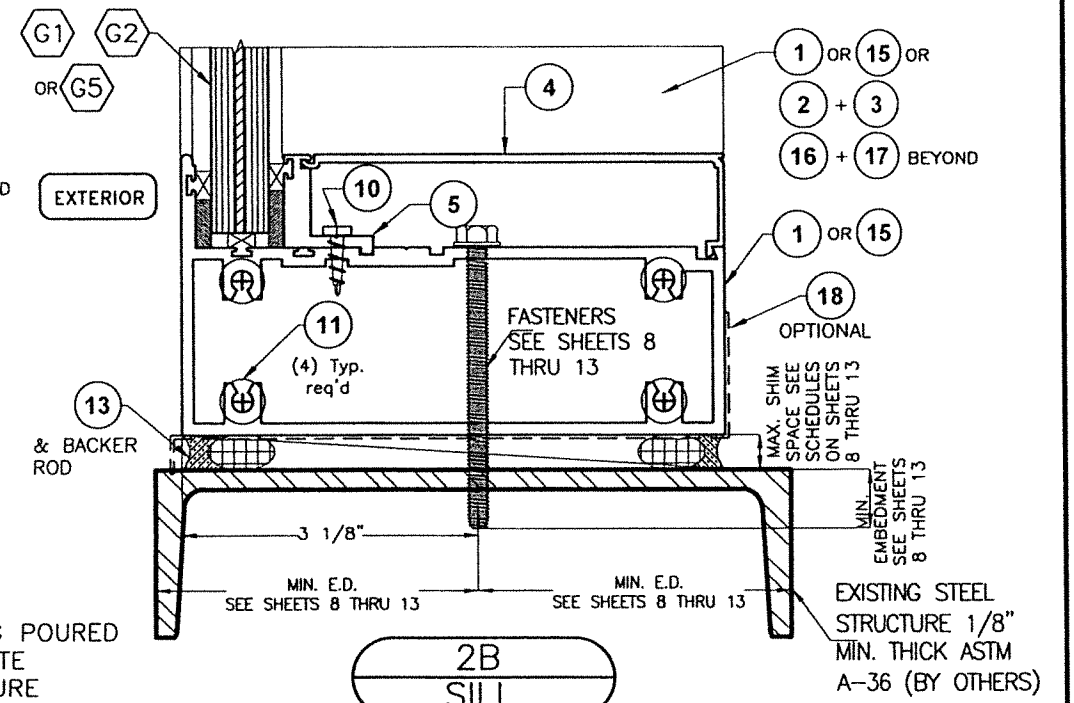
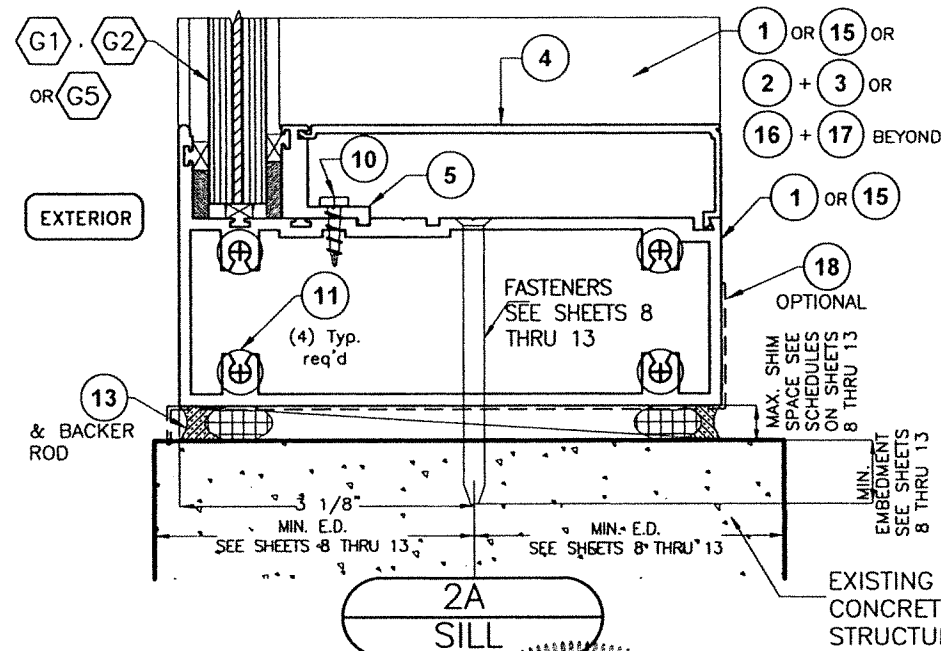
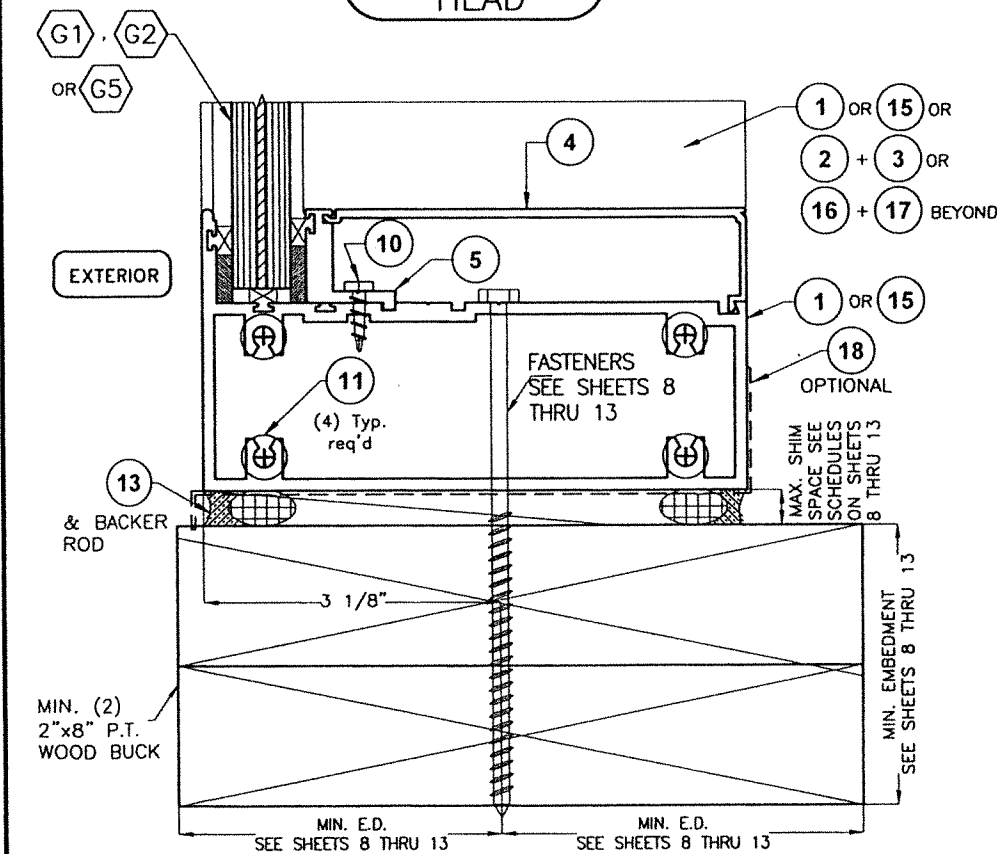
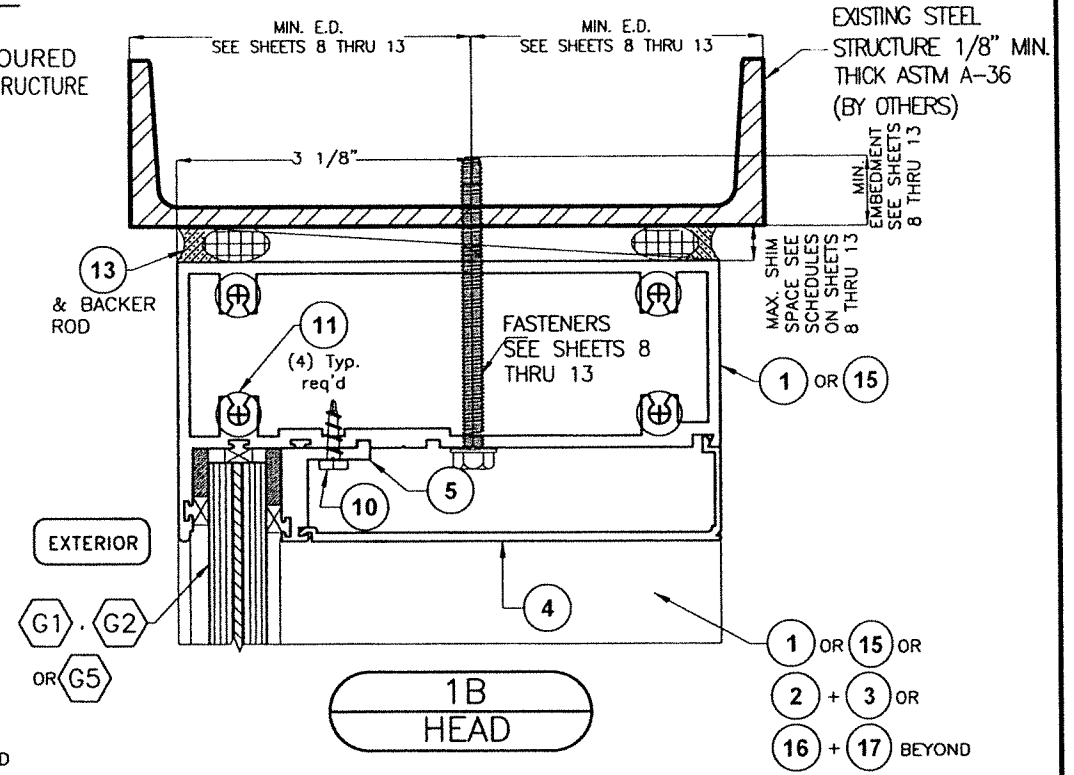
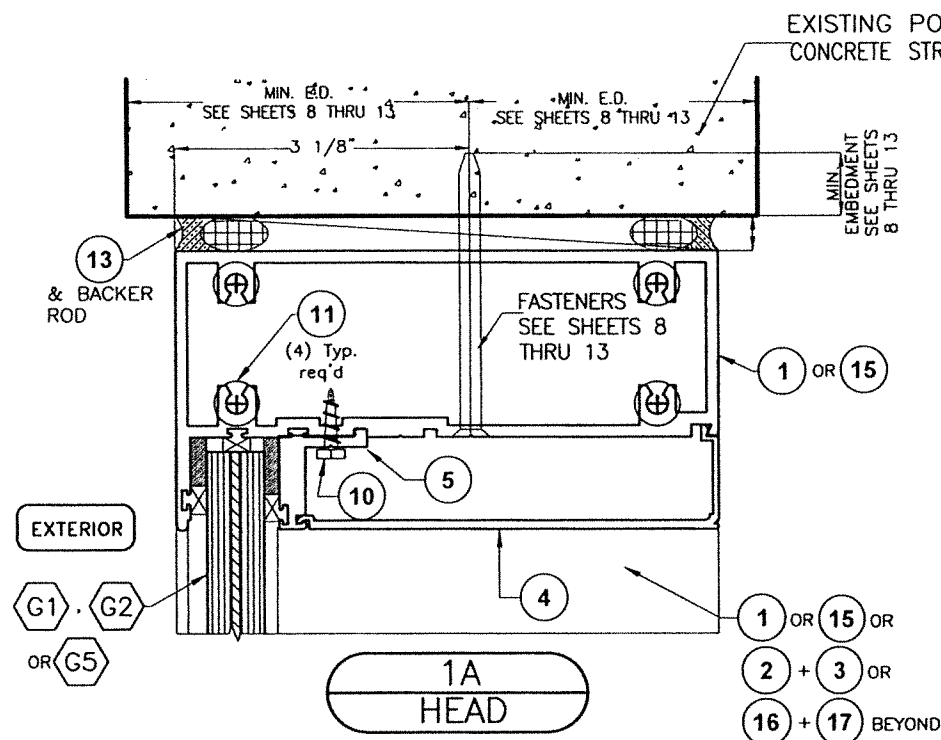
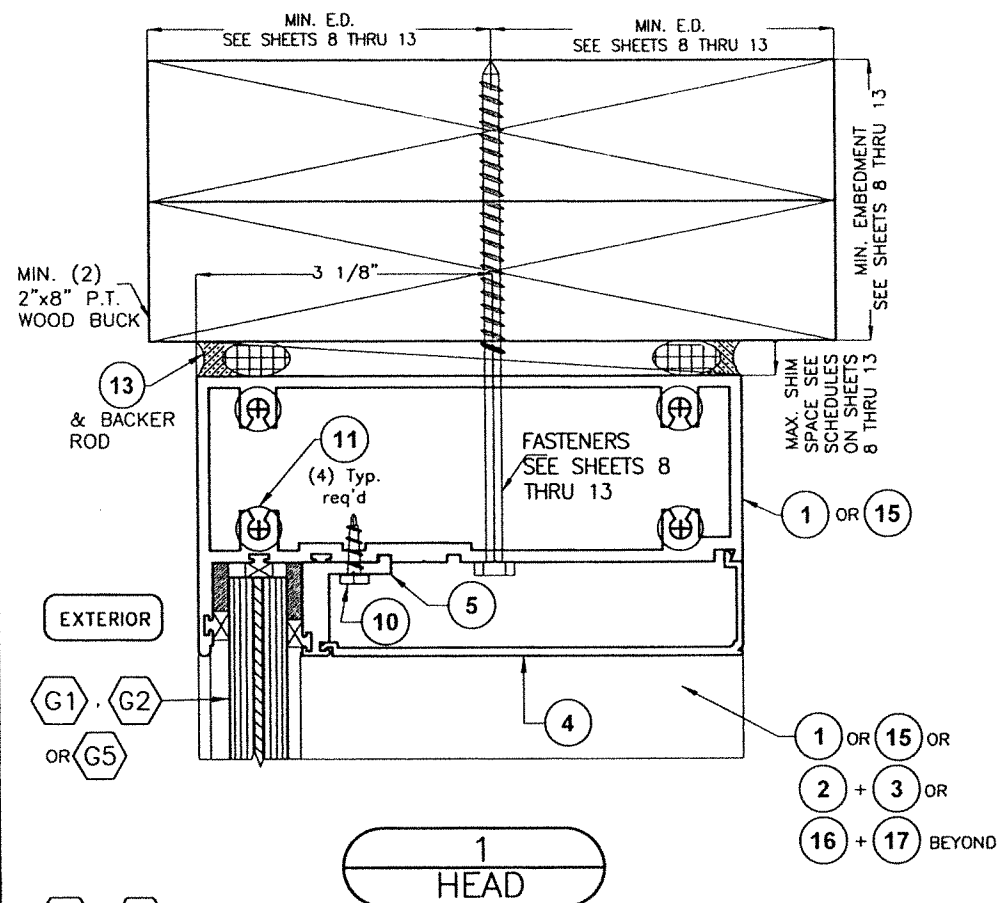
09/12/2023  
DATE

23-213  
DRAWING No

| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
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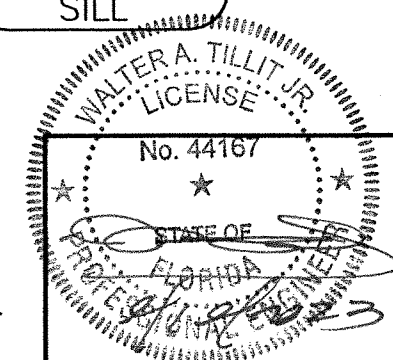
SHEET 16 OF 51

# HEAD & SILL CONNECTIONS DETAILS



2 SILL

## OPTIONAL SYSTEM # 1



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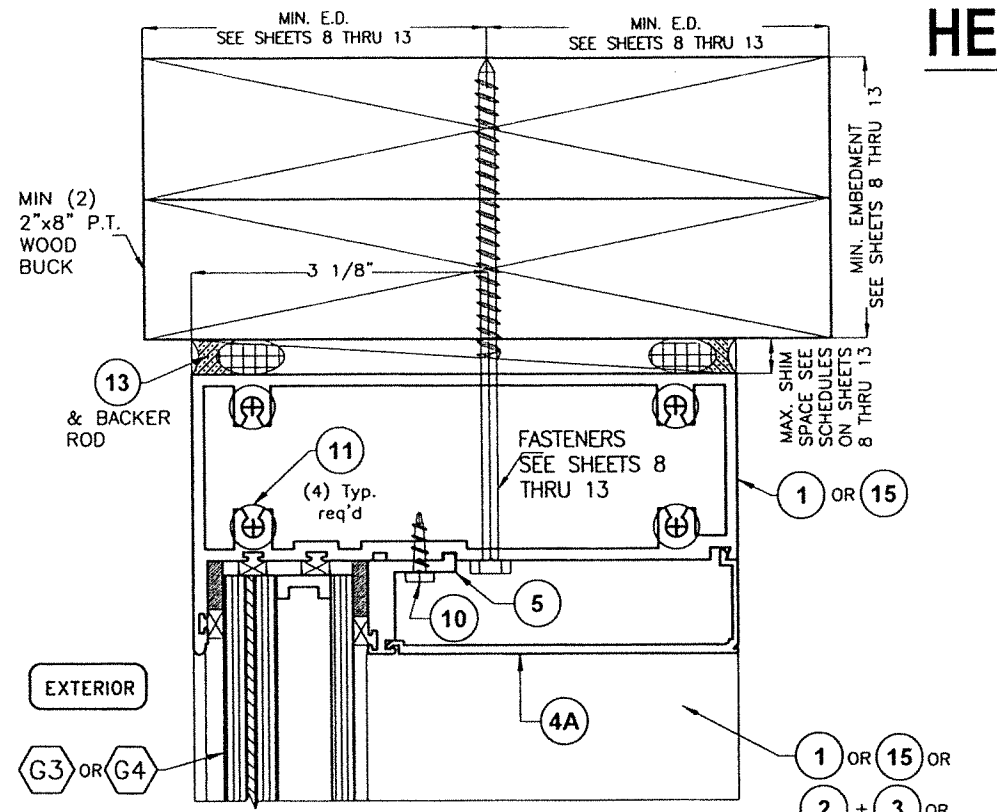
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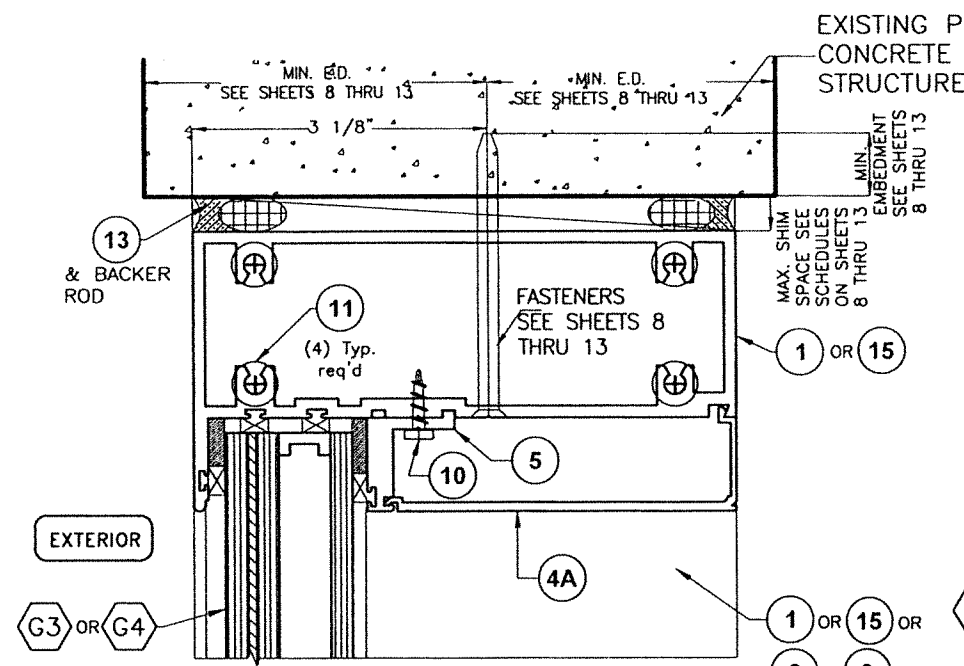
W.H. DRAWN BY  
 09/12/2023 DATE  
 23-213 DRAWING No  
 SHEET 17 OF 51

| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
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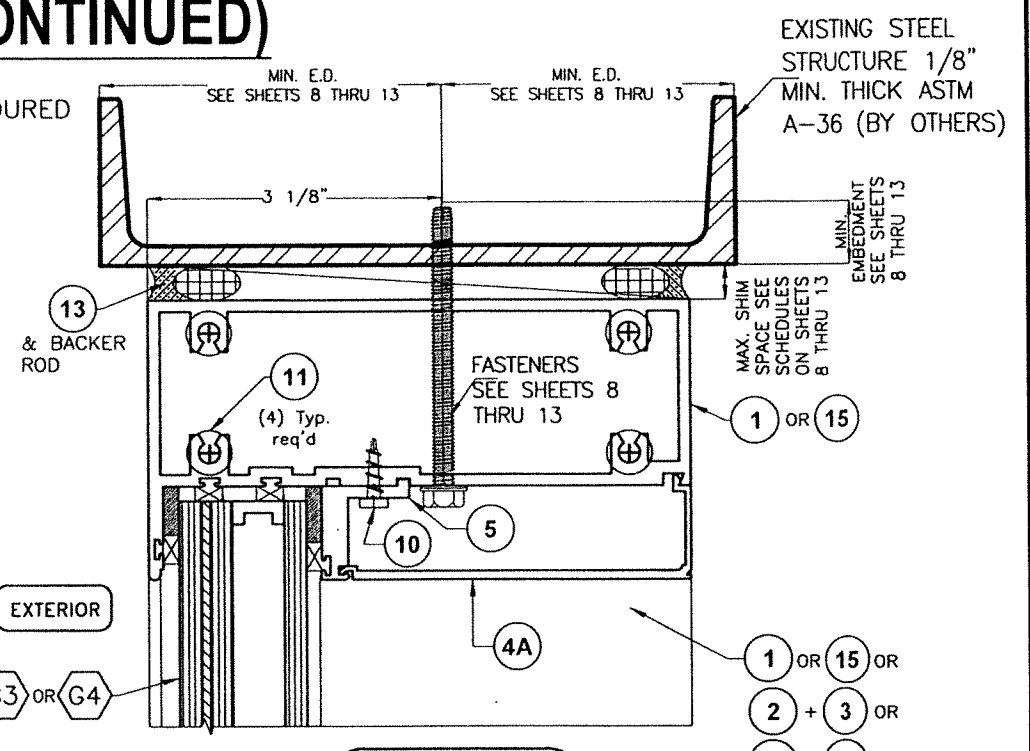
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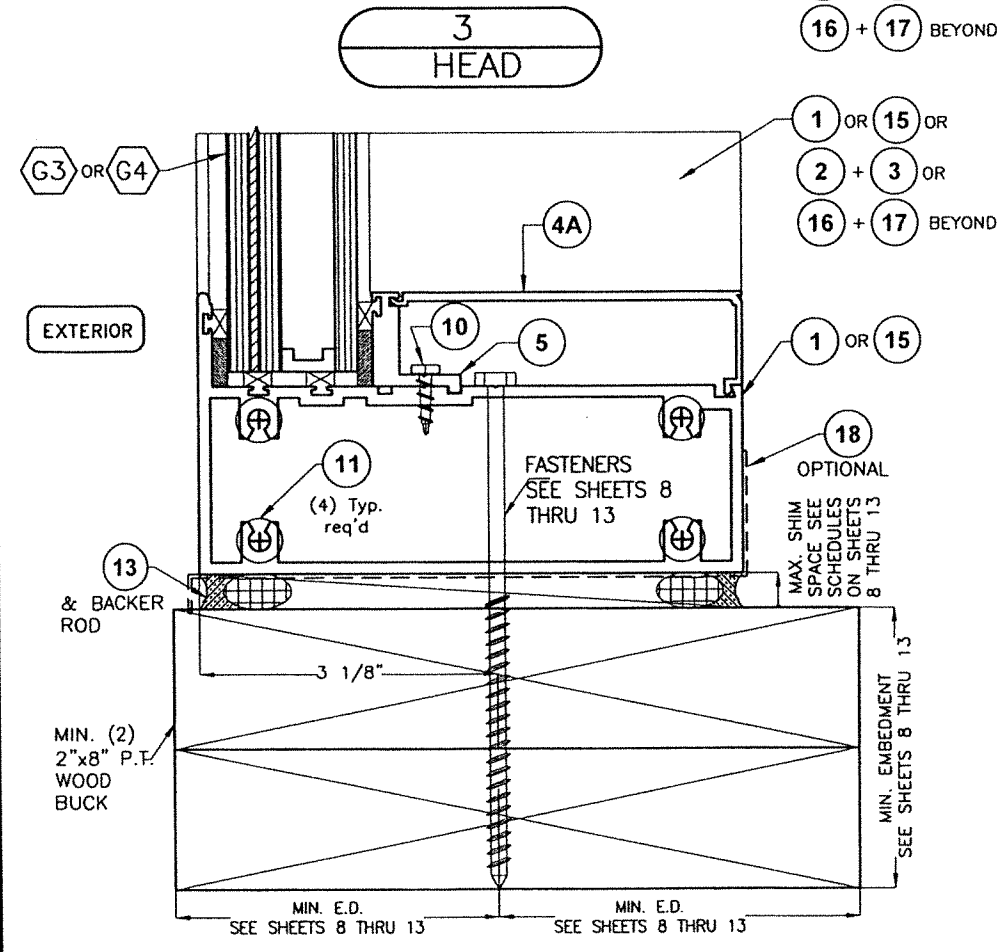
**3 HEAD**



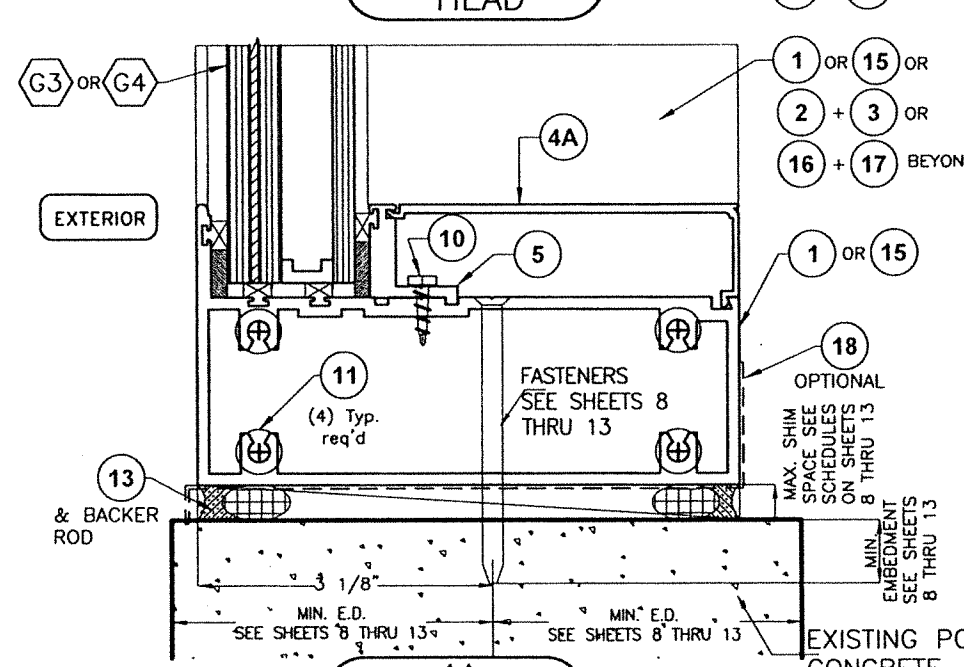
**3A HEAD**



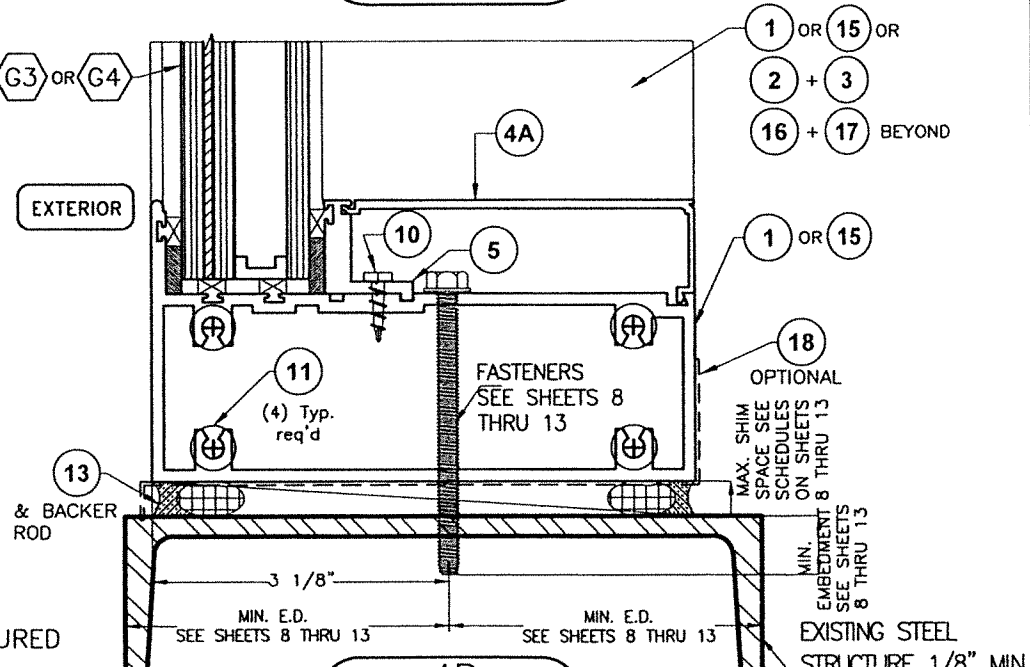
**3B HEAD**



**4 SILL**



**4A SILL**



**4B SILL**

## OPTIONAL SYSTEM # 1

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LICENSE  
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STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
P.E. SEAL/SIGNATURE/DATE

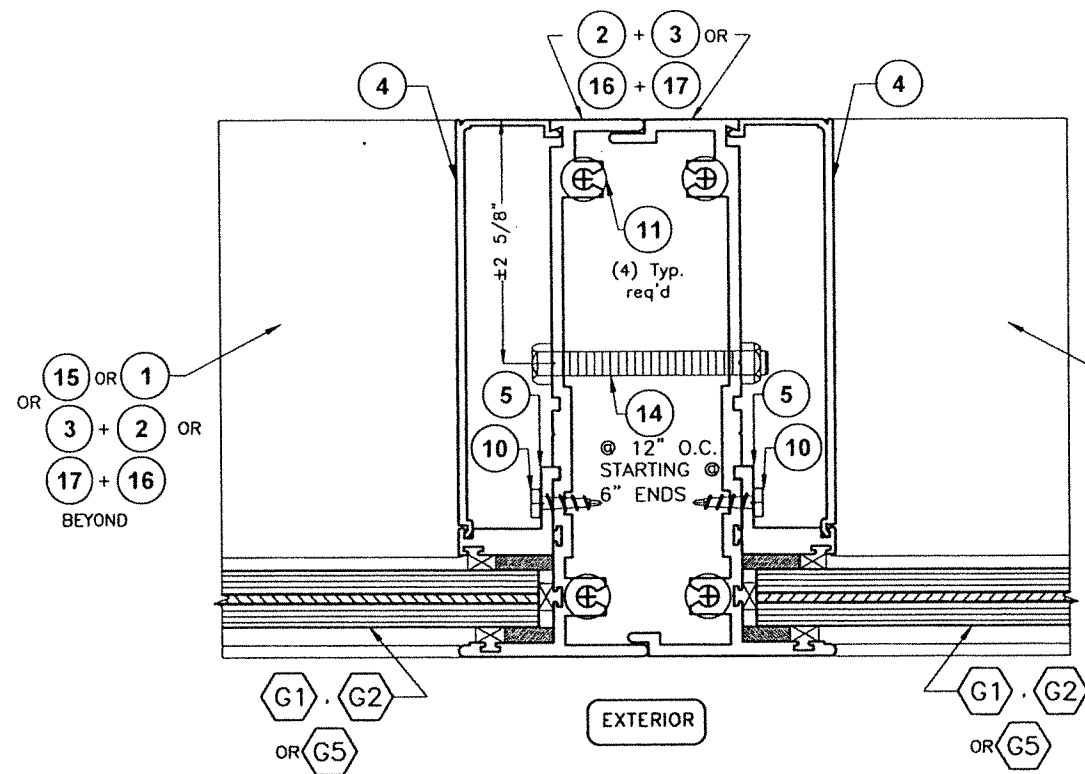
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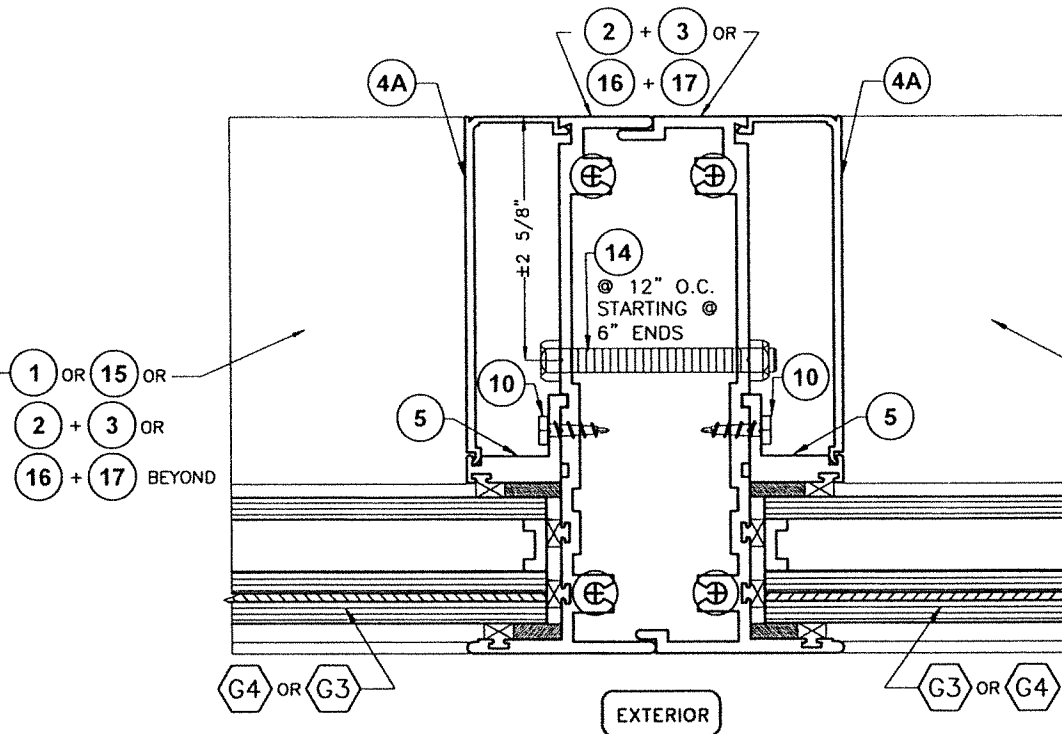
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| 23-213 DRAWING No   |             |          | SHEET 18 OF 51  |             |      |
| REV. No   | DESCRIPTION | DATE     | REV. No         | DESCRIPTION | DATE |
| 1   | OLD 21-118  | 09/12/23 | 3               |             |      |
| 2   |             |          | 4               |             |      |

# HORIZONTAL SECTIONS AT INTERIOR VERTICAL MULLIONS AT STRAIGHT GLASS WALL APPLICATIONS

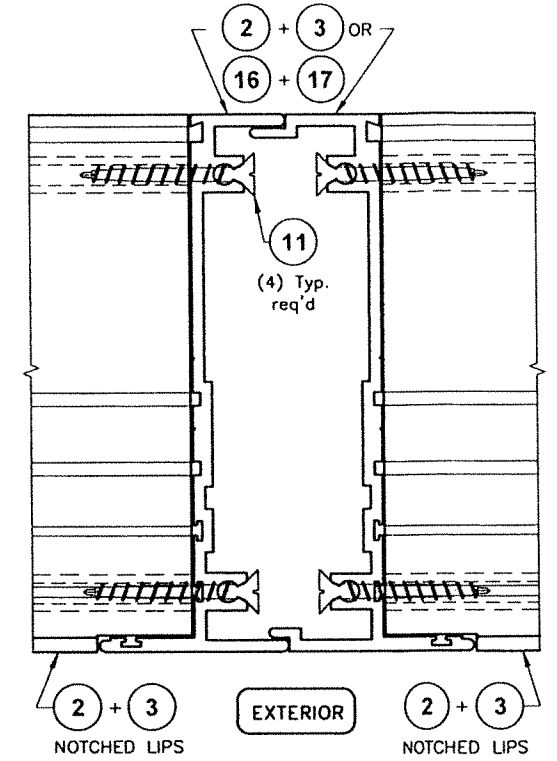
## OPTIONAL SYSTEM # 1



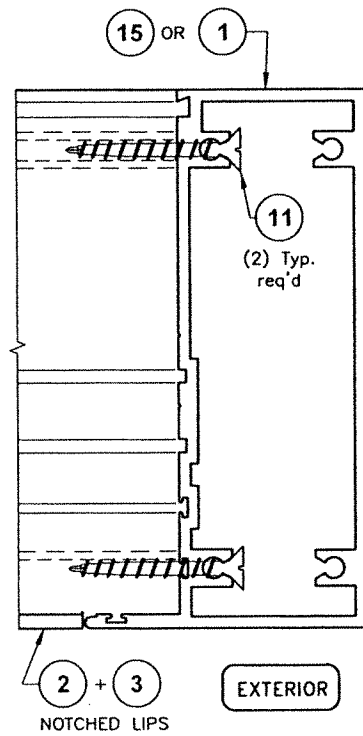
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INTERIOR VERTICAL MULLION



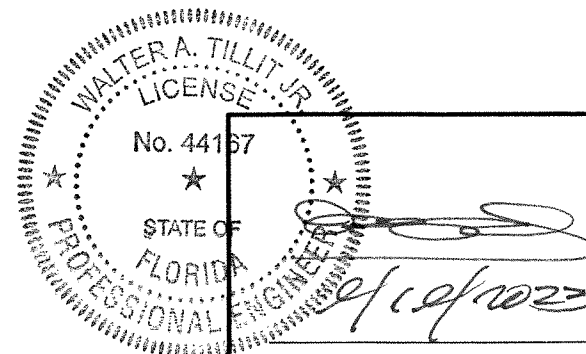
6  
INTERIOR VERTICAL MULLION



DETAIL X  
HORIZONTAL MULLION TO  
INTERIOR VERTICAL MULLION



DETAIL X  
HORIZONTAL MULLION TO JAMB MULLION



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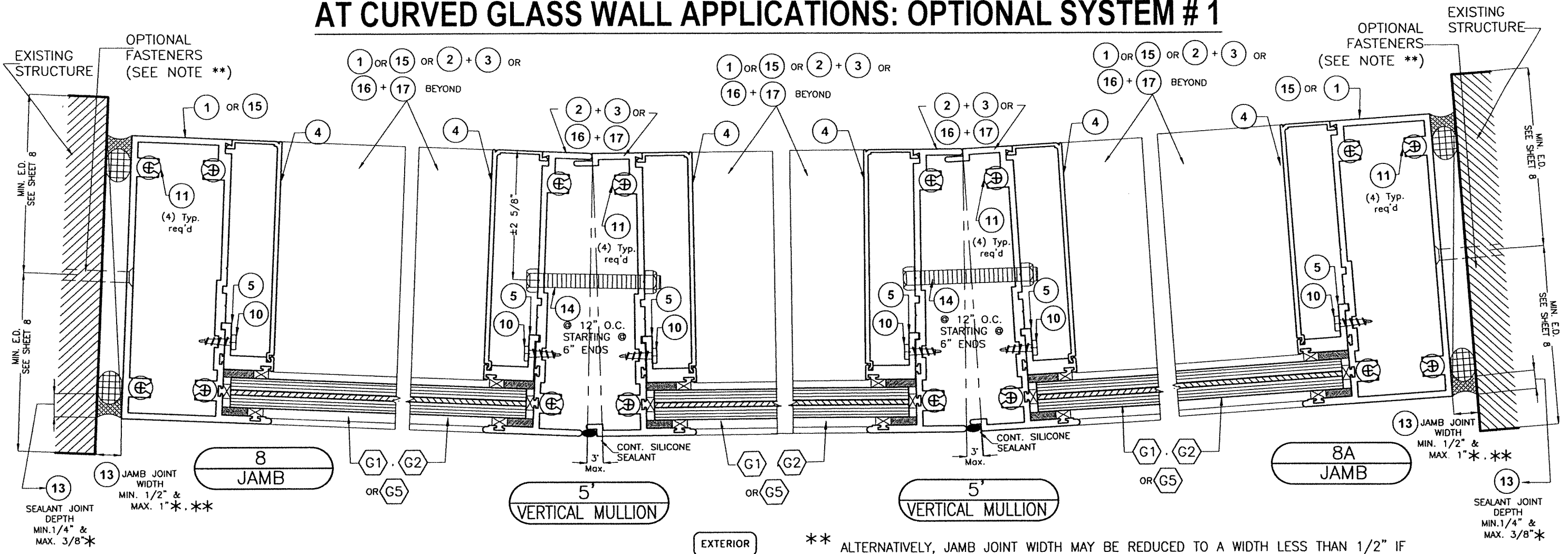
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| HIGH IMPACT GREEN WORLD FIXED GLASS WALL<br>SERIES 12000 LARGE MISSILE LAMINATED &<br>INSULATED GLASS  |             |          | W.H.<br>DRAWN BY   |             |                |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |  |  |
|--|-------------|----------|--------------------|-------------|----------------|---------|-------------|------|---|------------|----------|---|---|---|---|---|---|---|---|---|----------------------|--|--|
| <p>290 WEST 78 ROAD<br/>HIALEAH, FL 33014<br/>PH: (954)226-5555/(305)558-8103<br/>FAX: (305)558-6665<br/>www.gigwindows.com</p>  |             |          | 09/12/2023<br>DATE |             |                |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>OLD 21-118</td> <td>09/12/23</td> <td>3</td> <td>-</td> <td>-</td> </tr> <tr> <td>2</td> <td>-</td> <td>-</td> <td>4</td> <td>-</td> <td>-</td> </tr> </tbody> </table> |             |          | REV. No            | DESCRIPTION | DATE           | REV. No | DESCRIPTION | DATE | 1 | OLD 21-118 | 09/12/23 | 3 | - | - | 2 | - | - | 4 | - | - | 23-213<br>DRAWING No |  |  |
| REV. No  | DESCRIPTION | DATE     | REV. No            | DESCRIPTION | DATE           |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |  |  |
| 1  | OLD 21-118  | 09/12/23 | 3                  | -           | -              |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |  |  |
| 2  | -           | -        | 4                  | -           | -              |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |  |  |
|  |             |          |                    |             | SHEET 19 OF 51 |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |  |  |

# HORIZONTAL SECTIONS AT INTERIOR VERTICAL MULLIONS PLUS JAMB MULLIONS

## AT CURVED GLASS WALL APPLICATIONS: OPTIONAL SYSTEM # 1



\*\* ALTERNATIVELY, JAMB JOINT WIDTH MAY BE REDUCED TO A WIDTH LESS THAN 1/2" IF JAMB PROFILE IS ATTACHED TO WALL FULL HEIGHT W/ THE FOLLOWING FASTENERS.

\* NOTE: ABOVE INDICATED MAXIMUM AND MINIMUM VALUES FOR SPECIFIED SEALANT VERTICAL JOINT WIDTH AT JAMBS NOT CONNECTED TO WALL (FREE STANDING) HAVE BEEN DETERMINED ONLY TAKING INTO CONSIDERATION THE ACTUAL MOVEMENT OF GLASS WALL AT JAMBS DUE TO THERMAL, WIND AND ITS OWN CONSTRUCTION TOLERANCE, AND NOT PERFORMANCE FACTORS FROM THE SURROUNDING STRUCTURE.

| SUBSTRATE Δ                                    | FASTENERS TYPES Δ       |                          | SPACING |
|--|-------------------------|--------------------------|---------|
|  | 3/8" SHIM SPACE OR LESS | >3/8" , <1/2" SHIM SPACE |         |
| POURED CONCRETE                                | FASTENER TYPE A         | FASTENER TYPE B          | 6" O.C. |
| 2500 psi GROUT FILLED ASTM C-90 CONCRETE BLOCK | FASTENER TYPE A         | FASTENER TYPE B          | 6" O.C. |
| STEEL OR ALUMINUM                              | FASTENER TYPE E         | FASTENER TYPE E          | 6" O.C. |
| WOOD   | FASTENER TYPES C & D    | FASTENER TYPE D          | 5" O.C. |

Δ CORRESPONDS TO FASTENERS TYPES AND SUBSTRATES CHARACTERISTICS (AS APPLICABLE) DESCRIBED ON SHEET'S 8 THRU 13.

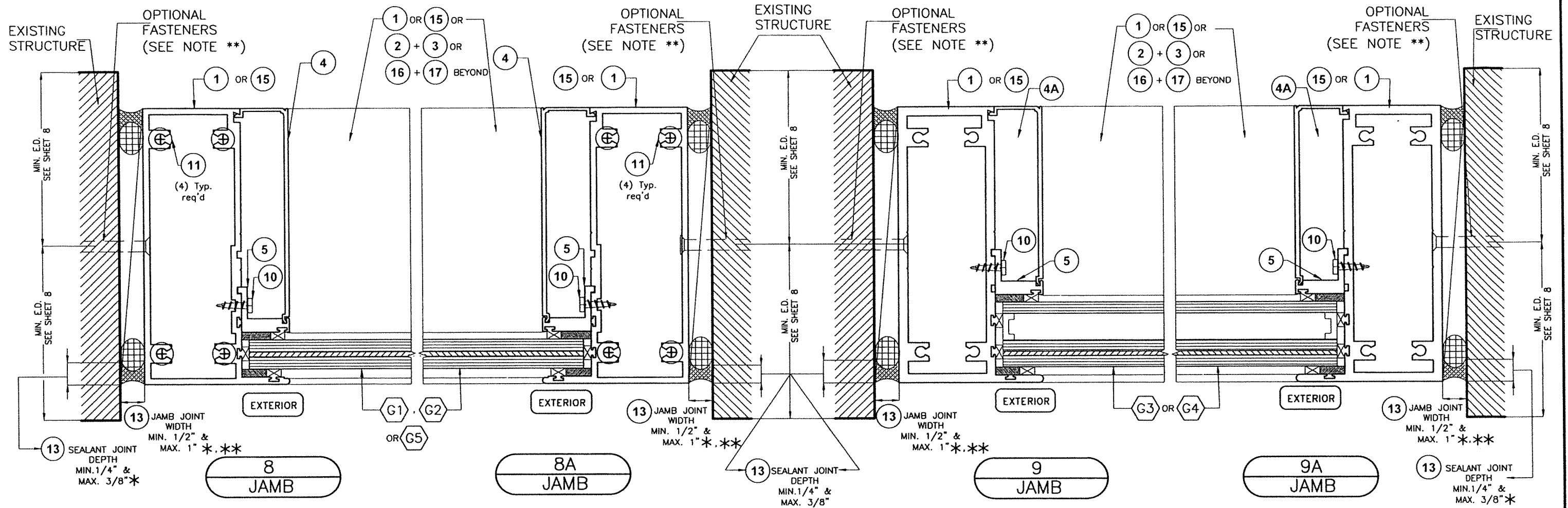
WALTER A. TILLIT JR.  
 LICENSE No. 44167  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 P.E. SEAL/SIGNATURE/DATE

**FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)**

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|--|--|--|
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|--|--|--|

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|---------|-------------|----------|---------|-------------|------|
| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

# HORIZONTAL SECTIONS AT JAMBS AT STRAIGHT GLASS WALL APPLICATIONS: OPTIONAL SYSTEM # 1

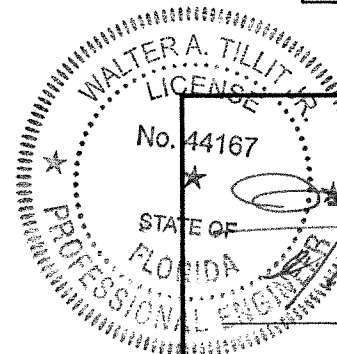


\*\* ALTERNATIVELY, JAMB JOINT WIDTH MAY BE REDUCED TO A WIDTH LESS THAN 1/2" IF JAMB PROFILE IS ATTACHED TO WALL FULL HEIGHT W/ THE FOLLOWING FASTENERS.

\* NOTE: ABOVE INDICATED MAXIMUM AND MINIMUM VALUES FOR SPECIFIED SEALANT VERTICAL JOINT WIDTH AT JAMBS NOT CONNECTED TO WALL (FREE STANDING) HAVE BEEN DETERMINED ONLY TAKING INTO CONSIDERATION THE ACTUAL MOVEMENT OF GLASS WALL AT JAMBS DUE TO THERMAL, WIND AND ITS OWN CONSTRUCTION TOLERANCE, AND NOT PERFORMANCE FACTORS FROM THE SURROUNDING STRUCTURE.

| SUBSTRATE Δ                                    | FASTENERS TYPES Δ       |                          | SPACING |
|--|-------------------------|--------------------------|---------|
|  | 3/8" SHIM SPACE OR LESS | >3/8" , <1/2" SHIM SPACE |         |
| POURED CONCRETE                                | FASTENER TYPE A         | FASTENER TYPE B          | 6" O.C. |
| 2500 psi GROUT FILLED ASTM C-90 CONCRETE BLOCK | FASTENER TYPE A         | FASTENER TYPE B          | 6" O.C. |
| STEEL OR ALUMINUM                              | FASTENER TYPE E         | FASTENER TYPE E          | 6" O.C. |
| WOOD   | FASTENER TYPES C & D    | FASTENER TYPE D          | 5" O.C. |

Δ CORRESPONDS TO FASTENERS TYPES AND SUBSTRATES CHARACTERISTICS (AS APPLICABLE) DESCRIBED ON SHEET'S 8 THRU 13.



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 WALTER A. TILLIT Jr. P.E.  
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FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

HIGH IMPACT GREEN WORLD FIXED GLASS WALL  
 SERIES 12000 LARGE MISSILE LAMINATED &  
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W.H.  
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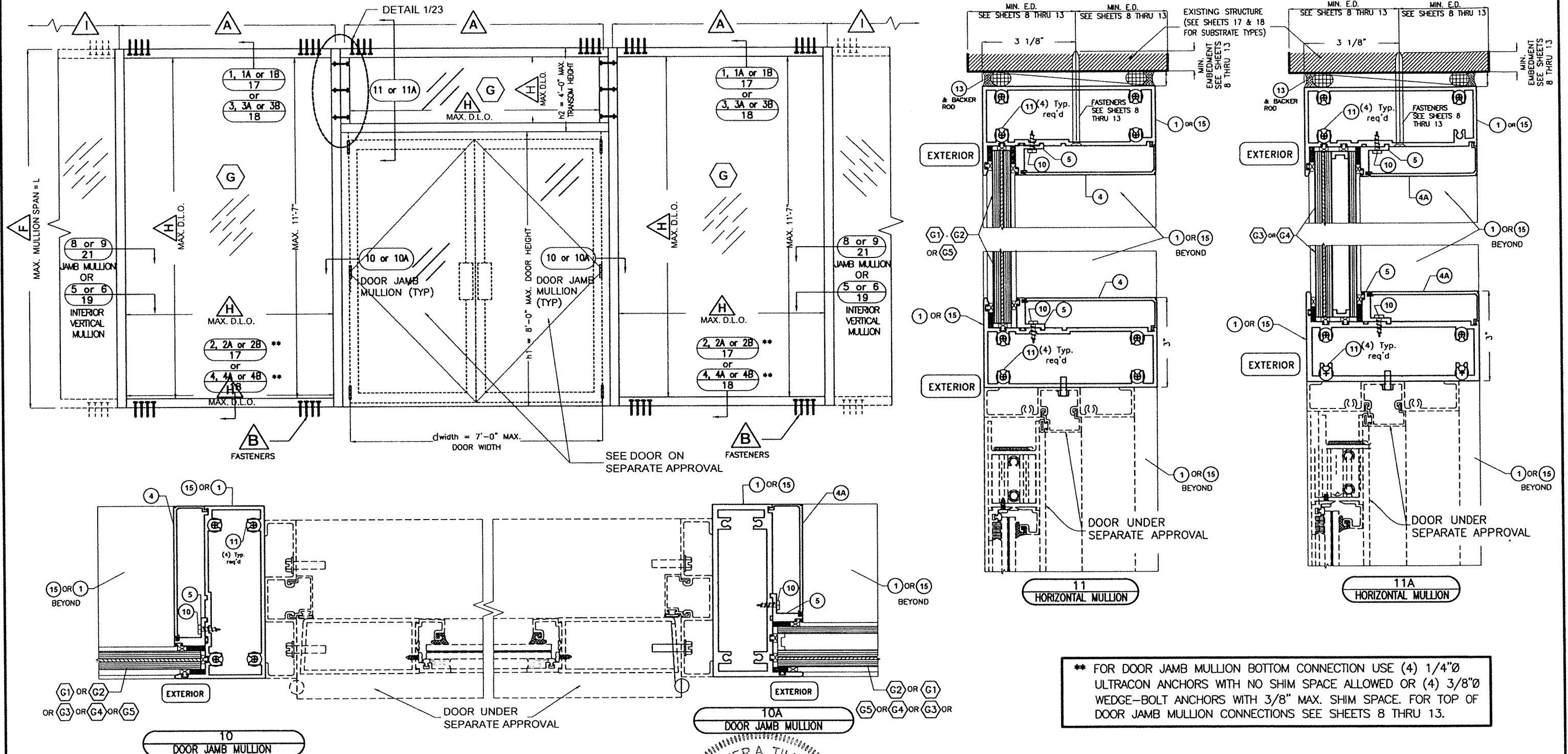
9/12/2023  
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23-213  
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SHEET 21 OF 51

# ELEVATION FOR HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 ADJACENT TO APPROVED DOOR (ON SEPARATE APPROVAL): OPTIONAL SYSTEM # 1



**\*\* FOR DOOR JAMB MULLION BOTTOM CONNECTION USE (4) 1/4"Ø ULTRACON ANCHORS WITH NO SHIM SPACE ALLOWED OR (4) 3/8"Ø WEDGE-BOLT ANCHORS WITH 3/8" MAX. SHIM SPACE. FOR TOP OF DOOR JAMB MULLION CONNECTIONS SEE SHEETS 8 THRU 13.**

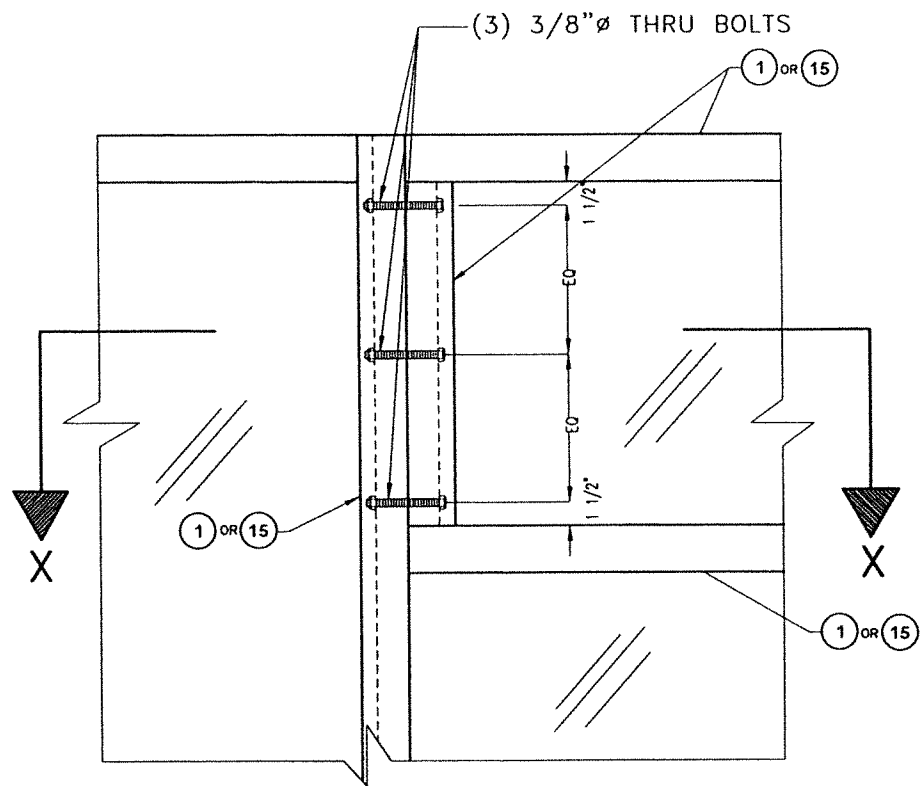
**FOOT NOTES:**

- A** FOR MAXIMUM DOOR JAMB MULLION SPACING ON CENTERS SEE SHEET 23.
- B** FOR HEAD AND SILL FASTENERS QUANTITY, TYPES AND SPECS SEE SHEETS 8 THRU 13.
- F** FOR MAXIMUM VERTICAL MULLION SPAN SEE SHEET 23.
- G** FOR GLAZING DETAILS SEE SHEET 3 AND FOR GLASS SCHEDULE SEE SHEETS 5, 5A.
- H** FOR MAXIMUM D.L.O. SEE SCHEDULE ON SHEETS 5, 5A.
- I** FOR MAXIMUM INTERIOR VERTICAL MULLION SPACING ON CENTERS SEE SHEETS 6 & 7.

WALTER A. TILLIT JR.  
 LICENSE No. 44167  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
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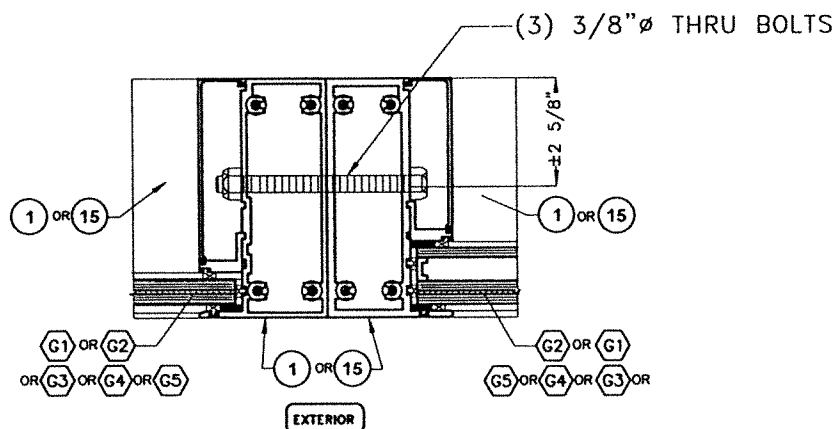
**FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)**

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| <br>GIG<br>WINDOWS & DOORS  |  | 290 WEST 78 ROAD<br>HIALEAH, FL 33014<br>PH: (954)226-5555/(305)558-8103<br>FAX: (305)558-6665<br>www.gigwindows.com | 09/12/2023<br>DATE |
| REV. No    DESCRIPTION    DATE    REV. No    DESCRIPTION    DATE  |  | DRAWING No   |                    |
| 1    OLD 21-118    09/12/23    3    -    -  |  | 23-213   |                    |
| 2    -    -    4    -    -  |  | SHEET 22 OF 51   |                    |



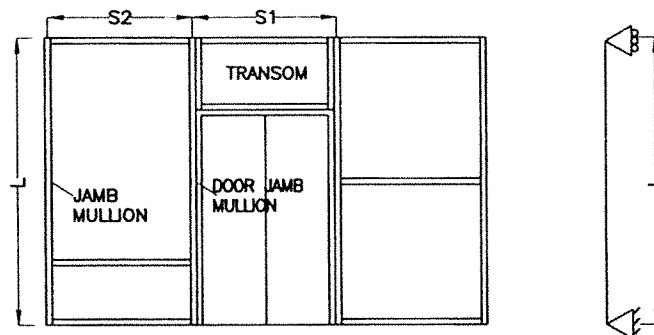
**ELEVATION DETAIL 1**

SCALE: 1"=1'-0"



**SECTION X-X**

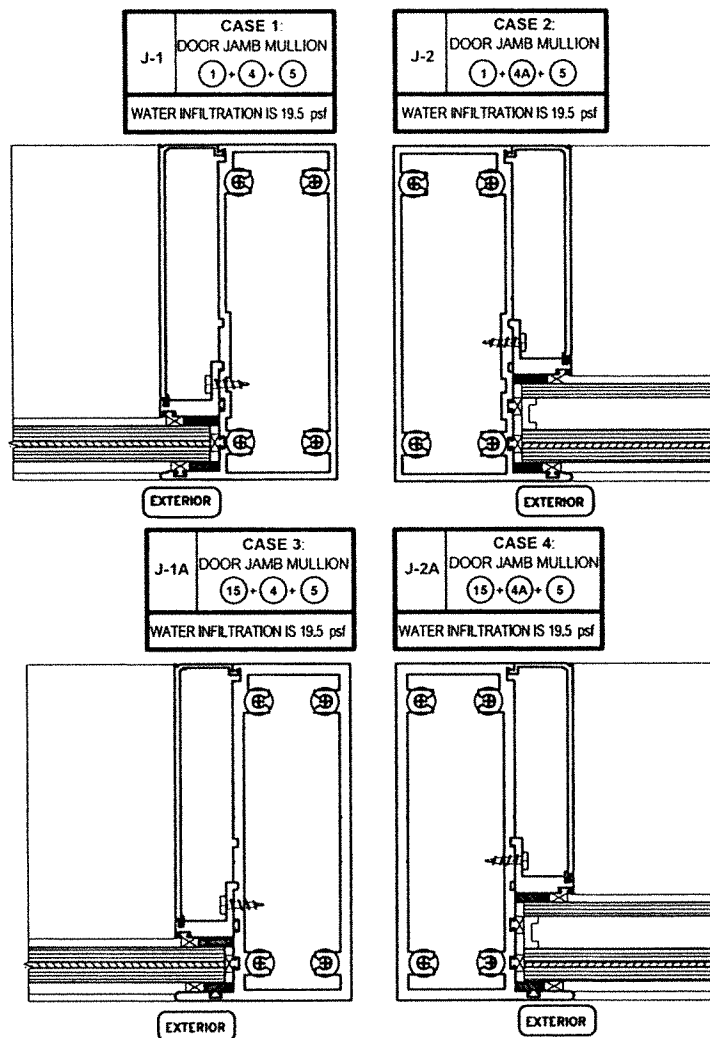
SCALE: 3/8"=1'-0"



**ELEVATION W/ DOOR JAMB MULLION**

"L" = MAXIMUM DOOR JAMB MULLION SPAN  
 DOOR JAMB MULLION EFFECTIVE SPACING: "b" =  $\frac{S1+S2}{2}$  **SIDE VIEW DOOR JAMB MULLION**

\* MAXIMUM DESIGN PRESSURE RATING FOR DOOR JAMB MULLION WILL AUTOMATICALLY QUALIFY DESIGN PRESSURE RATINGS FOR JAMB MULLIONS FOR ANY GIVEN MULLION SPACING & PRESSURE RATING.



**\*\* MAXIMUM DOOR JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf), DOOR JAMB MULLION EFFECTIVE SPACING "b"**

| MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf) | MAX. EFFECTIVE SPACING "b" (Ft-in) | 1/8" or 3/16" THICK INTERIOR DOOR JAMB MULLION SPAN "L"(FT) |                                     |
|---|------------------------------------|---|-------------------------------------|
|   |                                    | Laminated/Insulated Glass                                   | CASES: 1,2,3,4 J-1, J2, J-1A & J-2A |
| ± 40.0                                      | 3'-6"                              | 12'-0"  | 12'-0"                              |
|   | 4'-0"                              | 12'-0"  | 12'-0"                              |
|   | 4'-6"                              | 12'-0"  | 12'-0"                              |
|   | 5'-0"                              | 12'-0"  | 12'-0"                              |
|   | 5'-6"                              | 11'-9"  | 11'-9"                              |
|   | 6'-0"                              | 11'-3"  | 11'-3"                              |
| ± 45.0                                      | 6'-6"                              | 10'-10"   | 10'-10"                             |
|   | 7'-0"                              | 10'-5"  | 10'-5"                              |
|   | 3'-6"                              | 12'-0"  | 12'-0"                              |
|   | 4'-0"                              | 12'-0"  | 12'-0"                              |
|   | 4'-6"                              | 12'-0"  | 12'-0"                              |
|   | 5'-0"                              | 11'-7"  | 11'-7"                              |
| ± 50.0                                      | 5'-6"                              | 11'-1"  | 11'-1"                              |
|   | 6'-0"                              | 10'-7"  | 10'-7"                              |
|   | 6'-6"                              | 10'-10"   | 10'-10"                             |
|   | 7'-0"                              | 9'-10"  | 9'-10"                              |
|   | 3'-6"                              | 12'-0"  | 12'-0"                              |
|   | 4'-0"                              | 11'-9"  | 11'-9"                              |
| ± 55.0                                      | 4'-6"                              | 11'-1"  | 11'-1"                              |
|   | 5'-0"                              | 10'-6"  | 10'-6"                              |
|   | 5'-6"                              | 10'-0"  | 10'-0"                              |
|   | 6'-0"                              | 9'-7"   | 9'-7"                               |
|   | 6'-6"                              | 9'-3"   | 9'-3"                               |
|   | 7'-0"                              | 8'-11"  | 8'-11"                              |
| ± 60.0                                      | 3'-6"                              | 12'-0"  | 12'-0"                              |
|   | 4'-0"                              | 11'-3"  | 11'-3"                              |
|   | 4'-6"                              | 10'-7"  | 10'-7"                              |
|   | 5'-0"                              | 10'-1"  | 10'-1"                              |
|   | 5'-6"                              | 9'-7"   | 9'-7"                               |
|   | 6'-0"                              | 9'-2"   | 9'-2"                               |
| ± 65.0                                      | 6'-6"                              | 8'-10"  | 8'-10"                              |
|   | 7'-0"                              | 8'-6"   | 8'-6"                               |
|   | 3'-6"                              | 11'-7"  | 11'-7"                              |
|   | 4'-0"                              | 10'-10"   | 10'-10"                             |
|   | 4'-6"                              | 10'-2"  | 10'-2"                              |
|   | 5'-0"                              | 9'-8"   | 9'-8"                               |

**\*\* MAXIMUM DOOR JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & DOOR JAMB MULLION EFFECTIVE SPACING "b"**

(CONTINUED)

| MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf) | MAX. EFFECTIVE SPACING "b" (Ft-in) | 1/8" or 3/16" THICK INTERIOR DOOR JAMB MULLION SPAN "L"(FT) |                                     |
|---|------------------------------------|---|-------------------------------------|
|   |                                    | Laminated/Insulated Glass                                   | CASES: 1,2,3,4 J-1, J2, J-1A & J-2A |
| ± 70.0                                      | 3'-6"                              | 11'-2"  | 11'-2"                              |
|   | 4'-0"                              | 10'-5"  | 10'-5"                              |
|   | 4'-6"                              | 9'-10"  | 9'-10"                              |
|   | 5'-0"                              | 9'-4"   | 9'-4"                               |
|   | 5'-6"                              | 8'-11"  | 8'-11"                              |
|   | 6'-0"                              | 8'-6"   | 8'-6"                               |
| ± 75.0                                      | 6'-6"                              | 7'-10"  | 7'-10"                              |
|   | 7'-0"                              | 7'-3"   | 7'-3"                               |
|   | 3'-6"                              | 10'-9"  | 10'-9"                              |
|   | 4'-0"                              | 10'-1"  | 10'-1"                              |
|   | 4'-6"                              | 9'-6"   | 9'-6"                               |
|   | 5'-0"                              | 9'-0"   | 9'-0"                               |
| ± 80.0                                      | 5'-6"                              | 8'-7"   | 8'-7"                               |
|   | 6'-0"                              | 7'-11"  | 7'-11"                              |
|   | 6'-6"                              | 7'-4"   | 7'-4"                               |
|   | 7'-0"                              | 6'-9"   | 6'-9"                               |
|   | 3'-6"                              | 10'-5"  | 10'-5"                              |
|   | 4'-0"                              | 9'-9"   | 9'-9"                               |
| ± 85.0                                      | 4'-6"                              | 9'-2"   | 9'-2"                               |
|   | 5'-0"                              | 8'-9"   | 8'-9"                               |
|   | 5'-6"                              | 8'-1"   | 8'-1"                               |
|   | 6'-0"                              | 7'-5"   | 7'-5"                               |
|   | 6'-6"                              | 6'-10"  | 6'-10"                              |
|   | 7'-0"                              | 6'-4"   | 6'-4"                               |

\*\* FOR DOOR JAMB MULLION BOTTOM CONNECTION USE (4) 1/4" ULTRACON ANCHORS WITH NO SHIM SPACE ALLOWED OR (4) 3/8" WEDGE-BOLT ANCHORS WITH 3/8" MAX. SHIM SPACE FOR TOP OF DOOR JAMB MULLION CONNECTIONS SEE SHEETS 8 THRU 13.

**CASES DEFINITIONS**

|              |  |
|--------------|--|
| CASE 1: J-1  | JAMB MULLION: 1/8" THICK W/ LAMINATED GLASS (SEE DET. 8/ 21 & 10/22)   |
| CASE 2: J-2  | JAMB MULLION: 1/8" THICK W/ INSULATED GLASS (SEE DET. 8A/ 21 & 10/22)  |
| CASE 3: J-1A | JAMB MULLION: 3/16" THICK W/ LAMINATED GLASS (SEE DET. 9/ 21 & 10A/22) |
| CASE 4: J-2A | JAMB MULLION: 3/16" THICK W/ INSULATED GLASS (SEE DET. 9A/21 & 10A/22) |

**OPTIONAL SYSTEM # 1**

WALTER A. TILLIT JR.  
 LICENSE No. 44167  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
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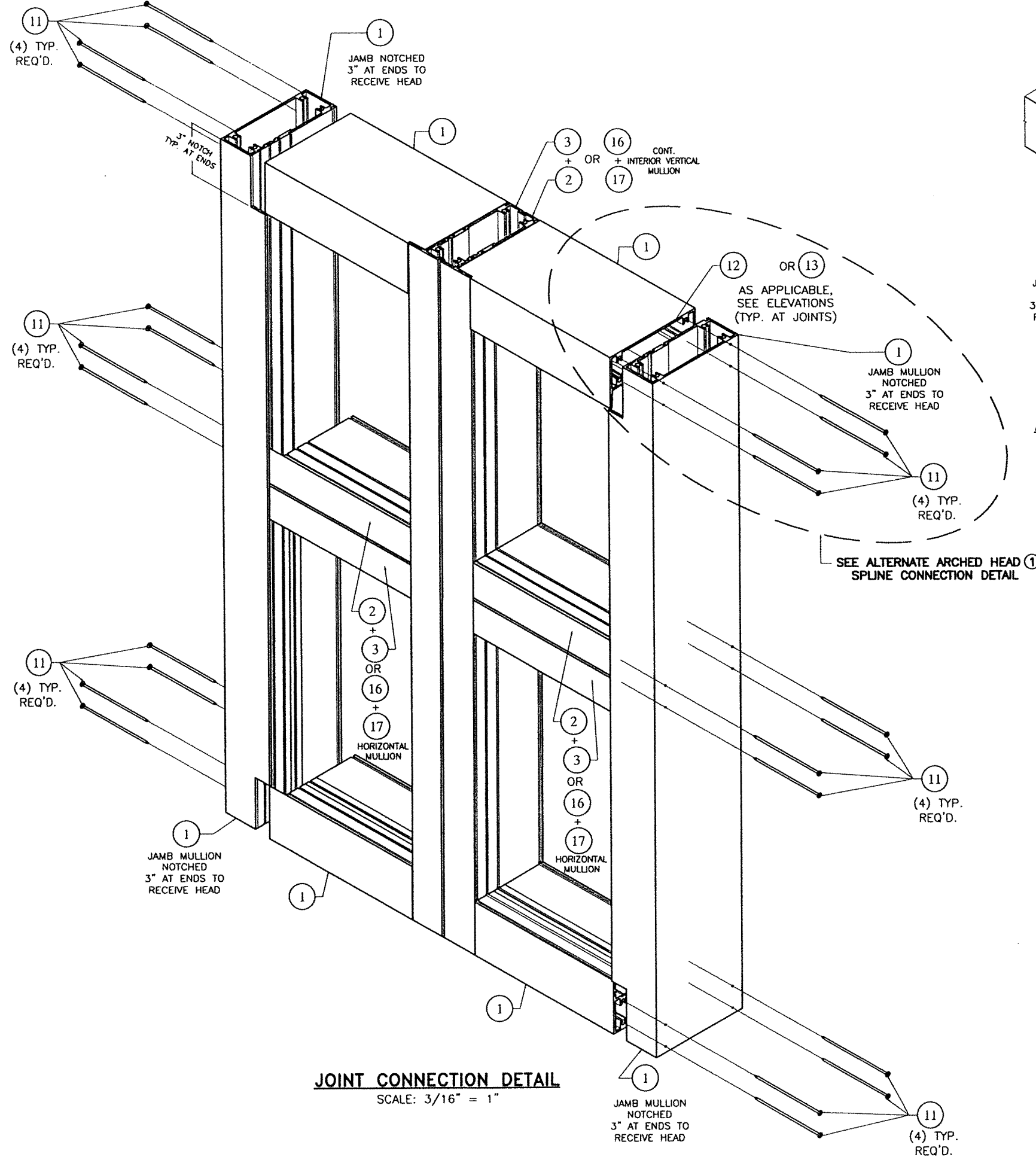
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 e-mail: tilteco@aol.com  
 CA-0006719  
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 FLORIDA Lic. # 44167

**HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED & INSULATED GLASS**

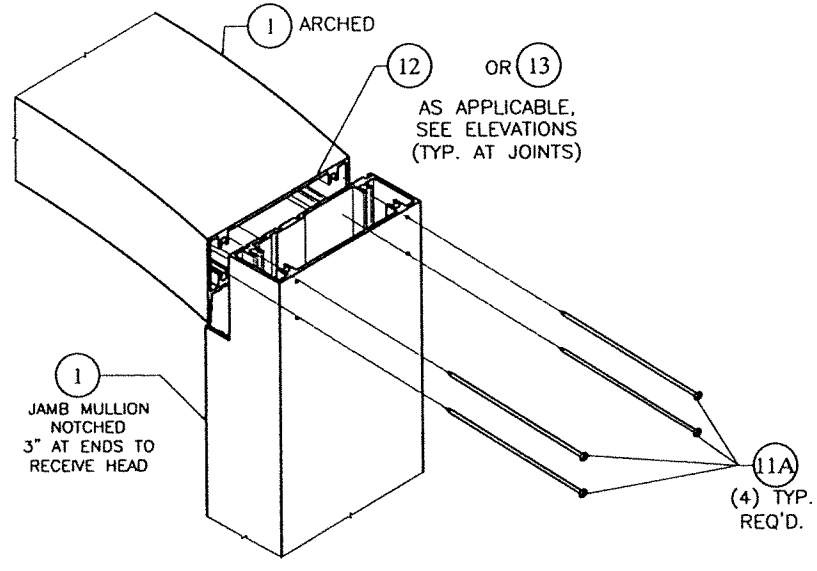
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 SHEET 23 OF 51

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| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |



**JOINT CONNECTION DETAIL**  
SCALE: 3/16" = 1"



**ARCHED HEAD (1) SPLINE CONNECTION DETAIL**  
SCALE: 3/16" = 1"

**OPTIONAL SYSTEM # 1**  
**(ISOMETRIC)**  
NTS

WALTER A. TILLIT JR.  
LICENSE  
No. 44167  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
12/23  
P.E. SEAL/SIGNATURE/DATE

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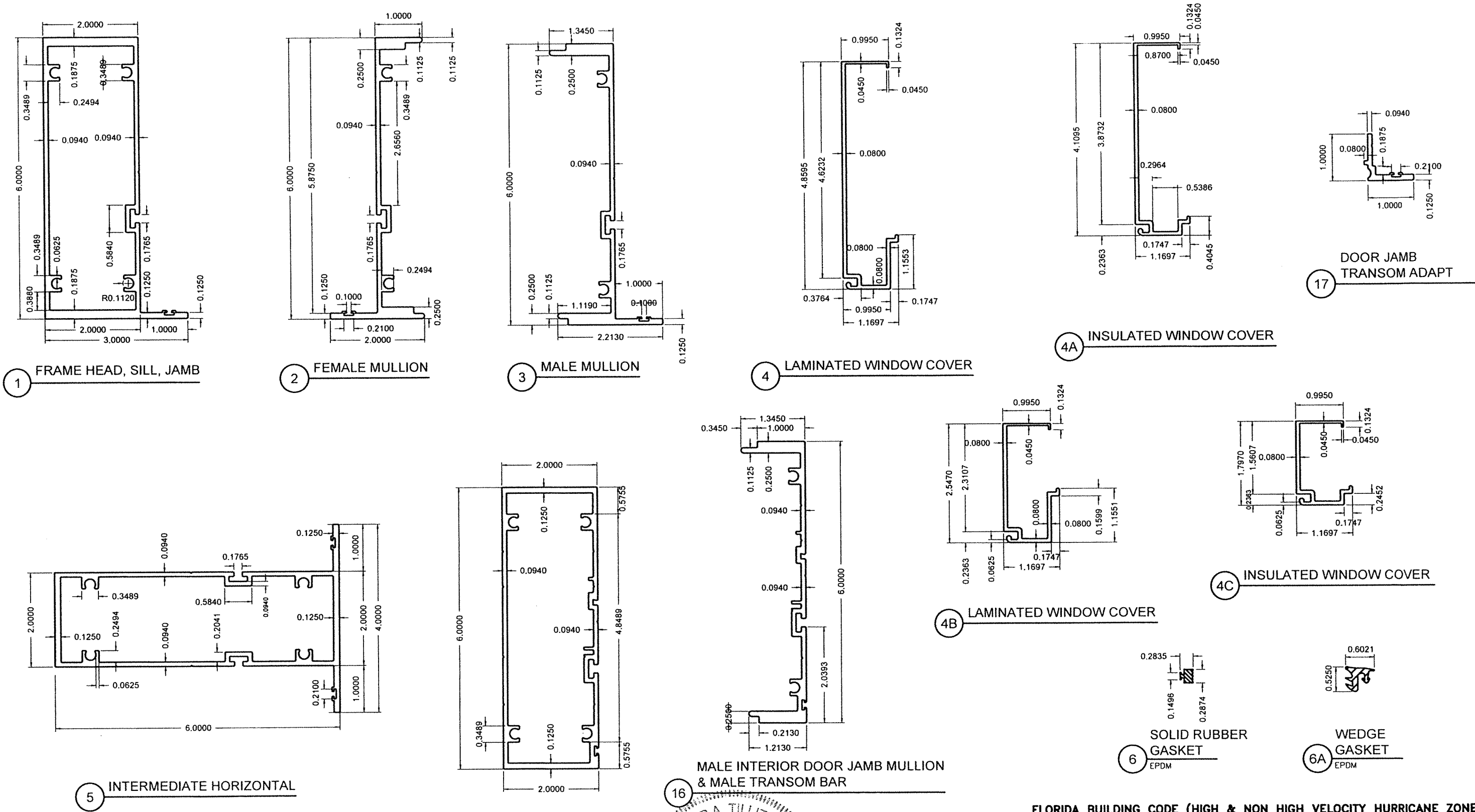
HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES  
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|---------|-------------|----------|---------|-------------|------|
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| 2       | -           | -        | 4       | -           | -    |

W.H. DRAWN BY  
09/12/2023 DATE  
23-213 DRAWING No  
SHEET 24 OF 51



# COMPONENTS: OPTIONAL SYSTEM # 2

16  
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 PROFESSIONAL ENGINEER  
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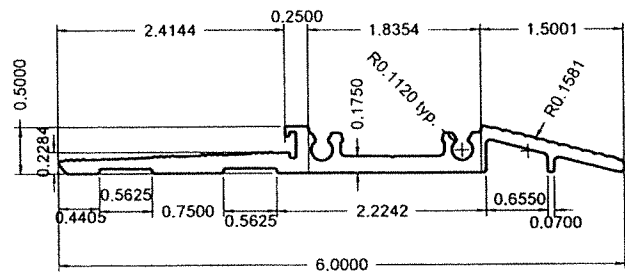
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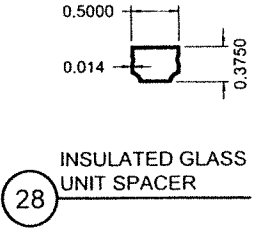
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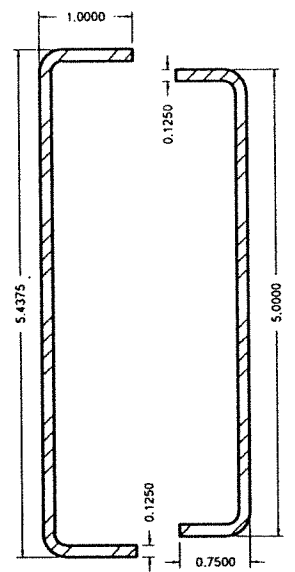
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|---|-------------|----------|----------------------|-------------|------|
| HIGH IMPACT GREEN WORLD FIXED GLASS WALL<br>SERIES 12000 LARGE MISSILE LAMINATED &<br>INSULATED GLASS                           |             |          | W.H.<br>DRAWN BY     |             |      |
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|   |             |          | 23-213<br>DRAWING No |             |      |
| REV. No   | DESCRIPTION | DATE     | REV. No              | DESCRIPTION | DATE |
| 1   | OLD 21-118  | 09/12/23 | 3                    | -           | -    |
| 2   | -           | -        | 4                    | -           | -    |



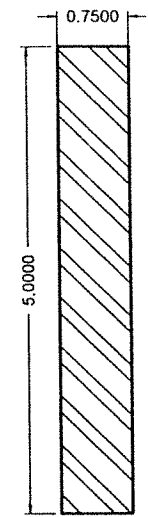
22 ADA THRESHOLD



28 INSULATED GLASS UNIT SPACER



40 STEEL REINFORCEMENT  
STEEL



41 OPTIONAL ALUMINUM REINFORCEMENT TO 40  
6063-T6 ALLOY

COMPONENTS CONT'. :  
OPTIONAL SYSTEM # 2

WALTER A. TILLIT JR.  
LICENSE  
No. 44167  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
09/12/2023

P.E. SEAL/SIGNATURE/DATE

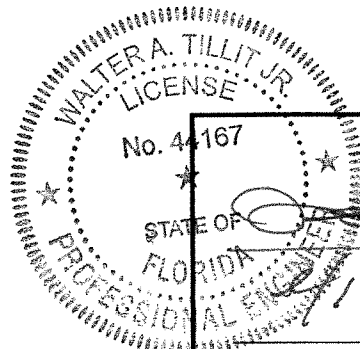
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**TILTECO** INC.  
TILLIT TESTING & ENGINEERING COMPANY  
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166  
Phone : (305)871-1530 ; Fax : (305)871-1531  
e-mail: tilteco@ttil.com  
CA-0006719  
WALTER A. TILLIT Jr. P.E.  
FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

|   |             |          |         |             |                      |
|---|-------------|----------|---------|-------------|----------------------|
| HIGH IMPACT GREEN WORLD FIXED GLASS WALL<br>SERIES 12000 LARGE MISSILE LAMINATED &<br>INSULATED GLASS                           |             |          |         |             | W.H.<br>DRAWN BY     |
| <p>290 WEST 78 ROAD<br/>HIALEAH, FL 33014<br/>PH: (954)226-5555/(305)558-8103<br/>FAX: (305)558-6665<br/>www.gigwindows.com</p> |             |          |         |             | 09/12/2023<br>DATE   |
|   |             |          |         |             | 23-213<br>DRAWING No |
| REV. No   | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE                 |
| 1   | OLD 21-118  | 09/12/23 | 3       | -           | -                    |
| 2   | -           | -        | 4       | -           | -                    |

**BILL OF MATERIALS: OPTIONAL SYSTEM # 2**

| ITEM # | DESCRIPTION   | DIMENSIONS & REMARKS   | MATERIAL  |
|--------|---|--|---|
| ①      | FRAME JAMB, HEAD & SILL   | 6"x3"xVARIES THK.  | 6063-T6 ALUMINUM                                      |
| ②      | FEMALE MULLION  | 6"x2"xVARIES THK.  | 6063-T6 ALUMINUM                                      |
| ③      | MALE MULLION  | 6"x2.213"xVARIES THK.  | 6063-T6 ALUMINUM                                      |
| ④      | LAMINATED WINDOW COVER  | 4.8595"x1.1697"xVARIES THK.  | 6063-T6 ALUMINUM                                      |
| ④A     | INSULATED WINDOW COVER  | 4.1095"x1.1697"xVARIES THK.  | 6063-T6 ALUMINUM                                      |
| ④B     | LAMINATED WINDOW COVER  | 2.5470"x1.1697"xVARIES THK.  | 6063-T6 ALUMINUM                                      |
| ④C     | INSULATED WINDOW COVER  | 1.7970"x1.1697"xVARIES THK.  | 6063-T6 ALUMINUM                                      |
| ⑤      | INTERMEDIATE HORIZONTAL   | 6"x4"xVARIES THK.  | 6063-T6 ALUMINUM                                      |
| ⑥      | SOLID RUBBER GASKET   | 0.2874"x0.2835"xVARIES THK.  | EPDM  |
| ⑥A     | WEDGE GASKET  | 0.6021"x0.5250"xVARIES THK.  | EPDM  |
| ⑧      | STRUCTURAL SILICONE SIKASIL SG-500 CN OR DOWSIL 983               | ALL AROUND GLASS   | SILICONE  |
| ⑩      | DOOR JAMB TRANSOM ADAPT. ASSEMBLY SCREW                           | #10x5/8" F.H. SCREW (START 3" & 8 O.C.)  | S.S.  |
| ⑪      | FRAME ASSEMBLY SCREW  | #14x2 1/2" H.H. SCREW  | STEEL   |
| ⑫      | JOINT DETAIL (METAL TO METAL) GASKET 1/16 XLP W/ RUBBER BASED PSA | OPTIONAL TO ⑬ FOR INTERNAL JOINT. MANUFACTURED BY FRANK LOWE RUBBER & GASKET CO.   | CLOSED CELL POLYETHYLENE FOAM TAPE COATED IN ONE SIDE |
| ⑬      | NON STRUCTURAL SILICONE   | OPTIONAL TO ⑫ FOR INTERNAL JOINT, PLUS EXTERIOR FRAME SEALANT ALL AROUND PERIMETER | SILICONE  |
| ⑭      | MULLION ASSEMBLY BOLT   | 1/4"Ø-20x2 1/2" THRU BOLT W/NUT @ 12" O.C. (START @ 6" O.C. FROM TOP/BOT)          | STAINLESS STEEL AISI 304 SERIES                       |
| ⑮      | END DOOR JAMB MULLION   | 6"x2"xVARIES THK.  | 6063-T6 ALUMINUM                                      |
| ⑯      | MALE INTERIOR DOOR JAMB MULLION & MALE TRANSOM BAR                | 6"x1.2130"xVARIES THK.   | 6063-T6 ALUMINUM                                      |
| ⑰      | DOOR JAMB TRANSOM ADAPT.  | 1"x1.0798"xVARIES THK.   | 6063-T6 ALUMINUM                                      |
| ⑱      | SILL FLASHING (OPTIONAL)  | 1.340" MIN.x5.915" MIN.x0.415" MIN.x0.040" THK.                                    | 3105-H24 ALUMINUM                                     |
| ⑳      | INSULATED GLASS UNIT SPACER                                       | 0.5"x0.375"x0.014" THK.  | 3105-H24 ALUMINUM                                     |
| ㉔      | ANCHORS: SEE SHEETS 34 THRU 43                                    | -  | STEEL   |
| ㉙      | SETTING BLOCK   | 0.133"x0.5" (ULTRAFAB)   | EPDM  |
| ④①     | STEEL REINFORCEMENT   | VARIES   | ASTM A-36 ZINC PLATED OR G-60 GALVANIZED STEEL        |
| ④②     | OPTIONAL ALUMINUM REINFORCEMENT TO ④①                             | 0.75"x5"   | 6061-T6 ALUMINUM                                      |



*Walter A. Tillit Jr.*  
 P.E. SEAL/SIGNATURE/DATE

**FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)**

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 SERIES 12000 LARGE MISSILE LAMINATED &  
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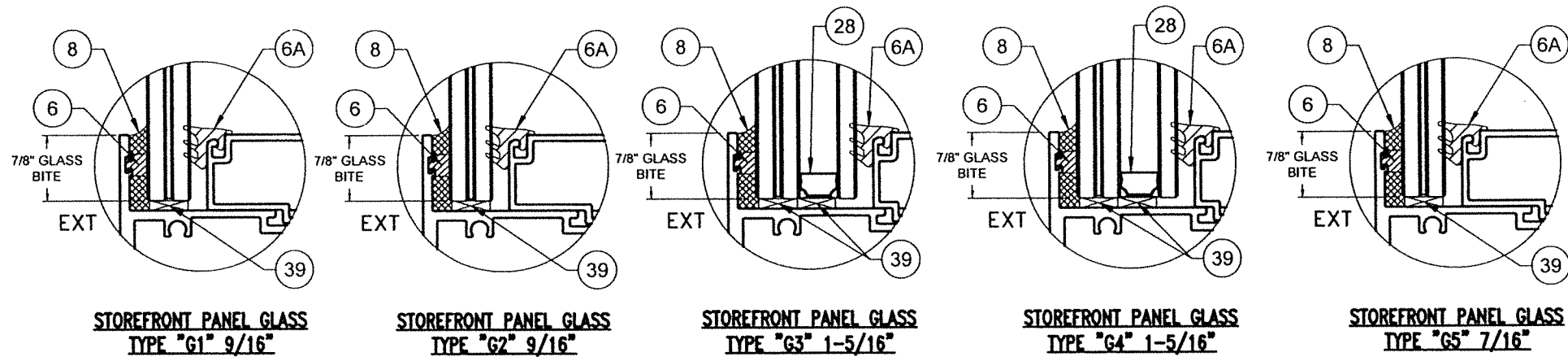
W.H.  
 DRAWN BY  
 09/12/2023  
 DATE  
 23-213  
 DRAWING No

| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
|---------|-------------|----------|---------|-------------|------|
| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

SHEET 27 OF 51

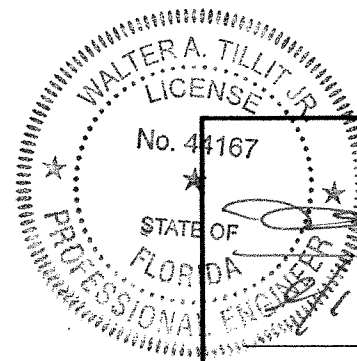
## BILL OF MATERIALS FOR GLASS : OPTIONAL SYSTEM # 2

| COMP.# | DESCRIPTION  | ALLOWED MISSILE TYPE  |
|--------|--|-----------------------|
| G1     | 9/16" NOMINAL LAMINATED GLASS W/ 1/4" H.S. GLASS + 0.090" KURARAY SENTRYGLAS® INTERLAYER BY KURARAY AMERICA, INC. + 1/4" H.S. GLASS.   | LARGE & SMALL MISSILE |
| G2     | 9/16" NOMINAL LAMINATED GLASS W/ 1/4" H.S. GLASS + 0.090" TROSIFOL® PVB INTERLAYER BY KURARAY AMERICA INC. + 1/4" H.S. GLASS.  | LARGE & SMALL MISSILE |
| G3     | 1 5/16" NOMINAL INSULATED GLASS W/ 1/4" H.S. GLASS + 0.090" KURARAY SENTRYGLAS® INTERLAYER BY KURARAY AMERICA, INC. + 1/4" H.S. GLASS + 1/2" AIR SPACE + 1/4" INTERIOR MONOLITHIC TEMPERED GLASS | LARGE & SMALL MISSILE |
| G4     | 1 5/16" NOMINAL INSULATED GLASS W/ 1/4" H.S. GLASS + 0.090" TROSIFOL® PVB INTERLAYER BY KURARAY AMERICA, INC. + 1/4" H.S. GLASS + 1/2" AIR SPACE + 1/4" INTERIOR MONOLITHIC TEMPERED GLASS       | LARGE & SMALL MISSILE |
| G5     | 7/16" NOMINAL LAMINATED GLASS W/ 3/16" H.S. GLASS + 0.090" TROSIFOL® PVB INTERLAYER BY KURARAY AMERICA, INC. + 3/16" H.S. GLASS.   | LARGE & SMALL MISSILE |



### GLASS CONFIGURATION

SCALE: N.T.S



P.E. SEAL/SIGNATURE/DATE

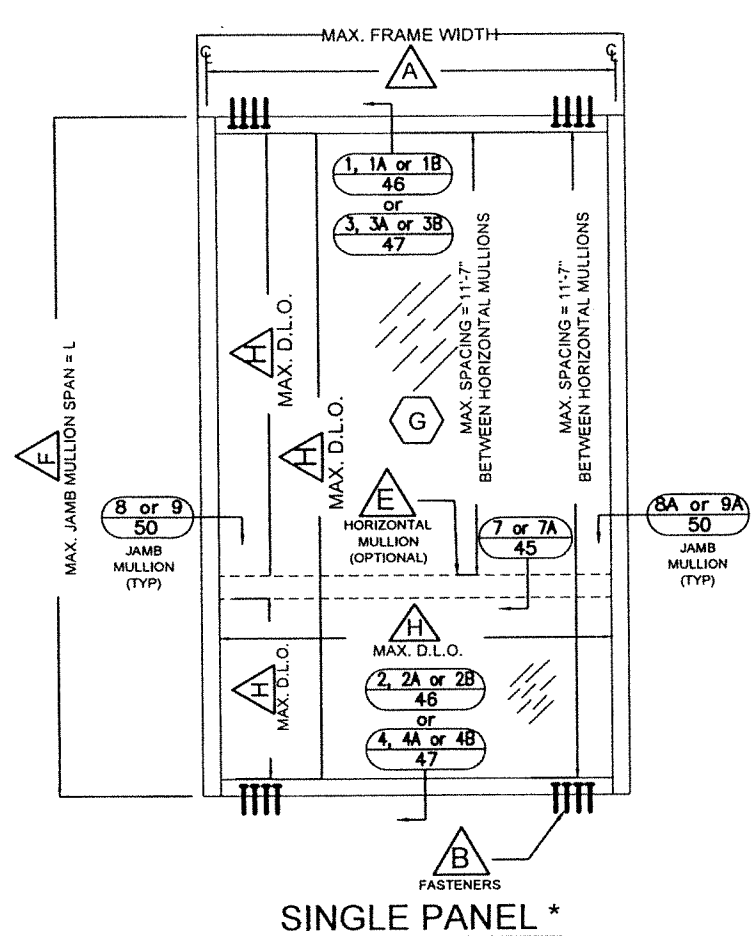
FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

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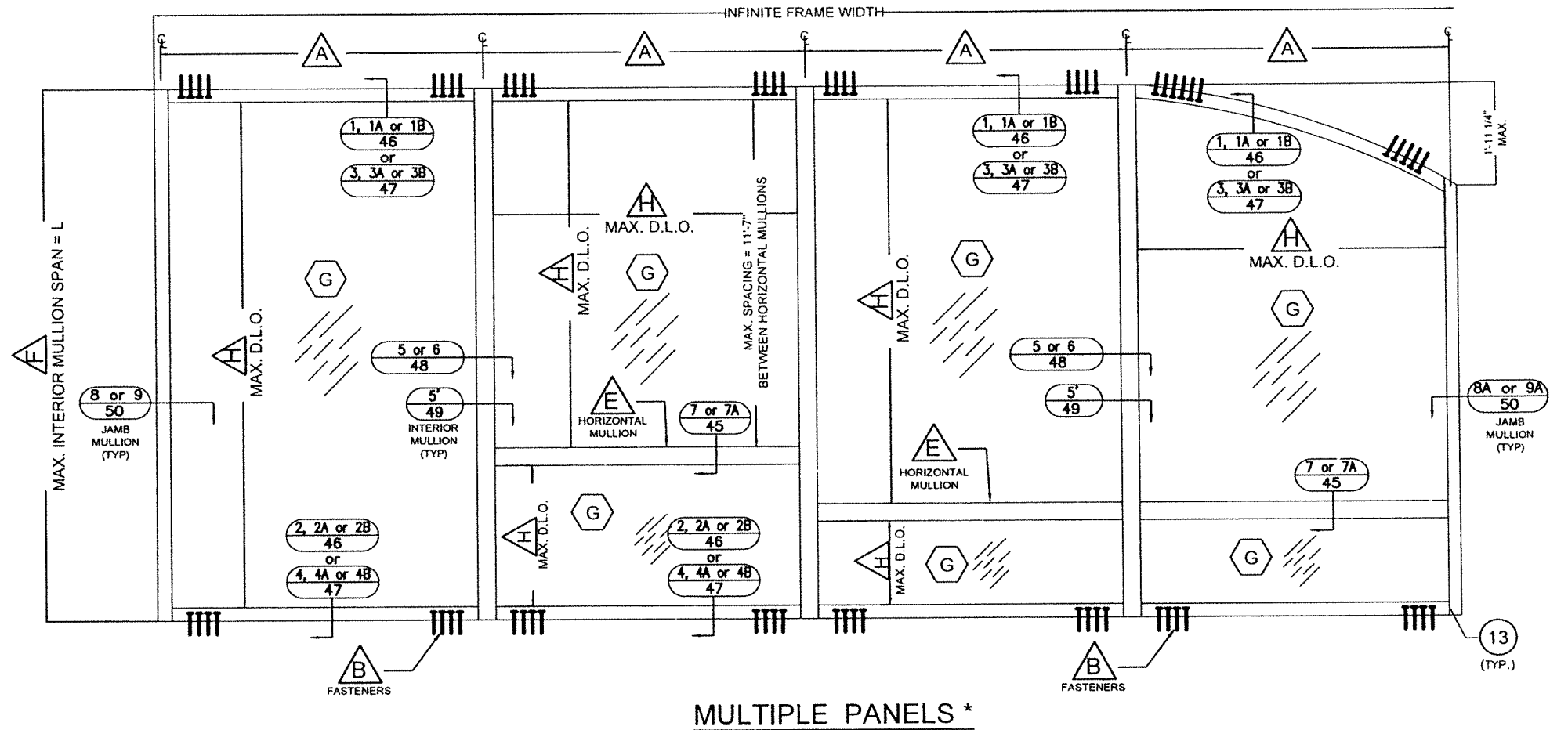
**TILTECO INC.**  
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| HIGH IMPACT GREEN WORLD FIXED GLASS WALL<br>SERIES 12000 LARGE MISSILE LAMINATED &<br>INSULATED GLASS  |             | W.H.<br>DRAWN BY   |             |             |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |
|--|-------------|--------------------|-------------|-------------|---------|-------------|------|---|------------|----------|---|---|---|---|---|---|---|---|---|----------------------|
| <p>290 WEST 78 ROAD<br/>HIALEAH, FL 33014<br/>PH: (954)226-5555/(305)558-8103<br/>FAX: (305)558-6665<br/>www.gigwindows.com</p>  |             | 09/12/2023<br>DATE |             |             |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>OLD 21-118</td> <td>09/12/23</td> <td>3</td> <td>-</td> <td>-</td> </tr> <tr> <td>2</td> <td>-</td> <td>-</td> <td>4</td> <td>-</td> <td>-</td> </tr> </tbody> </table> |             | REV. No            | DESCRIPTION | DATE        | REV. No | DESCRIPTION | DATE | 1 | OLD 21-118 | 09/12/23 | 3 | - | - | 2 | - | - | 4 | - | - | 23-213<br>DRAWING No |
| REV. No  | DESCRIPTION | DATE               | REV. No     | DESCRIPTION | DATE    |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |
| 1  | OLD 21-118  | 09/12/23           | 3           | -           | -       |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |
| 2  | -           | -                  | 4           | -           | -       |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |
|  |             | SHEET 28 OF 51     |             |             |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |

# ELEVATIONS FOR HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 : OPTIONAL SYSTEM # 2



**SINGLE PANEL \***

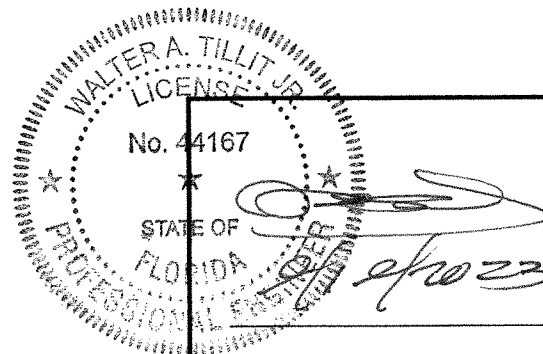


**MULTIPLE PANELS \***

**FOOT NOTES:**

- A** FOR MAXIMUM REINFORCED OR UNREINFORCED INTERIOR MULLION & JAMB MULLION SPACING AT MULTIPLE PANELS OR BETWEEN JAMB MULLIONS AT SINGLE PANELS SEE SHEETS 32 , 32A.
- B** FOR HEAD AND SILL FASTENERS QUANTITY, TYPES AND SPECS SEE SHEETS 34 THRU 39.
- E** USE OF HORIZONTAL MULLION LIMITED BY SCHEDULES ON SHEETS 44 & 44A.
- F** FOR MAXIMUM REINFORCED OR UNREINFORCED INTERIOR DOOR AND END DOOR JAMB MULLION SPAN SEE SHEET 33.
- G** FOR GLAZING DETAILS SEE SHEET 28 AND FOR GLASS SCHEDULE SEE SHEETS 31, 31A.
- H** FOR MAXIMUM D.L.O. SEE SCHEDULE ON SHEETS 31, 31A.

\* NOTE: SINGLE & MULTIPLE PANELS FIXED GLASS WALL SERIES 12000 MAY BE INSTALLED ROTATED 90° FROM ABOVE SHOWN ORIENTATION.



P.E. SEAL/SIGNATURE/DATE

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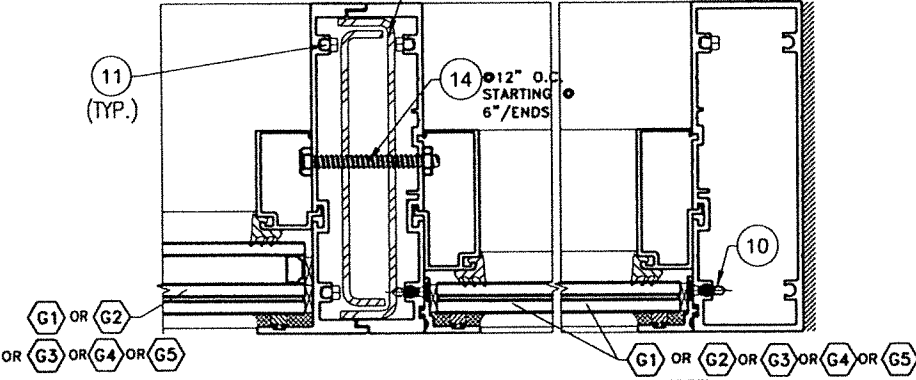
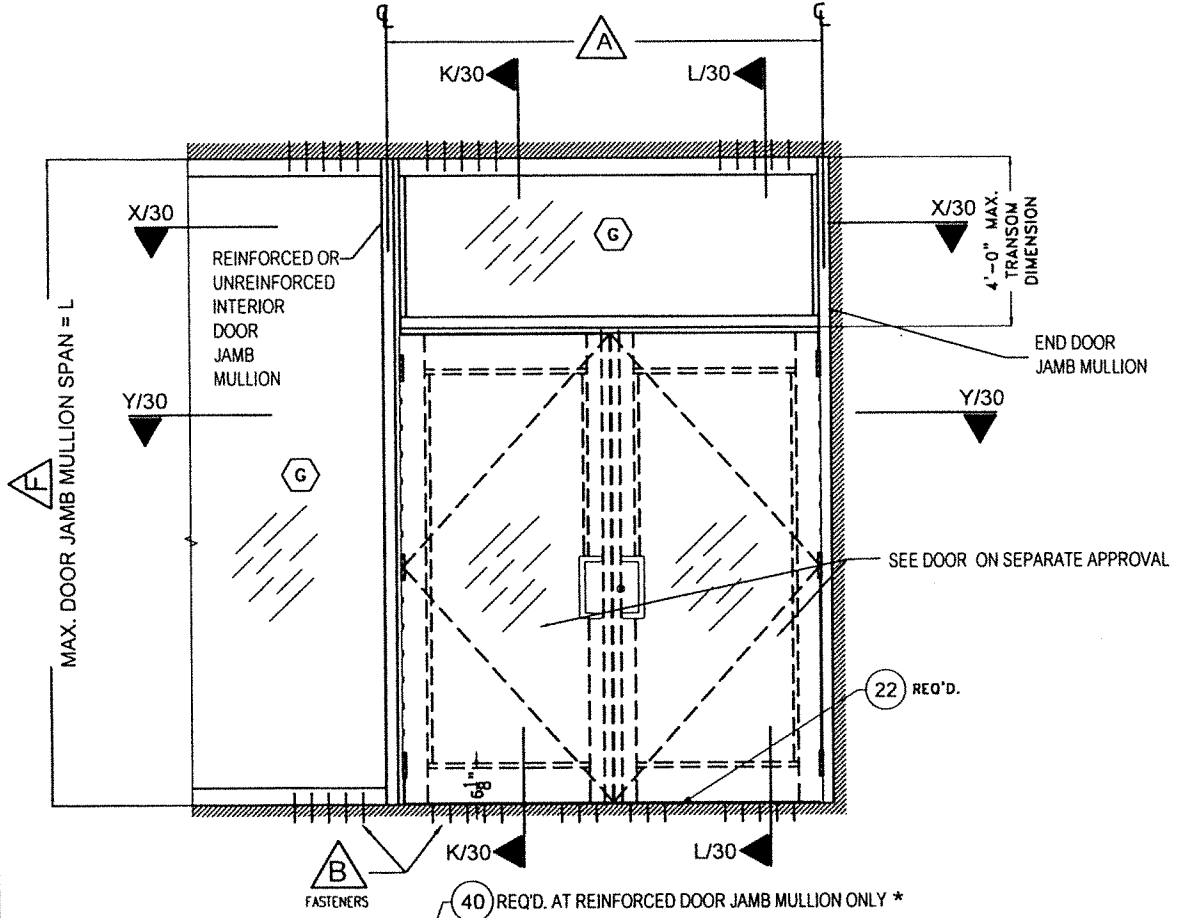
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|--|-------------|----------|--------------------|-------------|------|---------|-------------|------|---|------------|----------|---|---|---|---|---|---|---|---|---|----------------------|
| <p>290 WEST 78 ROAD<br/>HALEAH, FL 33014<br/>PH: (954)226-5555/(305)558-8103<br/>FAX: (305)558-6665<br/>www.gigwindows.com</p>   |             |          | 09/12/2023<br>DATE |             |      |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |
| <p><b>WINDOWS &amp; DOORS</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>OLD 21-118</td> <td>09/12/23</td> <td>3</td> <td>-</td> <td>-</td> </tr> <tr> <td>2</td> <td>-</td> <td>-</td> <td>4</td> <td>-</td> <td>-</td> </tr> </tbody> </table> |             |          | REV. No            | DESCRIPTION | DATE | REV. No | DESCRIPTION | DATE | 1 | OLD 21-118 | 09/12/23 | 3 | - | - | 2 | - | - | 4 | - | - | 23-213<br>DRAWING No |
| REV. No  | DESCRIPTION | DATE     | REV. No            | DESCRIPTION | DATE |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |
| 1  | OLD 21-118  | 09/12/23 | 3                  | -           | -    |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |
| 2  | -           | -        | 4                  | -           | -    |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |
|  |             |          | SHEET 29 OF 51     |             |      |         |             |      |   |            |          |   |   |   |   |   |   |   |   |   |                      |

# ELEVATION FOR HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000

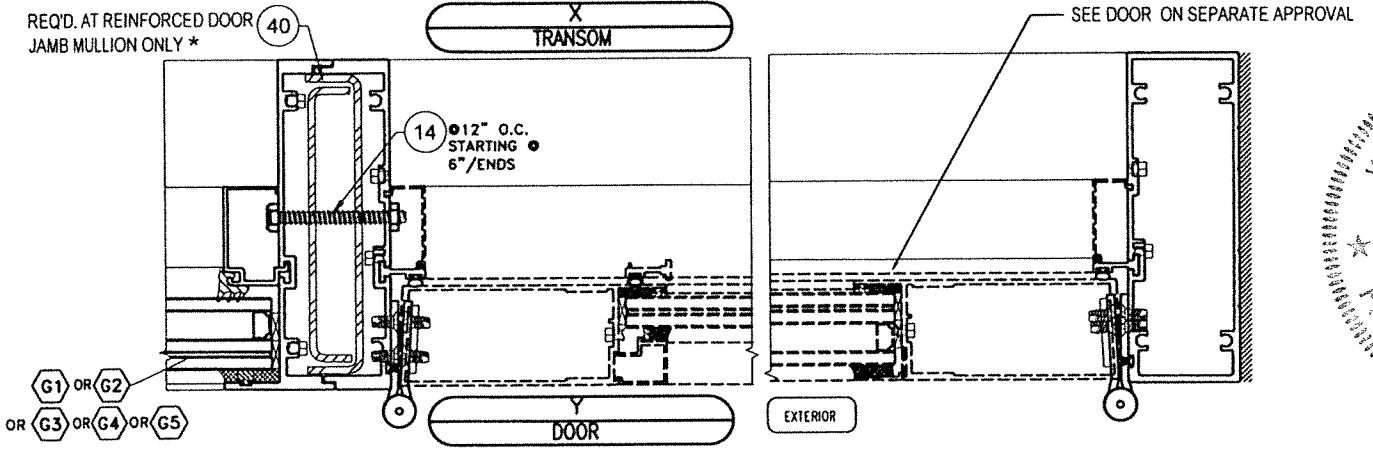
## ADJACENT TO APPROVED DOOR (ON SEPARATE APPROVAL)

### OPTIONAL SYSTEM # 2 CONTINUED

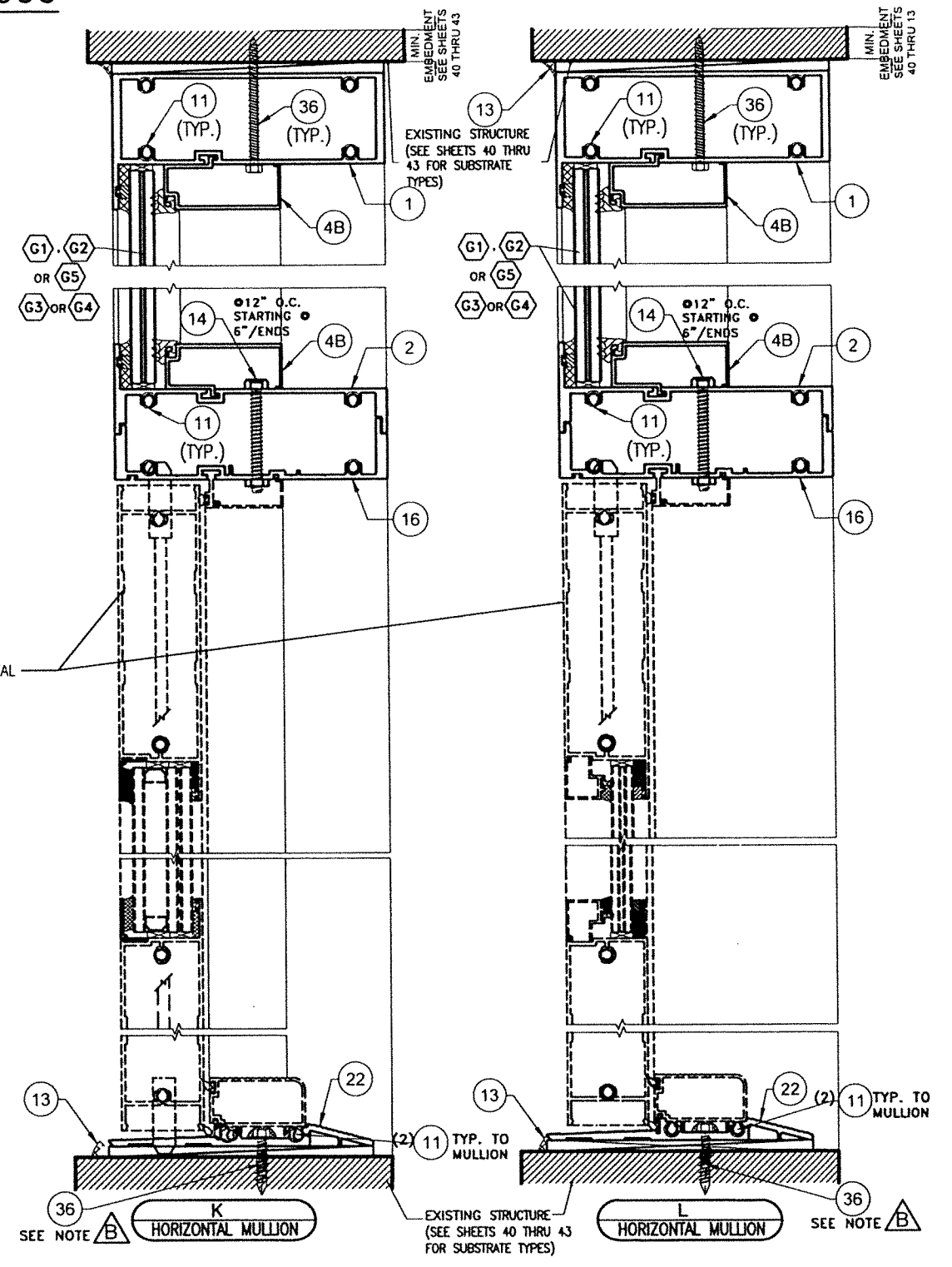


**FOOT NOTES:**

- A** MAXIMUM ON CENTERS BETWEEN INTERIOR DOOR JAMB MULLION & END DOOR JAMB MULLION IS 6'-4".
  - B** FOR HEAD AND SILL FASTENERS QUANTITY, TYPES AND SPECS SEE SHEETS 40 THRU 43.
  - F** FOR MAXIMUM INTERIOR & END DOOR JAMB MULLION SPAN SEE SHEET 33.
  - G** FOR GLAZING DETAILS SEE SHEET 28 AND FOR GLASS SCHEDULE SEE SHEETS 31 & 31A.
- \* COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).



SEE DOOR ON SEPARATE APPROVAL



WALTER A. TILLIT JR. LICENSE  
 No. 44167  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 09/12/2023  
 P.E. SEAL/SIGNATURE/DATE

|  |             |  |         |             |      |
|--|-------------|--|---------|-------------|------|
| FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)   |             | W.H.<br>DRAWN BY   |         |             |      |
| HIGH IMPACT GREEN WORLD FIXED GLASS WALL<br>SERIES 12000 LARGE MISSILE LAMINATED &<br>INSULATED GLASS  |             | 09/12/2023<br>DATE   |         |             |      |
| TILTECO INC.<br>TILLIT TESTING & ENGINEERING COMPANY<br>6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33168<br>Phone : (305)871-1530 . Fax : (305)871-1531<br>e-mail: tilteco@aol.com<br>CA-0006719<br>WALTER A. TILLIT Jr. P.E.<br>FLORIDA Lic. # 44167 |             | 290 WEST 78 ROAD<br>HIALEAH, FL 33014<br>PH: (954)226-5555/(305)558-8103<br>FAX: (305)558-6665<br>www.gigwindows.com |         |             |      |
| 23-213<br>DRAWING No   |             | SHEET 30 OF 51   |         |             |      |
| REV. No  | DESCRIPTION | DATE   | REV. No | DESCRIPTION | DATE |
| 1  | OLD 21-118  | 09/12/23   | 3       | -           | -    |
| 2  | -           | -  | 4       | -           | -    |

**MAXIMUM FRAME WIDTH "a" AND FRAME LENGTH "b" VERSUS A.S.D. DESIGN PRESSURE RATING (psf) SCHEDULE \*  
OPTIONAL SYSTEM # 2**

| GLASS TYPE <b>G1</b> |               |   |
|----------------------|---------------|---|
| DIMENSION "a"        | DIMENSION "b" | MAX.A.S.D. DESIGN PRESSURE RATING (psf) |
| 18" or less          | 18" or less   | +130.0 -140.0                           |
| 18"                  | 18" to 139"   | +130.0 -140.0                           |
| 20"                  | 20" to 139"   | +130.0 -140.0                           |
| 22"                  | 22" to 139"   | +130.0 -140.0                           |
| 24"                  | 24" to 139"   | +130.0 -140.0                           |
| 26"                  | 26" to 139"   | +130.0 -140.0                           |
| 28"                  | 28" to 139"   | +130.0 -140.0                           |
| 30"                  | 30" to 139"   | +130.0 -140.0                           |
| 32"                  | 32" to 139"   | +130.0 -140.0                           |
| 34"                  | 34" to 139"   | +130.0 -140.0                           |
| 36"                  | 36" to 139"   | +130.0 -140.0                           |
| 38"                  | 38" to 139"   | +130.0 -140.0                           |
| 40"                  | 40" to 139"   | +130.0 -140.0                           |
| 42"                  | 42" to 139"   | +130.0 -140.0                           |
| 44"                  | 44" to 137"   | +130.0 -120.0                           |
| 46"                  | 46" to 131"   | +130.0 -116.0                           |
| 48"                  | 48" to 126"   | +130.0 -140.0                           |
| 50"                  | 50" to 121"   | +130.0 -111.0                           |
| 52"                  | 52" to 116"   | +130.0 -111.0                           |
| 54"                  | 54" to 112"   | +130.0 -140.0                           |
| 56"                  | 56" to 108"   | +130.0 110.0                            |
| 58"                  | 58" to 104"   | +130.0 -111.0                           |
| 60"                  | 60" to 98"    | +130.0 -140.0                           |
| 62"                  | 62" to 97"    | +130.0 -114.0                           |
| 64"                  | 64" to 94"    | +130.0 -110.4                           |
| 66"                  | 66" to 84"    | +130.0 -140.0                           |
| 68"                  | 68" to 89"    | +130.0 -103.9                           |
| 70"                  | 70" to 86"    | +130.0 -101.0                           |
| 72"                  | 72" to 82"    | +130.0 -140.0                           |
| 74"                  | 74" to 78"    | +130.0 -95.5                            |
| 76"                  | 76" to 79.7"  | +130.0 -93.0                            |

| GLASS TYPE <b>G2</b> |                |   |
|----------------------|----------------|---|
| DIMENSION "a"        | DIMENSION "b"  | MAX.A.S.D. DESIGN PRESSURE RATING (psf) |
| 18" or less          | 18" or less    | ±90.0                                   |
| 18"                  | 18" to 139"    | ±90.0                                   |
| 20"                  | 20" to 139"    | ±90.0                                   |
| 22"                  | 22" to 139"    | ±90.0                                   |
| 24"                  | 24" to 139"    | ±90.0                                   |
| 26"                  | 26" to 139"    | ±90.0                                   |
| 28"                  | 28" to 139"    | ±90.0                                   |
| 30"                  | 30" to 139"    | ±90.0                                   |
| 32"                  | 32" to 139"    | ±90.0                                   |
| 34"                  | 34" to 139"    | ±90.0                                   |
| 36"                  | 36" to 139"    | ±90.0                                   |
| 38"                  | 38" to 132"    | ±90.0                                   |
| 40"                  | 40" to 128"    | ±90.0                                   |
| 42"                  | 42" to 120"    | ±90.0                                   |
| 44"                  | > 120" to 139" | ±80.0                                   |
| 46"                  | 46" to 112"    | ±90.0                                   |
| 48"                  | > 112" to 139" | ±80.0                                   |
| 50"                  | 50" to 103"    | ±90.0                                   |
| 52"                  | 52" to 99"     | ±87.4                                   |
| 54"                  | 54" to 95"     | ±84.1                                   |
| 56"                  | 56" to 129"    | ±80.0                                   |
| 58"                  | 58" to 124"    | ±80.0                                   |
| 60"                  | 60" to 120"    | ±80.0                                   |
| 62"                  | 62" to 116"    | ±80.0                                   |
| 64"                  | 64" to 112"    | ±80.0                                   |
| 66"                  | 66" to 108"    | ±79.6                                   |
| 68"                  | 68" to 106"    | ±79.3                                   |
| 70"                  | 70" to 103"    | ±79.3                                   |
| 72"                  | 72" to 100"    | ±79.5                                   |
| 74"                  | 74" to 97"     | ±79.8                                   |
| 76"                  | 76" to 95"     | ±78.4                                   |
| 78"                  | 78" to 92.5"   | ±76.4                                   |
| 80"                  | 80" to 90"     | ±74.5                                   |
| 82"                  | 82" to 88"     | ±72.6                                   |
| 84"                  | 84" to 86"     | ±70.9                                   |

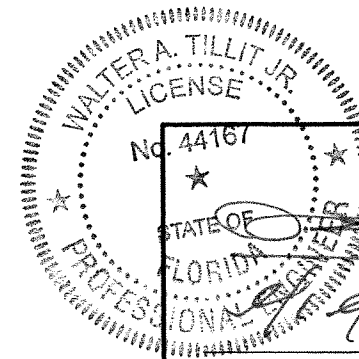
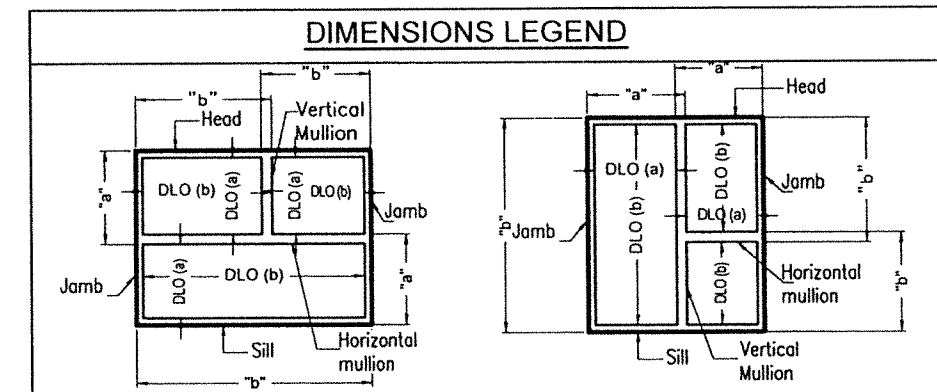
**\* DETERMINATION OF MAXIMUM DAY LIGHT OPENING (D.L.O.) AT EACH END OF GLASS  
GIVEN "a" & "b"**

| SIDE                         | MAX. DAY LIGHT OPENING                             |  |
|------------------------------|--|--|
|                              | (D.L.O.) Formula at vertical & horizontal mullions | (D.L.O.) Formula at jamb, head & sill frames |
| MAX. D.L.O. (a) (SHORT SIDE) | "a"-6.00"  | "a"-6.00"                                    |
| MAX. D.L.O. (b) (LONG SIDE)  | "b"-6.00"  | "b"-6.00"                                    |

**NOTE:**

1. SEE SHEET 28 FOR GLAZING DETAILS AND GLASS DESCRIPTIONS.

\*\* SIDE "a" IS ALWAYS EQUAL OR SHORTER THAN "b".  
"a", "b", MAY BE ORIENTED IN ANY DIRECTION.



P.E. SEAL/SIGNATURE/DATE

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CA-0006719  
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FLORIDA Lic. # 44167

**FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)**

HIGH IMPACT GREEN WORLD FIXED GLASS WALL  
SERIES 12000 LARGE MISSILE LAMINATED &  
INSULATED GLASS



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W.H.  
DRAWN BY

09/12/2023  
DATE

23-213  
DRAWING No

| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
|---------|-------------|----------|---------|-------------|------|
| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

**MAXIMUM FRAME WIDTH "a" AND FRAME LENGTH "b" VERSUS A.S.D. DESIGN PRESSURE RATING (psf) SCHEDULE \***  
**OPTIONAL SYSTEM # 2**

| GLASS TYPE G3 |                |   |
|---------------|----------------|---|
| DIMENSION "a" | DIMENSION "b"  | MAX.A.S.D. DESIGN PRESSURE RATING (psf) |
| 18" or less   | 18" or less    | +130.0 -140.0                           |
| 18"           | 18" to 139"    | +130.0 -140.0                           |
| 20"           | 20" to 139"    | +130.0 -140.0                           |
| 22"           | 22" to 139"    | +130.0 -140.0                           |
| 24"           | 24" to 139"    | +130.0 -140.0                           |
| 26"           | 26" to 139"    | +130.0 -140.0                           |
| 28"           | 28" to 139"    | +130.0 -140.0                           |
| 30"           | 30" to 139"    | +130.0 -140.0                           |
| 32"           | 32" to 139"    | +130.0 -140.0                           |
| 34"           | 34" to 139"    | +130.0 -140.0                           |
| 36"           | 36" to 139"    | +130.0 -140.0                           |
| 38"           | 38" to 139"    | +130.0 -140.0                           |
| 40"           | 40" to 139"    | +130.0 -140.0                           |
| 42"           | 42" to 139"    | +130.0 -140.0                           |
| 44"           | 44" to 137"    | +130.0 -126.0                           |
| 46"           | 46" to 131"    | +130.0 -121.0                           |
| 48"           | 48" to 122"    | +130.0 -140.0                           |
|               | > 122" to 139" | ±20.0                                   |
| 50"           | 50" to 121"    | +130.0 -113.0                           |
| 52"           | 52" to 116"    | +130.0 -113.0                           |
| 54"           | 54" to 108"    | +130.0 -140.0                           |
|               | > 108" to 139" | ±20.0                                   |
| 56"           | 56" to 108"    | +130.0 -108.0                           |
| 58"           | 58" to 104"    | +130.0 -117.0                           |
| 60"           | 60" to 98"     | +130.0 -140.0                           |
|               | > 98" to 139"  | ±20.0                                   |
| 62"           | 62" to 96"     | +130.0 -114.0                           |
| 64"           | 64" to 94"     | +130.0 -110.4                           |
| 66"           | 66" to 87.5"   | +130.0 -140.0                           |
|               | > 87.5" to 90" | ±107.1                                  |
|               | > 90" to 139"  | ±20.0                                   |
| 68"           | 68" to 89"     | +130.0 -103.9                           |
| 70"           | 70" to 86"     | +130.0 -101.0                           |
| 72"           | 72" to 80.5"   | +130.0 -140.0                           |
|               | >80.5" to 84"  | ±98.1                                   |
|               | >84" to 139"   | ±20.0                                   |
| 74"           | 74" to 81"     | +130.0 -95.5                            |
| 76"           | 76" to 79"     | +130.0 -93.0                            |

| GLASS TYPE G4 |                  |   |
|---------------|------------------|---|
| DIMENSION "a" | DIMENSION "b"    | MAX.A.S.D. DESIGN PRESSURE RATING (psf) |
| 18" or less   | 18" or less      | ±80.0                                   |
| 18"           | 18" to 139"      | ±80.0                                   |
| 20"           | 20" to 139"      | ±80.0                                   |
| 22"           | 22" to 139"      | ±80.0                                   |
| 24"           | 24" to 139"      | ±80.0                                   |
| 26"           | 26" to 139"      | ±80.0                                   |
| 28"           | 28" to 139"      | ±80.0                                   |
| 30"           | 30" to 139"      | ±80.0                                   |
| 32"           | 32" to 139"      | ±80.0                                   |
| 34"           | 34" to 139"      | ±80.0                                   |
| 36"           | 36" to 139"      | ±80.0                                   |
| 38"           | 38" to 139"      | ±80.0                                   |
| 40"           | 40" to 139"      | ±80.0                                   |
| 42"           | 42" to 139"      | ±80.0                                   |
| 44"           | 44" to 139"      | ±80.0                                   |
| 46"           | 46" to 139"      | ±80.0                                   |
| 48"           | 48" to 139"      | ±80.0                                   |
| 50"           | 50" to 139"      | ±80.0                                   |
| 52"           | 52" to 138"      | ±80.0                                   |
| 54"           | 54" to 133.5"    | ±80.0                                   |
| 56"           | 56" to 129"      | ±80.0                                   |
| 58"           | 58" to 124"      | ±80.0                                   |
| 60"           | 60" to 120"      | ±80.0                                   |
| 62"           | 62" to 116"      | ±80.0                                   |
| 64"           | 64" to 112"      | ±80.0                                   |
| 66"           | 66" to 108"      | ±80.0                                   |
|               | > 108" to 109.5" | ±79.6                                   |
| 68"           | 68" to 106"      | ±79.3                                   |
| 70"           | 70" to 103"      | ±79.3                                   |
| 72"           | 72" to 96"       | ±80.0                                   |
|               | > 96" to 100"    | ±79.5                                   |
| 74"           | 74" to 97"       | ±79.8                                   |
| 76"           | 76" to 95"       | ±78.4                                   |
| 78"           | 78" to 91"       | ±76.1                                   |
| 80"           | 80" to 90"       | ±74.5                                   |
| 82"           | 82" to 88"       | ±72.6                                   |
| 84"           | 84" to 86"       | ±70.9                                   |

| GLASS TYPE G5 |               |   |
|---------------|---------------|---|
| DIMENSION "a" | DIMENSION "b" | MAX.A.S.D. DESIGN PRESSURE RATING (psf) |
| 18" or less   | 18" or less   | ±90.0                                   |
| 18"           | 18" to 139"   | ±90.0                                   |
| 20"           | 20" to 139"   | ±90.0                                   |
| 22"           | 22" to 139"   | ±90.0                                   |
| 24"           | 24" to 139"   | ±90.0                                   |
| 26"           | 26" to 139"   | ±90.0                                   |
| 28"           | 28" to 139"   | ±90.0                                   |
| 30"           | 30" to 139"   | ±90.0                                   |
| 32"           | 32" to 139"   | ±90.0                                   |
| 34"           | 34" to 139"   | ±90.0                                   |
| 36"           | 36" to 139"   | ±90.0                                   |
| 38"           | 38" to 132"   | ±90.0                                   |
| 40"           | 40" to 128"   | ±90.0                                   |
| 42"           | 42" to 120"   | ±90.0                                   |
| 44"           | 44" to 117"   | ±90.0                                   |
| 46"           | 46" to 111"   | ±90.0                                   |
| 48"           | 48" to 107"   | ±90.0                                   |
| 50"           | 50" to 103"   | ±90.0                                   |
| 52"           | 52" to 99"    | ±90.0                                   |
| 54"           | 54" to 95"    | ±84.1                                   |
| 56"           | 56" to 91"    | ±81.1                                   |
| 58"           | 58" to 88"    | ±78.3                                   |
| 60"           | 60" to 85.5"  | ±75.7                                   |
| 62"           | 62" to 83"    | ±73.3                                   |
| 64"           | 64" to 80"    | ±71.2                                   |
| 66"           | 66" to 78"    | ±68.8                                   |
| 68"           | 68" to 75"    | ±66.8                                   |
| 70"           | 70" to 73"    | ±64.3                                   |

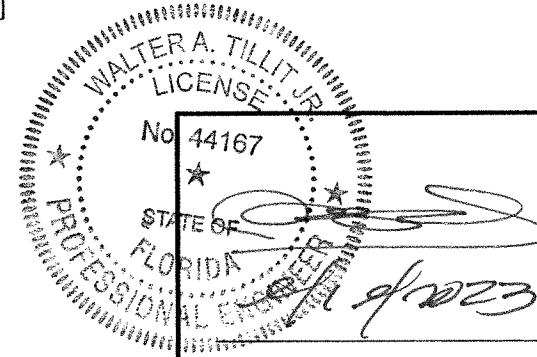
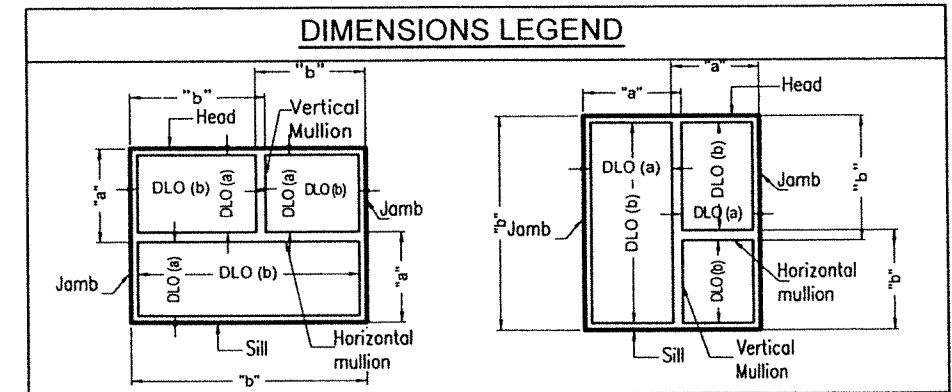
**\* DETERMINATION OF MAXIMUM DAY LIGHT OPENING (D.L.O.) AT EACH END OF GLASS GIVEN "a" & "b"**

| SIDE                         | MAX. DAY LIGHT OPENING                             |  |
|------------------------------|--|--|
|                              | (D.L.O.) Formula at vertical & horizontal mullions | (D.L.O.) Formula at jamb, head & sill frames |
| MAX. D.L.O. (a) (SHORT SIDE) | "a"-6.00"  | "a"-6.00"                                    |
| MAX. D.L.O. (b) (LONG SIDE)  | "b"-6.00"  | "b"-6.00"                                    |

**NOTE:**

1. SEE SHEET 28 FOR GLAZING DETAILS AND GLASS DESCRIPTIONS.

**\*\* SIDE "a" IS ALWAYS EQUAL OR SHORTER THAN "b". "a", "b" MAY BE ORIENTED IN ANY DIRECTION.**



**FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)**

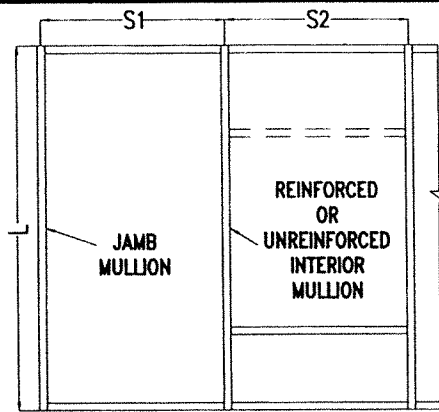
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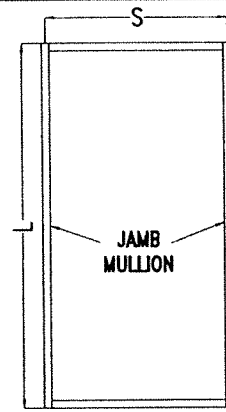
TILLIT TESTING & ENGINEERING COMPANY  
 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166  
 Phone : (305)871-1530 . Fax : (305)871-1531  
 e-mail: tilteco@aol.com  
 CA-0006719  
 WALTER A. TILLIT Jr. P.E.  
 FLORIDA Lic. # 44167

| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
|---------|-------------|----------|---------|-------------|------|
| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

W.H. DRAWN BY  
 09/12/2023 DATE  
**23-213** DRAWING No  
 SHEET 31A OF 51



ELEVATION W/ REINFORCED OR UNREINFORCED INTERIOR MULLION @ MULTIPLE PANELS

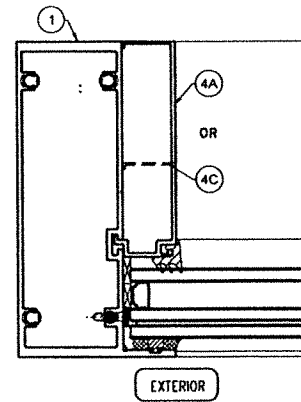
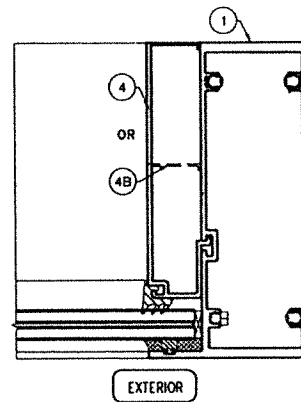
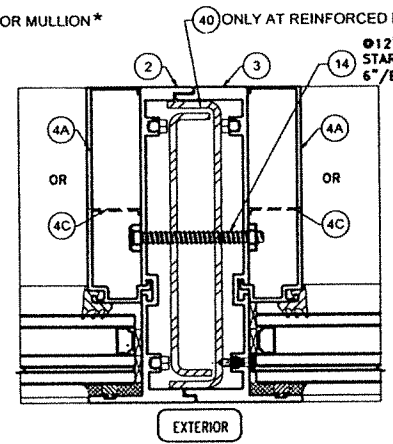
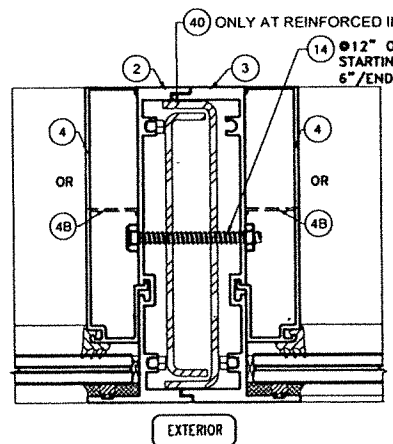
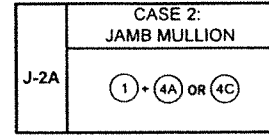
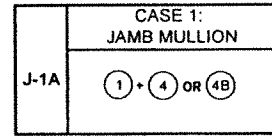
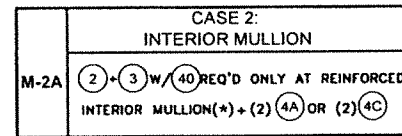
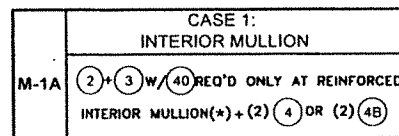


ELEVATION W/ JAMB MULLION @ SINGLE PANEL

"L" = MAXIMUM INTERIOR MULLION SPAN  
EFFECTIVE  
SPACING: "b" =  $\frac{S_1 + S_2}{2}$  FOR MULTIPLE PANELS

"L" = MAXIMUM JAMB MULLION SPAN  
EFFECTIVE  
SPACING: "b" = S FOR SINGLE PANEL.

\*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).



## OPTIONAL SYSTEM # 2

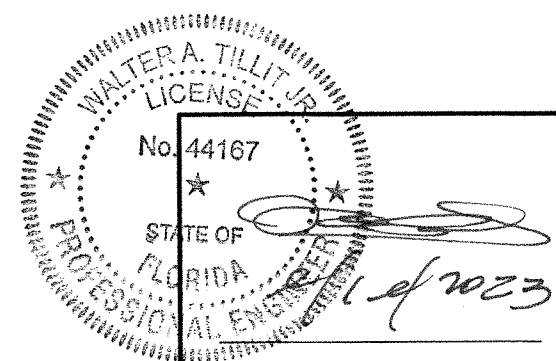
### CASES DEFINITIONS

- CASE 1: M-1A REINFORCED OR UNREINFORCED INTERIOR MULLION: W/ LAMINATED GLASS (SEE DET. 5 ON SHEET 48)  
J-1A JAMB MULLION: W/ LAMINATED GLASS (SEE DET. 8 OR 8A ON SHEET 50)
- CASE 2: M-2A REINFORCED OR UNREINFORCED INTERIOR MULLION: W/ INSULATED GLASS (SEE DET. 6 ON SHEET 48)  
J-2A JAMB MULLION: 3/16" THICK W/ INSULATED GLASS (SEE DET. 9 OR 9A ON SHEET 50)

| MAXIMUM UNREINFORCED INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED) |                                   |   |
|--|-----------------------------------|---|
| MAXIMUM DESIGN PRESSURE RATING   | MAX. EFFECTIVE SPACING "b"(Ft-in) | LAMINATED GLASS OR INSULATED GLASS      |
| "W"(psf)   |                                   | CASE 1 OR CASE 2<br>M-1A/J-1A M-2A/J-2A |
| +103.0 , -94.0   | 5'-0"                             | 9'-6"                                   |

| MAXIMUM REINFORCED INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED) |                                   |   |
|--|-----------------------------------|---|
| MAXIMUM DESIGN PRESSURE RATING   | MAX. EFFECTIVE SPACING "b"(Ft-in) | LAMINATED GLASS OR INSULATED GLASS      |
| "W"(psf)   |                                   | CASE 1 OR CASE 2<br>M-1A/J-1A M-2A/J-2A |
| ± 40.0   | 3'-6"                             | 15'-9"                                  |
|  | 4'-0"                             | 15'-9"                                  |
|  | 4'-6"                             | 15'-9"                                  |
|  | 5'-0"                             | 15'-9"                                  |
|  | 5'-6"                             | 15'-7"                                  |
|  | 6'-0"                             | 15'-1"                                  |
|  | 6'-6"                             | 14'-9"                                  |
| ± 45.0   | 3'-6"                             | 15'-9"                                  |
|  | 4'-0"                             | 15'-9"                                  |
|  | 4'-6"                             | 15'-9"                                  |
|  | 5'-0"                             | 15'-5"                                  |
|  | 5'-6"                             | 15'-0"                                  |
|  | 6'-0"                             | 14'-9"                                  |
|  | 6'-6"                             | 14'-6"                                  |
| ± 50.0   | 3'-6"                             | 15'-9"                                  |
|  | 4'-0"                             | 15'-9"                                  |
|  | 4'-6"                             | 15'-5"                                  |
|  | 5'-0"                             | 14'-11"                                 |
|  | 5'-6"                             | 14'-5"                                  |
|  | 6'-0"                             | 14'-0"                                  |
|  | 6'-6"                             | 13'-8"                                  |
| ± 55.0   | 3'-6"                             | 15'-9"                                  |
|  | 4'-0"                             | 15'-7"                                  |
|  | 4'-6"                             | 15'-0"                                  |
|  | 5'-0"                             | 14'-5"                                  |
|  | 5'-6"                             | 14'-0"                                  |
|  | 6'-0"                             | 13'-7"                                  |
|  | 6'-6"                             | 13'-3"                                  |
| ± 60.0   | 3'-6"                             | 15'-9"                                  |
|  | 4'-0"                             | 15'-1"                                  |
|  | 4'-6"                             | 14'-6"                                  |
|  | 5'-0"                             | 14'-0"                                  |
|  | 5'-6"                             | 13'-7"                                  |
|  | 6'-0"                             | 13'-3"                                  |
|  | 6'-6"                             | 12'-10"                                 |
| ± 65.0   | 3'-6"                             | 15'-5"                                  |
|  | 4'-0"                             | 14'-9"                                  |
|  | 4'-6"                             | 14'-2"                                  |
|  | 5'-0"                             | 13'-8"                                  |
|  | 5'-6"                             | 13'-3"                                  |
|  | 6'-0"                             | 12'-10"                                 |
|  | 6'-6"                             | 12'-4"                                  |

| MAXIMUM REINFORCED INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED) |                                   |   |
|--|-----------------------------------|---|
| MAXIMUM DESIGN PRESSURE RATING   | MAX. EFFECTIVE SPACING "b"(Ft-in) | LAMINATED GLASS OR INSULATED GLASS      |
| "W"(psf)   |                                   | CASE 1 OR CASE 2<br>M-1A/J-1A M-2A/J-2A |
| ± 70.0   | 3'-6"                             | 15'-0"                                  |
|  | 4'-0"                             | 14'-4"                                  |
|  | 4'-6"                             | 13'-10"                                 |
|  | 5'-0"                             | 13'-4"                                  |
|  | 5'-6"                             | 12'-11"                                 |
|  | 6'-0"                             | 12'-4"                                  |
|  | 6'-6"                             | 11'-10"                                 |
| ± 75.0   | 3'-6"                             | 14'-8"                                  |
|  | 4'-0"                             | 14'-0"                                  |
|  | 4'-6"                             | 13'-6"                                  |
|  | 5'-0"                             | 13'-0"                                  |
|  | 5'-6"                             | 12'-5"                                  |
|  | 6'-0"                             | 11'-11"                                 |
|  | 6'-6"                             | 11'-5"                                  |
| ± 80.0   | 3'-6"                             | 14'-4"                                  |
|  | 4'-0"                             | 13'-9"                                  |
|  | 4'-6"                             | 13'-3"                                  |
|  | 5'-0"                             | 12'-8"                                  |
|  | 5'-6"                             | 12'-1"                                  |
|  | 6'-0"                             | 10'-0"                                  |
|  | 6'-6"                             | 10'-0"                                  |
| ± 85.0   | 3'-6"                             | 14'-1"                                  |
|  | 4'-0"                             | 13'-6"                                  |
|  | 4'-6"                             | 12'-11"                                 |
|  | 5'-0"                             | 12'-3"                                  |
|  | 5'-6"                             | 11'-8"                                  |
|  | 6'-0"                             | 10'-0"                                  |
|  | 6'-6"                             | 10'-0"                                  |
| ± 90.0   | 3'-6"                             | 13'-10"                                 |
|  | 4'-0"                             | 13'-3"                                  |
|  | 4'-6"                             | 12'-7"                                  |
|  | 5'-0"                             | 11'-11"                                 |
|  | 5'-6"                             | 11'-4"                                  |
|  | 6'-0"                             | 10'-0"                                  |
|  | 6'-6"                             | 10'-0"                                  |
| ± 95.0   | 3'-6"                             | 13'-7"                                  |
|  | 4'-0"                             | 13'-0"                                  |
|  | 4'-6"                             | 12'-3"                                  |
|  | 5'-0"                             | 11'-7"                                  |
|  | 5'-6"                             | 11'-1"                                  |
|  | 6'-0"                             | 10'-0"                                  |
|  | 6'-6"                             | 10'-0"                                  |



FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

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WALTER A. TILLIT Jr. P.E.  
FLORIDA Lic. # 44167

HIGH IMPACT GREEN WORLD FIXED GLASS WALL  
SERIES 12000 LARGE MISSILE LAMINATED & INSULATED GLASS

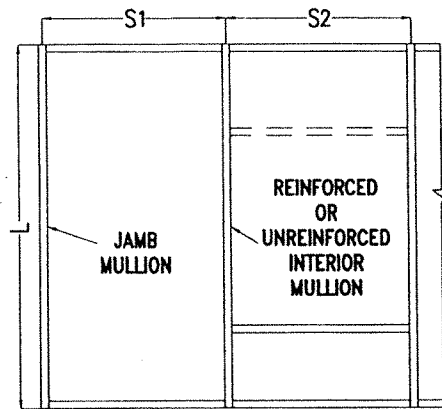
W.H. DRAWN BY

09/12/2023 DATE

23-213 DRAWING No

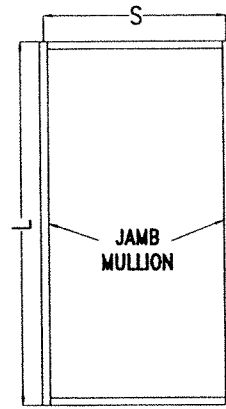
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| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
|---------|-------------|----------|---------|-------------|------|
| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |



ELEVATION W/ REINFORCED OR UNREINFORCED INTERIOR MULLION @ MULTIPLE PANELS

"L" = MAXIMUM INTERIOR MULLION SPAN EFFECTIVE SPACING: "b" =  $\frac{S_1 + S_2}{2}$  FOR MULTIPLE PANELS



ELEVATION W/ JAMB MULLION @ SINGLE PANEL

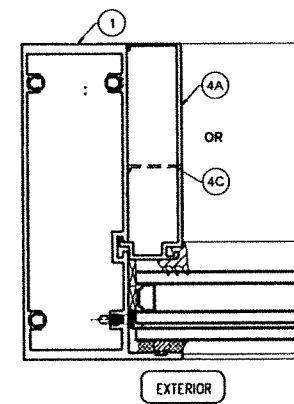
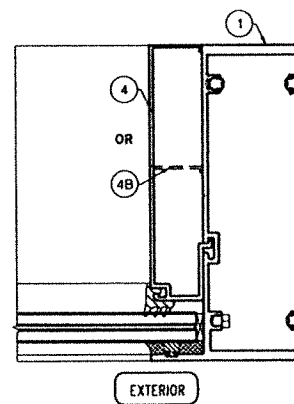
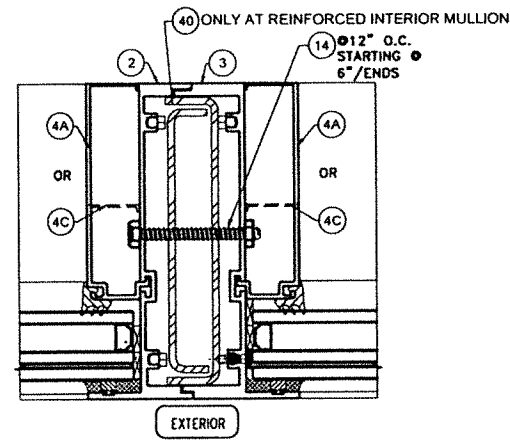
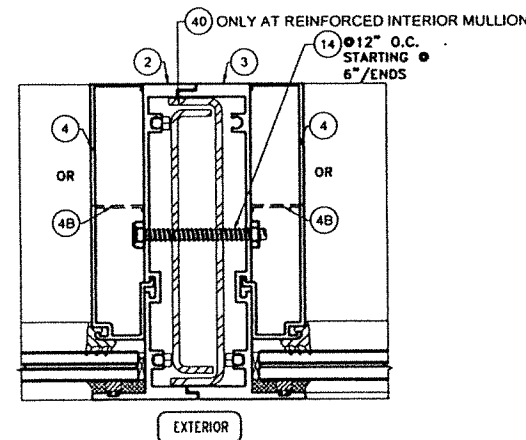
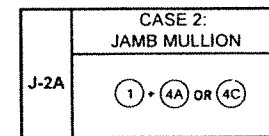
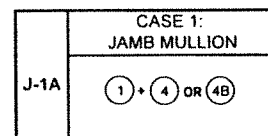
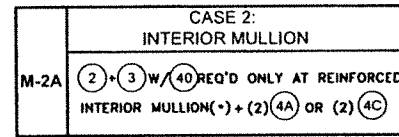
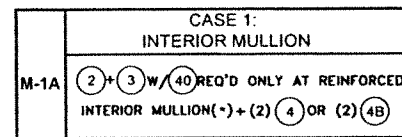
"L" = MAXIMUM JAMB MULLION SPAN EFFECTIVE SPACING: "b" = S FOR SINGLE PANEL.

| MAXIMUM UNREINFORCED INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED) |                                   |   |
|--|-----------------------------------|---|
| MAXIMUM DESIGN PRESSURE RATING   | MAX. EFFECTIVE SPACING "b"(Ft-in) | LAMINATED GLASS OR INSULATED GLASS      |
| +103.0 , -94.0   | 5'-0"                             | CASE 1 OR CASE 2<br>M-1A/J-1A M-2A/J-2A |
|  |                                   | 9'-6"                                   |

| MAXIMUM REINFORCED INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED) |                                   |   |
|--|-----------------------------------|---|
| MAXIMUM DESIGN PRESSURE RATING "W"(psf)  | MAX. EFFECTIVE SPACING "b"(Ft-in) | LAMINATED GLASS OR INSULATED GLASS      |
|  |                                   | CASE 1 OR CASE 2<br>M-1A/J-1A M-2A/J-2A |
| ± 100.0  | 3'-6"                             | 13'-4"                                  |
|  | 4'-0"                             | 12'-8"                                  |
|  | 4'-6"                             | 11'-11"                                 |
|  | 5'-0"                             | 11'-4"                                  |
|  | 5'-6"                             | 10'-9"                                  |
|  | 6'-0"                             | 10'-0"                                  |
|  | 6'-6"                             | 9'-11"                                  |
| ± 105.0  | 3'-6"                             | 13'-1"                                  |
|  | 4'-0"                             | 12'-4"                                  |
|  | 4'-6"                             | 11'-8"                                  |
|  | 5'-0"                             | 11'-0"                                  |
|  | 5'-6"                             | 10'-6"                                  |
|  | 6'-0"                             | 10'-0"                                  |
|  | 6'-6"                             | 9'-7"                                   |
| ± 110.0  | 3'-6"                             | 12'-11"                                 |
|  | 4'-0"                             | 12'-1"                                  |
|  | 4'-6"                             | 11'-4"                                  |
|  | 5'-0"                             | 10'-9"                                  |
|  | 5'-6"                             | 10'-3"                                  |
|  | 6'-0"                             | 9'-10"                                  |
|  | 6'-6"                             | 9'-6"                                   |
| ± 115.0  | 3'-6"                             | 12'-7"                                  |
|  | 4'-0"                             | 11'-10"                                 |
|  | 4'-6"                             | 11'-1"                                  |
|  | 5'-0"                             | 10'-7"                                  |
|  | 5'-6"                             | 10'-1"                                  |
|  | 6'-0"                             | 9'-8"                                   |
|  | 6'-6"                             | 9'-3"                                   |
| ± 120.0  | 3'-6"                             | 12'-4"                                  |
|  | 4'-0"                             | 11'-7"                                  |
|  | 4'-6"                             | 10'-11"                                 |
|  | 5'-0"                             | 10'-4"                                  |
|  | 5'-6"                             | 9'-10"                                  |
|  | 6'-0"                             | 9'-5"                                   |
|  | 6'-6"                             | 9'-1"                                   |
| ± 125.0  | 3'-6"                             | 12'-1"                                  |
|  | 4'-0"                             | 11'-4"                                  |
|  | 4'-6"                             | 10'-8"                                  |
|  | 5'-0"                             | 10'-1"                                  |
|  | 5'-6"                             | 9'-8"                                   |
|  | 6'-0"                             | 9'-3"                                   |
|  | 6'-6"                             | 8'-9"                                   |
|  | 7'-0"                             | 8'-2"                                   |

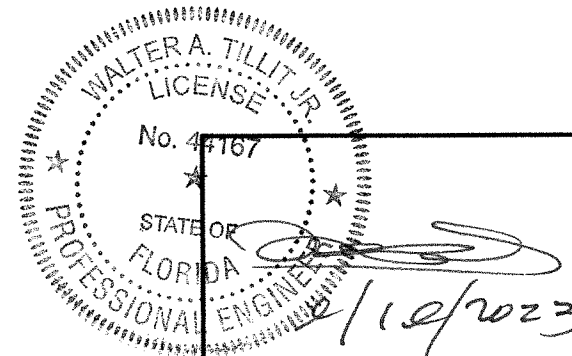
| MAXIMUM REINFORCED INTERIOR MULLION AND JAMB MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE SPACING "b" (CONTINUED) |                                   |   |
|--|-----------------------------------|---|
| MAXIMUM DESIGN PRESSURE RATING "W"(psf)  | MAX. EFFECTIVE SPACING "b"(Ft-in) | LAMINATED GLASS OR INSULATED GLASS      |
|  |                                   | CASE 1 OR CASE 2<br>M-1A/J-1A M-2A/J-2A |
| ± 130.0  | 3'-6"                             | 11'-10"                                 |
|  | 4'-0"                             | 11'-1"                                  |
|  | 4'-6"                             | 10'-6"                                  |
|  | 5'-0"                             | 9'-11"                                  |
|  | 5'-6"                             | 9'-6"                                   |
|  | 6'-0"                             | 9'-1"                                   |
|  | 6'-6"                             | 8'-5"                                   |
| +130.0, -135.0   | 3'-6"                             | 11'-8"                                  |
|  | 4'-0"                             | 11'-0"                                  |
|  | 4'-6"                             | 10'-3"                                  |
|  | 5'-0"                             | 9'-9"                                   |
|  | 5'-6"                             | 9'-3"                                   |
|  | 6'-0"                             | 8'-10"                                  |
|  | 6'-6"                             | 8'-2"                                   |
| +130.0, -140.0   | 3'-6"                             | 11'-5"                                  |
|  | 4'-0"                             | 11'-0"                                  |
|  | 4'-6"                             | 10'-1"                                  |
|  | 5'-0"                             | 9'-6"                                   |
|  | 5'-6"                             | 9'-1"                                   |
|  | 6'-0"                             | 8'-6"                                   |
|  | 6'-6"                             | 7'-10"                                  |
|  | 7'-0"                             | 7'-3"                                   |

\* COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).



OPTIONAL SYSTEM # 2 (CONTINUED)

| CASES DEFINITIONS   |  |
|---|--|
| CASE 1: M-1A REINFORCED OR UNREINFORCED INTERIOR MULLION: W/ LAMINATED GLASS (SEE DET. 5 ON SHEET 48) | J-1A JAMB MULLION: W/ LAMINATED GLASS (SEE DET. 8 OR 8A ON SHEET 50) |
| CASE 2: M-2A REINFORCED OR UNREINFORCED INTERIOR MULLION: W/ INSULATED GLASS (SEE DET. 6 ON SHEET 48) | J-2A JAMB MULLION: W/ INSULATED GLASS (SEE DET. 9 OR 9A ON SHEET 50) |



P.E. SEAL/SIGNATURE/DATE

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

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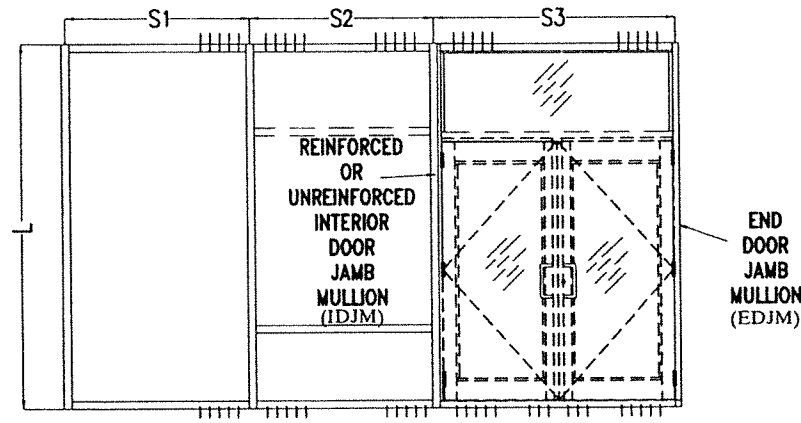
W.H. DRAWN BY

09/12/2023 DATE

23-213 DRAWING No

| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
|---------|-------------|----------|---------|-------------|------|
| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

SHEET 32A OF 51



**ELEVATION W/ REINFORCED OR UNREINFORCED INTERIOR DOOR JAMB MULLION AND END DOOR JAMB MULLION @ MULTIPLE PANELS**

"L" = MAXIMUM INTERIOR MULLION SPAN

EFFECTIVE SPACING FOR INTERIOR DOOR JAMB MULLION:  $b = \frac{S_3 + S_2}{2}$

EFFECTIVE SPACING FOR END DOOR JAMB MULLION:  $b = \frac{S_3}{2} \leq 3'-2"$

**: OPTIONAL SYSTEM # 2**

\*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).

| MAXIMUM UNREINFORCED INTERIOR DOOR JAMB MULLION (IDJM)<br>SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN<br>PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE<br>SPACING "b" |                                      |  |
|---|--------------------------------------|--|
| MAXIMUM DESIGN PRESSURE RATING<br>"W"(psf)  | MAX. EFFECTIVE SPACING<br>"b"(Ft-in) | LAMINATED & INSULATED GLASS  |
|   |                                      | CASE 1/CASE 2<br>IDJM-1/IDJM-2 &<br>CASE 3/CASE 4<br>IDJM-3/IDJM-4 |
| +103.0 , -94.0  | 5'-8"                                | 9'-6"  |

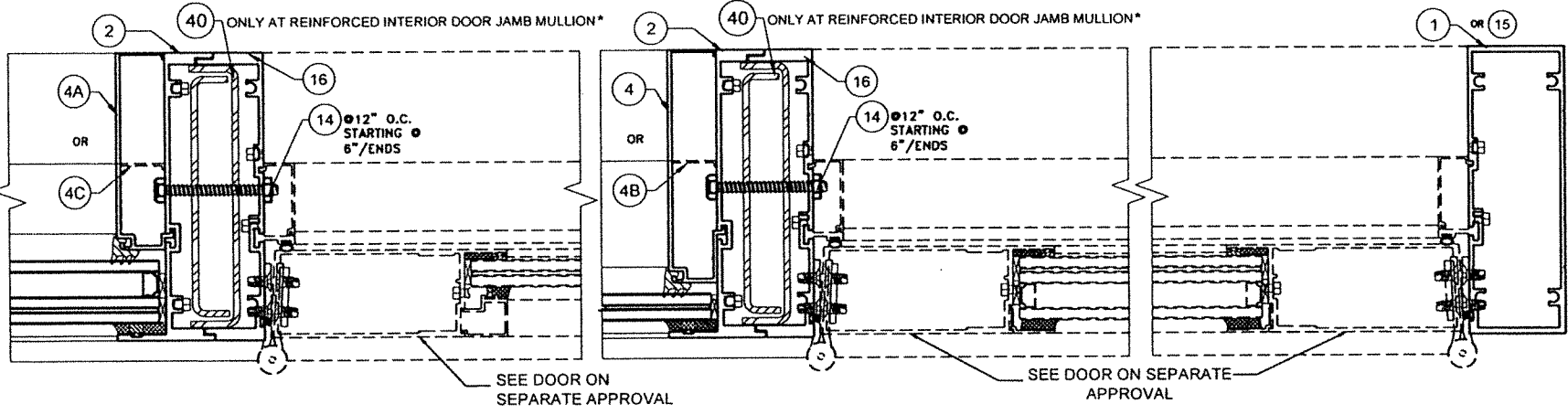
| MAXIMUM REINFORCED INTERIOR DOOR JAMB MULLION (IDJM)<br>SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN<br>PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE<br>SPACING "b" |                                      |  |
|---|--------------------------------------|--|
| MAXIMUM DESIGN PRESSURE RATING<br>"W"(psf)  | MAX. EFFECTIVE SPACING<br>"b"(Ft-in) | LAMINATED & INSULATED GLASS  |
|   |                                      | CASE 1/CASE 2<br>IDJM-1/IDJM-2 &<br>CASE 3/CASE 4<br>IDJM-3/IDJM-4 |
| ± 40.0  | 5'-2"                                | 15'-9"   |
|   | 5'-8"                                | 15'-9"   |
| ± 45.0  | 5'-2"                                | 15'-9"   |
|   | 5'-8"                                | 15'-5"   |
| ± 50.0  | 5'-2"                                | 15'-9"   |
|   | 5'-8"                                | 14'-11"  |
| ± 55.0  | 5'-2"                                | 15'-7"   |
|   | 5'-8"                                | 14'-5"   |
| ± 60.0  | 5'-2"                                | 15'-1"   |
|   | 5'-8"                                | 14'-0"   |
| ± 65.0  | 5'-2"                                | 14'-9"   |
|   | 5'-8"                                | 13'-8"   |
| ± 70.0  | 5'-2"                                | 14'-4"   |
|   | 5'-8"                                | 13'-4"   |
| ± 75.0  | 5'-2"                                | 14'-0"   |
|   | 5'-8"                                | 13'-0"   |
| ± 80.0  | 5'-2"                                | 13'-9"   |
|   | 5'-8"                                | 12'-8"   |
| ± 85.0  | 5'-2"                                | 13'-6"   |
|   | 5'-8"                                | 12'-3"   |
| ± 90.0  | 5'-2"                                | 13'-3"   |
|   | 5'-8"                                | 11'-11"  |
| ± 95.0  | 5'-2"                                | 13'-0"   |
|   | 5'-8"                                | 11'-7"   |
| ± 100.0   | 5'-2"                                | 12'-8"   |
|   | 5'-8"                                | 11'-4"   |
| ± 105.0   | 5'-2"                                | 12'-4"   |
|   | 5'-8"                                | 11'-0"   |
| ± 110.0   | 5'-2"                                | 12'-1"   |
|   | 5'-8"                                | 10'-9"   |
| ± 115.0   | 5'-2"                                | 11'-10"  |
|   | 5'-8"                                | 10'-7"   |
| ± 120.0   | 5'-2"                                | 11'-7"   |
|   | 5'-8"                                | 10'-4"   |
| ± 125.0   | 5'-2"                                | 11'-4"   |
|   | 5'-8"                                | 10'-1"   |
| ± 130.0   | 5'-2"                                | 11'-1"   |
|   | 5'-8"                                | 9'-11"   |
| +130.0,<br>-135.0   | 5'-2"                                | 11'-0"   |
|   | 5'-8"                                | 9'-9"  |
| +130.0,<br>-140.0   | 5'-2"                                | 11'-0"   |
|   | 5'-8"                                | 9'-6"  |

| MAXIMUM END DOOR JAMB MULLION (EDJM)<br>SPAN "L"(FT) SCHEDULE FOR A GIVEN A.S.D. DESIGN<br>PRESSURE RATING (psf) & A GIVEN MULLION EFFECTIVE<br>SPACING "b" |                                      |  |
|---|--------------------------------------|--|
| MAXIMUM DESIGN PRESSURE RATING<br>"W"(psf)  | MAX. EFFECTIVE SPACING<br>"b"(Ft-in) | LAMINATED & INSULATED GLASS            |
|   |                                      | CASE 1<br>EDJM-1 &<br>CASE 2<br>EDJM-2 |
| ± 40.0  | 3'-2"                                | 15'-9"                                 |
| ± 45.0  | 3'-2"                                | 15'-9"                                 |
| ± 50.0  | 3'-2"                                | 15'-9"                                 |
| ± 55.0  | 3'-2"                                | 15'-7"                                 |
| ± 60.0  | 3'-2"                                | 15'-1"                                 |
| ± 65.0  | 3'-2"                                | 14'-9"                                 |
| ± 70.0  | 3'-2"                                | 14'-4"                                 |
| ± 75.0  | 3'-2"                                | 14'-0"                                 |
| ± 80.0  | 3'-2"                                | 13'-9"                                 |
| ± 85.0  | 3'-2"                                | 13'-4"                                 |
| ± 90.0  | 3'-2"                                | 13'-3"                                 |
| ± 95.0  | 3'-2"                                | 13'-0"                                 |
| ± 100.0   | 3'-2"                                | 12'-8"                                 |
| ± 105.0   | 3'-2"                                | 12'-4"                                 |
| ± 110.0   | 3'-2"                                | 12'-1"                                 |
| ± 115.0   | 3'-2"                                | 11'-10"                                |
| ± 120.0   | 3'-2"                                | 11'-7"                                 |
| ± 125.0   | 3'-2"                                | 11'-4"                                 |
| ± 130.0   | 3'-2"                                | 11'-1"                                 |
| +130.0,<br>-135.0   | 3'-2"                                | 11'-0"                                 |
| +130.0,<br>-140.0   | 3'-2"                                | 11'-0"                                 |

| CASE 1:<br>INTERIOR DOOR JAMB MULLION |   |
|---------------------------------------|---|
| IDJM-1                                | (2)+(16) W/(40) REQ'D ONLY AT REINFORCED INTERIOR DOOR JAMB MULLION(*)+(4A) OR (4C) |

| CASE 2:<br>INTERIOR DOOR JAMB MULLION |  |
|---------------------------------------|--|
| IDJM-2                                | (2)+(16) W/(40) REQ'D ONLY AT REINFORCED INTERIOR DOOR JAMB MULLION(*)+(4) OR (4B) |

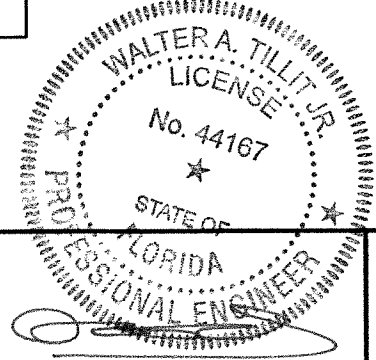
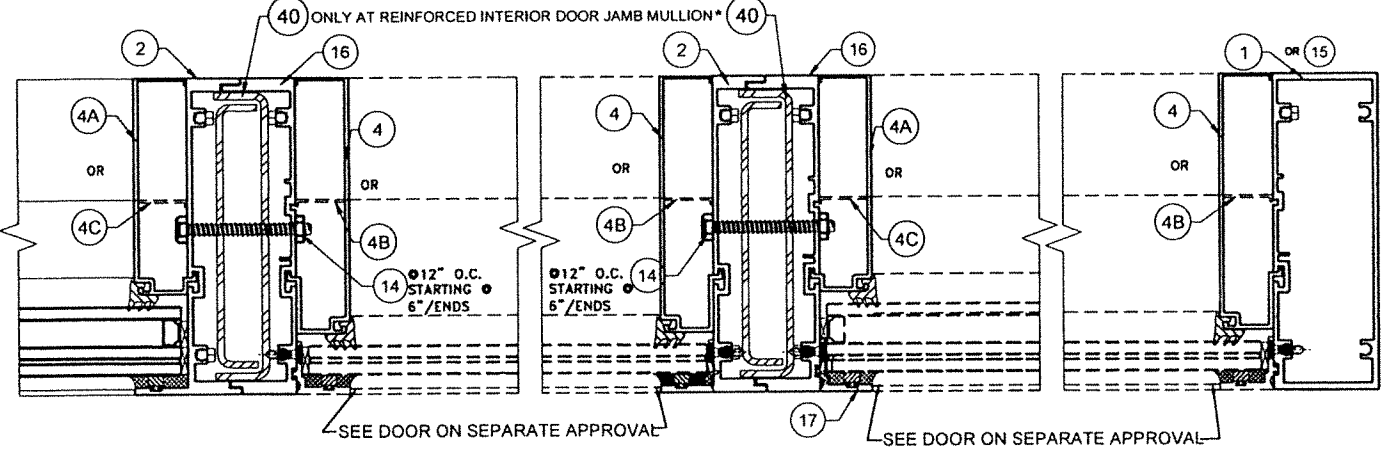
| CASE 1:<br>END DOOR JAMB MULLION W/<br>INSULATED GLASS |             |
|--|-------------|
| EDJM-1   | (1) OR (15) |



| CASE 3:<br>INTERIOR DOOR JAMB MULLION<br>& DOOR TRANSOM |  |
|---|--|
| IDJM-3  | (2)+(16) W/(40) REQ'D ONLY AT REINFORCED INTERIOR DOOR JAMB MULLION (*)+(4A) OR (4C) + (4) OR (4B) |

| CASE 4:<br>INTERIOR DOOR JAMB MULLION<br>& DOOR TRANSOM |  |
|---|--|
| IDJM-4  | (2)+(16) W/(40) REQ'D ONLY AT REINFORCED INTERIOR DOOR JAMB MULLION (*)+(4) OR (4B) + (4A) OR (4C) |

| CASE 2:<br>END DOOR JAMB MULLION W/<br>LAMINATED GLASS |                           |
|--|---------------------------|
| EDJM-2   | (15) + (17) + (4) OR (4B) |



2/12/2023  
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| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
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| 1       | OLD 21-11B  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

W.H.  
DRAWN BY  
09/12/2023  
DATE  
23-213  
DRAWING No  
SHEET 33 OF 51

# MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR MULLIONS & JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2

| MAXIMUM MULLION SPAN<br>"L" (Ft-in) | EFFECTIVE SPACING<br>"b" (Ft-in) | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE |       |       |       |       |                         |       |       |       |      |                                     |       |       |       |      |                         |       |       |       |       |                                |       |         |      |
|-------------------------------------|----------------------------------|---|-------|-------|-------|-------|-------------------------|-------|-------|-------|------|-------------------------------------|-------|-------|-------|------|-------------------------|-------|-------|-------|-------|--------------------------------|-------|---------|------|
|                                     |                                  | POURED CONCRETE SUBSTRATE                                       |       |       |       |       |                         |       |       |       |      | WOOD (2) 1 1/2" Min. THK. SUBSTRATE |       |       |       |      |                         |       |       |       |       | STEEL 1/4" Min. THK. SUBSTRATE |       |         |      |
|                                     |                                  | FASTENERS TYPE A (1/4")   |       |       |       |       | FASTENERS TYPE B (3/8") |       |       |       |      | FASTENERS TYPE C (1/4")             |       |       |       |      | FASTENERS TYPE D (3/8") |       |       |       |       | FASTENERS TYPE E (3/8")        |       |         |      |
|                                     |                                  | n=4   | n=6   | n=8   | n=10  | n=12  | n=4                     | n=6   | n=8   | n=10  | n=12 | n=4                                 | n=6   | n=8   | n=10  | n=12 | n=4                     | n=6   | n=8   | n=10  | n=12  | n=4                            | n=6   | n=8     | n=10 |
| 8' - 0"                             | 3' - 6"                          | 80.8  | 121.2 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 67.0 | 100.5                               | 140.0 | 140.0 | 140.0 | 62.9 | 94.3                    | 125.7 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 4' - 0"                          | 70.7  | 106.1 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 58.7 | 88.0                                | 140.0 | 140.0 | 140.0 | 55.0 | 82.5                    | 110.0 | 137.5 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 4' - 6"                          | 62.9  | 94.3  | 125.7 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 52.1 | 78.2                                | 125.7 | 130.3 | 140.0 | 48.9 | 73.3                    | 97.8  | 122.2 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 5' - 0"                          | 56.6  | 84.8  | 113.1 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 46.9 | 70.4                                | 113.1 | 117.3 | 140.0 | 44.0 | 66.0                    | 88.0  | 110.0 | 132.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 5' - 6"                          | 51.4  | 77.1  | 102.8 | 128.6 | 140.0 | 133.3                   | 140.0 | 140.0 | 140.0 | 42.7 | 64.0                                | 102.8 | 106.6 | 128.0 | 40.0 | 60.0                    | 80.0  | 100.0 | 120.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 6' - 0"                          | 47.1  | 70.7  | 94.3  | 117.8 | 140.0 | 122.2                   | 140.0 | 140.0 | 140.0 | 39.1 | 58.7                                | 94.3  | 97.8  | 117.3 | 36.7 | 55.0                    | 73.3  | 91.7  | 110.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 7' - 0"                          | 40.4  | 60.6  | 80.8  | 101.0 | 121.2 | 104.7                   | 140.0 | 140.0 | 140.0 | 33.5 | 50.3                                | 80.8  | 83.8  | 100.5 | 31.4 | 47.2                    | 62.9  | 78.6  | 94.3  | 130.2 | 140.0                          | 140.0 | 140.0   |      |
| 8' - 6"                             | 3' - 6"                          | 76.1  | 114.1 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 63.1 | 94.6                                | 140.0 | 140.0 | 140.0 | 59.2 | 88.8                    | 118.3 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 4' - 0"                          | 66.5  | 99.8  | 133.1 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 55.2 | 82.8                                | 133.1 | 138.0 | 140.0 | 51.8 | 77.7                    | 103.6 | 129.4 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 4' - 6"                          | 59.2  | 88.7  | 118.3 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 49.1 | 73.6                                | 118.3 | 122.7 | 140.0 | 46.0 | 69.0                    | 92.0  | 115.1 | 138.1 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 5' - 0"                          | 53.2  | 79.9  | 106.5 | 133.1 | 140.0 | 138.0                   | 140.0 | 140.0 | 140.0 | 44.2 | 66.2                                | 106.5 | 110.4 | 132.5 | 41.4 | 62.1                    | 82.8  | 103.6 | 124.3 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 5' - 6"                          | 48.4  | 72.6  | 96.8  | 121.0 | 140.0 | 125.4                   | 140.0 | 140.0 | 140.0 | 40.1 | 60.2                                | 96.8  | 100.4 | 120.4 | 37.7 | 56.5                    | 75.3  | 94.1  | 113.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 6' - 0"                          | 44.4  | 66.5  | 88.7  | 110.9 | 133.1 | 115.0                   | 140.0 | 140.0 | 140.0 | 36.8 | 55.2                                | 88.7  | 92.0  | 110.4 | 34.5 | 51.8                    | 69.0  | 86.3  | 103.6 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 7' - 0"                          | 41.0  | 61.4  | 81.9  | 102.4 | 122.9 | 106.1                   | 140.0 | 140.0 | 140.0 | 34.0 | 51.0                                | 81.9  | 84.9  | 101.9 | 31.9 | 47.8                    | 63.7  | 79.7  | 95.6  | 131.9 | 140.0                          | 140.0 | 140.0   |      |
| 9' - 0"                             | 3' - 6"                          | 71.8  | 107.7 | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 59.6 | 89.4                                | 140.0 | 140.0 | 140.0 | 55.9 | 83.8                    | 111.8 | 139.7 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 4' - 0"                          | 62.9  | 94.3  | 125.7 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 52.1 | 78.2                                | 125.7 | 130.3 | 140.0 | 48.9 | 73.3                    | 97.8  | 122.2 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 4' - 6"                          | 55.9  | 83.8  | 111.7 | 139.7 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 46.3 | 69.5                                | 111.7 | 115.9 | 139.0 | 43.5 | 65.2                    | 86.9  | 108.7 | 130.4 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 5' - 0"                          | 50.3  | 75.4  | 100.6 | 125.7 | 140.0 | 130.3                   | 140.0 | 140.0 | 140.0 | 41.7 | 62.6                                | 100.6 | 104.3 | 125.1 | 39.1 | 58.7                    | 78.2  | 97.8  | 117.4 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 5' - 6"                          | 45.7  | 68.6  | 91.4  | 114.3 | 137.1 | 118.5                   | 140.0 | 140.0 | 140.0 | 37.9 | 56.9                                | 91.4  | 94.8  | 113.7 | 35.6 | 53.3                    | 71.1  | 88.9  | 106.7 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 6' - 0"                          | 41.9  | 62.9  | 83.8  | 104.8 | 125.7 | 108.6                   | 140.0 | 140.0 | 140.0 | 34.8 | 52.1                                | 83.8  | 86.9  | 104.3 | 32.6 | 48.9                    | 65.2  | 81.5  | 97.8  | 135.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 7' - 0"                          | 38.7  | 58.0  | 77.4  | 96.7  | 116.0 | 100.2                   | 140.0 | 140.0 | 140.0 | 32.1 | 48.1                                | 77.4  | 80.2  | 96.2  | 30.1 | 45.1                    | 60.2  | 75.2  | 90.3  | 124.6 | 140.0                          | 140.0 | 140.0   |      |
| 9' - 6"                             | 3' - 6"                          | 68.0  | 102.1 | 136.1 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 56.4 | 84.7                                | 136.1 | 140.0 | 140.0 | 52.9 | 79.4                    | 105.9 | 132.4 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 4' - 0"                          | 59.5  | 89.3  | 119.1 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 49.4 | 74.1                                | 119.1 | 123.5 | 140.0 | 46.3 | 69.5                    | 92.7  | 115.8 | 139.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 4' - 6"                          | 52.9  | 79.4  | 105.9 | 132.3 | 140.0 | 137.2                   | 140.0 | 140.0 | 140.0 | 43.9 | 65.9                                | 105.9 | 109.8 | 131.7 | 41.2 | 61.8                    | 82.4  | 102.9 | 123.5 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 5' - 0"                          | 47.6  | 71.5  | 95.3  | 119.1 | 140.0 | 123.5                   | 140.0 | 140.0 | 140.0 | 39.5 | 59.3                                | 95.3  | 98.8  | 118.5 | 37.1 | 55.6                    | 74.1  | 92.7  | 111.2 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 5' - 6"                          | 43.3  | 65.0  | 86.6  | 108.3 | 129.9 | 112.2                   | 140.0 | 140.0 | 140.0 | 35.9 | 53.9                                | 86.6  | 89.8  | 107.8 | 33.7 | 50.5                    | 67.4  | 84.2  | 101.1 | 139.5 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 6' - 0"                          | 39.7  | 59.5  | 79.4  | 99.2  | 119.1 | 102.9                   | 140.0 | 140.0 | 140.0 | 32.9 | 49.4                                | 79.4  | 82.3  | 98.8  | 30.9 | 46.3                    | 61.8  | 77.2  | 92.7  | 127.9 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 7' - 0"                          | 36.6  | 55.0  | 73.3  | 91.6  | 109.9 | 95.0                    | 140.0 | 140.0 | 140.0 | 30.4 | 45.6                                | 73.3  | 76.0  | 91.2  | 28.5 | 42.8                    | 57.0  | 71.3  | 85.5  | 118.0 | 140.0                          | 140.0 | 140.0   |      |
| 10' - 0"                            | 3' - 6"                          | 64.6  | 97.0  | 129.3 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 53.6 | 80.4                                | 129.3 | 134.1 | 140.0 | 50.3 | 75.4                    | 100.6 | 125.7 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 4' - 0"                          | 56.6  | 84.8  | 113.1 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 46.9 | 70.4                                | 113.1 | 117.3 | 140.0 | 44.0 | 66.0                    | 88.0  | 110.0 | 132.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 4' - 6"                          | 50.3  | 75.4  | 100.6 | 125.7 | 140.0 | 130.3                   | 140.0 | 140.0 | 140.0 | 41.7 | 62.6                                | 100.6 | 104.3 | 125.1 | 39.1 | 58.7                    | 78.2  | 97.8  | 117.4 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 5' - 0"                          | 45.3  | 67.9  | 90.5  | 113.1 | 135.8 | 117.3                   | 140.0 | 140.0 | 140.0 | 37.5 | 56.3                                | 90.5  | 93.8  | 112.6 | 35.2 | 52.8                    | 70.4  | 88.0  | 105.6 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 5' - 6"                          | 41.1  | 61.7  | 82.3  | 102.8 | 123.4 | 106.6                   | 140.0 | 140.0 | 140.0 | 34.1 | 51.2                                | 82.3  | 85.3  | 102.4 | 32.0 | 48.0                    | 64.0  | 80.0  | 96.0  | 132.5 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 6' - 0"                          | 37.7  | 56.6  | 75.4  | 94.3  | 113.1 | 97.7                    | 140.0 | 140.0 | 140.0 | 31.3 | 46.9                                | 75.4  | 78.2  | 93.8  | 29.3 | 44.0                    | 58.7  | 73.3  | 88.0  | 121.5 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 7' - 0"                          | 34.8  | 52.2  | 69.6  | 87.0  | 104.4 | 90.2                    | 135.3 | 140.0 | 140.0 | 28.9 | 43.3                                | 69.6  | 72.2  | 86.6  | 27.1 | 40.6                    | 54.2  | 67.7  | 81.2  | 112.1 | 140.0                          | 140.0 | 140.0   |      |
| 10' - 6"                            | 3' - 6"                          | 61.6  | 92.4  | 123.1 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 51.1 | 76.6                                | 123.1 | 127.7 | 140.0 | 47.9 | 71.9                    | 95.8  | 119.8 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 4' - 0"                          | 53.9  | 80.8  | 107.7 | 134.7 | 140.0 | 139.6                   | 140.0 | 140.0 | 140.0 | 44.7 | 67.0                                | 107.7 | 111.7 | 134.1 | 41.9 | 62.9                    | 83.8  | 104.8 | 125.7 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 4' - 6"                          | 47.9  | 71.8  | 95.8  | 119.7 | 140.0 | 124.1                   | 140.0 | 140.0 | 140.0 | 39.7 | 59.6                                | 95.8  | 99.3  | 119.2 | 37.3 | 55.9                    | 74.5  | 93.1  | 111.8 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 5' - 0"                          | 43.1  | 64.6  | 86.2  | 107.7 | 129.3 | 111.7                   | 140.0 | 140.0 | 140.0 | 35.7 | 53.6                                | 86.2  | 89.4  | 107.2 | 33.5 | 50.3                    | 67.1  | 83.8  | 100.6 | 138.8 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 5' - 6"                          | 39.2  | 58.8  | 78.4  | 97.9  | 117.5 | 101.5                   | 140.0 | 140.0 | 140.0 | 32.5 | 48.7                                | 78.4  | 81.2  | 97.5  | 30.5 | 45.7                    | 61.0  | 76.2  | 91.4  | 126.2 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 6' - 0"                          | 35.9  | 53.9  | 71.8  | 89.8  | 107.7 | 93.1                    | 139.6 | 140.0 | 140.0 | 29.8 | 44.7                                | 71.8  | 74.5  | 89.4  | 27.9 | 41.9                    | 55.9  | 69.9  | 83.8  | 115.7 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 7' - 0"                          | 33.2  | 49.7  | 66.3  | 82.9  | 99.5  | 85.9                    | 128.9 | 140.0 | 140.0 | 27.5 | 41.2                                | 66.3  | 68.7  | 82.5  | 25.8 | 38.7                    | 51.6  | 64.5  | 77.4  | 106.8 | 140.0                          | 140.0 | 140.0   |      |
| 11' - 0"                            | 3' - 6"                          | 58.8  | 88.2  | 117.5 | 140.0 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 48.7 | 73.1                                | 117.5 | 121.9 | 140.0 | 45.7 | 68.6                    | 91.4  | 114.3 | 137.2 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 4' - 0"                          | 51.4  | 77.1  | 102.8 | 128.6 | 140.0 | 133.3                   | 140.0 | 140.0 | 140.0 | 42.7 | 64.0                                | 102.8 | 106.6 | 128.0 | 40.0 | 60.0                    | 80.0  | 100.0 | 120.0 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 4' - 6"                          | 45.7  | 68.6  | 91.4  | 114.3 | 137.1 | 118.5                   | 140.0 | 140.0 | 140.0 | 37.9 | 56.9                                | 91.4  | 94.8  | 113.7 | 35.6 | 53.3                    | 71.1  | 88.9  | 106.7 | 140.0 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 5' - 0"                          | 41.1  | 61.7  | 82.3  | 102.8 | 123.4 | 106.6                   | 140.0 | 140.0 | 140.0 | 34.1 | 51.2                                | 82.3  | 85.3  | 102.4 | 32.0 | 48.0                    | 64.0  | 80.0  | 96.0  | 132.5 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 5' - 6"                          | 37.4  | 56.1  | 74.8  | 93.5  | 112.2 | 96.9                    | 140.0 | 140.0 | 140.0 | 31.0 | 46.5                                | 74.8  | 77.6  | 93.1  | 29.1 | 43.6                    | 58.2  | 72.7  | 87.3  | 120.5 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 6' - 0"                          | 34.3  | 51.4  | 68.6  | 85.7  | 102.8 | 88.9                    | 133.3 | 140.0 | 140.0 | 28.4 | 42.7                                | 68.6  | 71.1  | 85.3  | 26.7 | 40.0                    | 53.3  | 66.7  | 80.0  | 110.4 | 140.0                          | 140.0 | 140.0   |      |
|                                     | 7' - 0"                          | 31.6  | 47.5  | 63.3  | 79.1  | 94.9  | 82.0                    | 123.0 | 140.0 | 140.0 | 26.2 | 39.4                                | 63.3  | 65.6  | 78.7  | 24.6 | 36.9                    | 49.2  | 61.6  | 73.9  | 101.9 | 140.0                          | 140.0 | 140.0</ |      |

# MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR MULLIONS & JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2

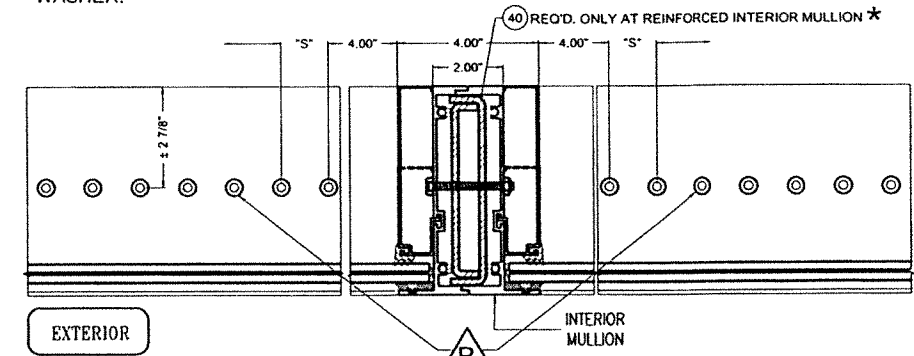
| MAXIMUM MULLION SPAN | EFFECTIVE SPACING | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE (CONTINUED) |      |       |       |                         |       |       |       |                         |       |      |      |                                     |       |       |      |                         |      |       |       |       |       |       |       |                      |       |
|----------------------|-------------------|---|------|-------|-------|-------------------------|-------|-------|-------|-------------------------|-------|------|------|-------------------------------------|-------|-------|------|-------------------------|------|-------|-------|-------|-------|-------|-------|----------------------|-------|
|                      |                   | POURED CONCRETE SUBSTRATE   |      |       |       |                         |       |       |       |                         |       |      |      | WOOD (2) 1 1/2" Min. THK. SUBSTRATE |       |       |      |                         |      |       |       |       |       |       |       | STEEL 1/4" Min. THK. |       |
|                      |                   | FASTENERS TYPE A (1/4")   |      |       |       | FASTENERS TYPE B (3/8") |       |       |       | FASTENERS TYPE C (1/4") |       |      |      | FASTENERS TYPE D (3/8")             |       |       |      | FASTENERS TYPE E (3/8") |      |       |       |       |       |       |       |                      |       |
| "L" (Ft-in)          | "b" (Ft-in)       | n=4   | n=6  | n=8   | n=10  | n=12                    | n=4   | n=6   | n=8   | n=10                    | n=12  | n=4  | n=6  | n=8                                 | n=10  | n=12  | n=4  | n=6                     | n=8  | n=10  | n=12  | n=4   | n=6   | n=8   | n=10  | n=12                 |       |
| 11' - 6"             | 3' - 6"           | 56.2  | 84.3 | 112.4 | 140.0 | 140.0                   | 140.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 46.6 | 69.9 | 112.4                               | 116.6 | 139.9 | 43.7 | 65.6                    | 87.5 | 109.3 | 131.2 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 4' - 0"           | 49.2  | 73.8 | 98.4  | 123.0 | 140.0                   | 127.5 | 140.0 | 140.0 | 140.0                   | 140.0 | 40.8 | 61.2 | 98.4                                | 102.0 | 122.4 | 38.3 | 57.4                    | 76.5 | 95.7  | 114.8 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 4' - 6"           | 43.7  | 65.6 | 87.4  | 109.3 | 131.2                   | 113.3 | 140.0 | 140.0 | 140.0                   | 140.0 | 36.3 | 54.4 | 87.4                                | 90.7  | 108.8 | 34.0 | 51.0                    | 68.0 | 85.0  | 102.1 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 5' - 0"           | 39.3  | 59.0 | 78.7  | 98.4  | 118.0                   | 102.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 32.6 | 49.0 | 78.7                                | 81.6  | 97.9  | 30.6 | 45.9                    | 61.2 | 76.5  | 91.8  | 126.8 | 140.0 | 140.0 | 140.0 | 140.0                | 140.0 |
|                      | 5' - 6"           | 35.8  | 53.7 | 71.5  | 89.4  | 107.3                   | 92.7  | 139.1 | 140.0 | 140.0                   | 140.0 | 29.7 | 44.5 | 71.5                                | 74.2  | 89.0  | 27.8 | 41.7                    | 55.7 | 69.6  | 83.5  | 115.2 | 140.0 | 140.0 | 140.0 | 140.0                | 140.0 |
|                      | 6' - 0"           | 32.8  | 49.2 | 65.6  | 82.0  | 98.4                    | 85.0  | 127.5 | 140.0 | 140.0                   | 140.0 | 27.2 | 40.8 | 65.6                                | 68.0  | 81.6  | 25.5 | 38.3                    | 51.0 | 63.8  | 76.5  | 105.6 | 140.0 | 140.0 | 140.0 | 140.0                | 140.0 |
|                      | 7' - 0"           | 28.1  | 42.2 | 56.2  | 70.3  | 84.3                    | 72.8  | 109.3 | 140.0 | 140.0                   | 140.0 | 23.3 | 35.0 | 56.2                                | 58.3  | 69.9  | 21.9 | 32.8                    | 43.7 | 54.7  | 65.6  | 90.5  | 135.8 | 140.0 | 140.0 | 140.0                | 140.0 |
| 12' - 0"             | 3' - 6"           | 53.9  | 80.8 | 107.7 | 134.7 | 140.0                   | 139.6 | 140.0 | 140.0 | 140.0                   | 140.0 | 44.7 | 67.0 | 107.7                               | 111.7 | 134.1 | 41.9 | 62.9                    | 83.8 | 104.8 | 125.7 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 4' - 0"           | 47.1  | 70.7 | 94.3  | 117.8 | 140.0                   | 122.2 | 140.0 | 140.0 | 140.0                   | 140.0 | 39.1 | 58.7 | 94.3                                | 97.8  | 117.3 | 36.7 | 55.0                    | 73.3 | 91.7  | 110.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 4' - 6"           | 41.9  | 62.9 | 83.8  | 104.8 | 125.7                   | 108.6 | 140.0 | 140.0 | 140.0                   | 140.0 | 34.8 | 52.1 | 83.8                                | 86.9  | 104.3 | 32.6 | 48.9                    | 65.2 | 81.5  | 97.8  | 135.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 5' - 0"           | 37.7  | 56.6 | 75.4  | 94.3  | 113.1                   | 97.7  | 140.0 | 140.0 | 140.0                   | 140.0 | 31.3 | 46.9 | 75.4                                | 78.2  | 93.8  | 29.3 | 44.0                    | 58.7 | 73.3  | 88.0  | 121.5 | 140.0 | 140.0 | 140.0 | 140.0                | 140.0 |
|                      | 5' - 6"           | 34.3  | 51.4 | 68.6  | 85.7  | 102.8                   | 88.9  | 133.3 | 140.0 | 140.0                   | 140.0 | 28.4 | 42.7 | 68.6                                | 71.1  | 85.3  | 26.7 | 40.0                    | 53.3 | 66.7  | 80.0  | 110.4 | 140.0 | 140.0 | 140.0 | 140.0                | 140.0 |
|                      | 6' - 0"           | 31.4  | 47.1 | 62.9  | 78.6  | 94.3                    | 81.4  | 122.2 | 140.0 | 140.0                   | 140.0 | 26.1 | 39.1 | 62.9                                | 65.2  | 78.2  | 24.4 | 36.7                    | 48.9 | 61.1  | 73.3  | 101.2 | 140.0 | 140.0 | 140.0 | 140.0                | 140.0 |
|                      | 7' - 0"           | 26.9  | 40.4 | 53.9  | 67.3  | 80.8                    | 69.8  | 104.7 | 139.6 | 140.0                   | 140.0 | 22.3 | 33.5 | 53.9                                | 55.9  | 67.0  | 21.0 | 31.4                    | 41.9 | 52.4  | 62.9  | 86.8  | 130.2 | 140.0 | 140.0 | 140.0                | 140.0 |
| 12' - 6"             | 3' - 6"           | 51.7  | 77.6 | 103.4 | 129.3 | 140.0                   | 134.0 | 140.0 | 140.0 | 140.0                   | 140.0 | 42.9 | 64.3 | 103.4                               | 107.2 | 128.7 | 40.2 | 60.4                    | 80.5 | 100.6 | 120.7 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 4' - 0"           | 45.3  | 67.9 | 90.5  | 113.1 | 135.8                   | 117.3 | 140.0 | 140.0 | 140.0                   | 140.0 | 37.5 | 56.3 | 90.5                                | 93.8  | 112.6 | 35.2 | 52.8                    | 70.4 | 88.0  | 105.6 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 4' - 6"           | 40.2  | 60.3 | 80.4  | 100.6 | 120.7                   | 104.3 | 140.0 | 140.0 | 140.0                   | 140.0 | 33.4 | 50.0 | 80.4                                | 83.4  | 100.1 | 31.3 | 46.9                    | 62.6 | 78.2  | 93.9  | 129.6 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 5' - 0"           | 36.2  | 54.3 | 72.4  | 90.5  | 108.6                   | 93.8  | 140.0 | 140.0 | 140.0                   | 140.0 | 30.0 | 45.0 | 72.4                                | 75.1  | 90.1  | 28.2 | 42.2                    | 56.3 | 70.4  | 84.5  | 116.6 | 140.0 | 140.0 | 140.0 | 140.0                | 140.0 |
|                      | 5' - 6"           | 32.9  | 49.4 | 65.8  | 82.3  | 98.7                    | 85.3  | 127.9 | 140.0 | 140.0                   | 140.0 | 27.3 | 40.9 | 65.8                                | 68.2  | 81.9  | 25.6 | 38.4                    | 51.2 | 64.0  | 76.8  | 106.0 | 140.0 | 140.0 | 140.0 | 140.0                | 140.0 |
|                      | 6' - 0"           | 30.2  | 45.3 | 60.3  | 75.4  | 90.5                    | 78.2  | 117.3 | 140.0 | 140.0                   | 140.0 | 25.0 | 37.5 | 60.3                                | 62.6  | 75.1  | 23.5 | 35.2                    | 46.9 | 58.7  | 70.4  | 97.2  | 140.0 | 140.0 | 140.0 | 140.0                | 140.0 |
|                      | 7' - 0"           | 27.8  | 41.8 | 55.7  | 69.6  | 83.5                    | 72.2  | 108.3 | 140.0 | 140.0                   | 140.0 | 23.1 | 34.6 | 55.7                                | 57.7  | 69.3  | 21.7 | 32.5                    | 43.3 | 54.2  | 65.0  | 89.7  | 134.6 | 140.0 | 140.0 | 140.0                | 140.0 |
| 13' - 0"             | 3' - 6"           | 49.7  | 74.6 | 99.5  | 124.3 | 140.0                   | 128.9 | 140.0 | 140.0 | 140.0                   | 140.0 | 41.2 | 61.9 | 99.5                                | 103.1 | 123.7 | 38.7 | 58.0                    | 77.4 | 96.7  | 116.1 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 4' - 0"           | 43.5  | 65.3 | 87.0  | 108.8 | 130.5                   | 112.8 | 140.0 | 140.0 | 140.0                   | 140.0 | 36.1 | 54.1 | 87.0                                | 90.2  | 108.3 | 33.9 | 50.8                    | 67.7 | 84.6  | 101.6 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 4' - 6"           | 38.7  | 58.0 | 77.4  | 96.7  | 116.0                   | 100.2 | 140.0 | 140.0 | 140.0                   | 140.0 | 32.1 | 48.1 | 77.4                                | 80.2  | 96.2  | 30.1 | 45.1                    | 60.2 | 75.2  | 90.3  | 124.6 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 5' - 0"           | 34.8  | 52.2 | 69.6  | 87.0  | 104.4                   | 90.2  | 135.3 | 140.0 | 140.0                   | 140.0 | 28.9 | 43.3 | 69.6                                | 72.2  | 86.6  | 27.1 | 40.8                    | 54.2 | 67.7  | 81.2  | 112.1 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 5' - 6"           | 31.6  | 47.5 | 63.3  | 79.1  | 94.9                    | 82.0  | 123.0 | 140.0 | 140.0                   | 140.0 | 26.2 | 39.4 | 63.3                                | 65.6  | 78.7  | 24.6 | 36.9                    | 49.2 | 61.6  | 73.9  | 101.9 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 6' - 0"           | 29.0  | 43.5 | 58.0  | 72.5  | 87.0                    | 75.2  | 112.8 | 140.0 | 140.0                   | 140.0 | 24.1 | 36.1 | 58.0                                | 60.2  | 72.2  | 22.6 | 33.9                    | 45.1 | 56.4  | 67.7  | 93.4  | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 7' - 0"           | 26.8  | 40.2 | 53.6  | 66.9  | 80.3                    | 69.4  | 104.1 | 138.8 | 140.0                   | 140.0 | 22.2 | 33.3 | 53.6                                | 55.5  | 66.6  | 20.8 | 31.2                    | 41.7 | 52.1  | 62.5  | 86.3  | 129.4 | 140.0 | 140.0 | 140.0                |       |
| 13' - 6"             | 3' - 6"           | 47.9  | 71.8 | 95.8  | 119.7 | 140.0                   | 124.1 | 140.0 | 140.0 | 140.0                   | 140.0 | 39.7 | 59.6 | 95.8                                | 99.3  | 119.2 | 37.3 | 55.9                    | 74.5 | 93.1  | 111.8 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 4' - 0"           | 41.9  | 62.9 | 83.8  | 104.8 | 125.7                   | 108.6 | 140.0 | 140.0 | 140.0                   | 140.0 | 34.8 | 52.1 | 83.8                                | 86.9  | 104.3 | 32.6 | 48.9                    | 65.2 | 81.5  | 97.8  | 135.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 4' - 6"           | 37.2  | 55.9 | 74.5  | 93.1  | 111.7                   | 96.5  | 140.0 | 140.0 | 140.0                   | 140.0 | 30.9 | 46.3 | 74.5                                | 77.2  | 92.7  | 29.0 | 43.5                    | 58.0 | 72.4  | 86.9  | 120.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 5' - 0"           | 33.5  | 50.3 | 67.0  | 83.8  | 100.6                   | 86.9  | 130.3 | 140.0 | 140.0                   | 140.0 | 27.8 | 41.7 | 67.0                                | 69.5  | 83.4  | 26.1 | 39.1                    | 52.2 | 65.2  | 78.2  | 108.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 5' - 6"           | 30.5  | 45.7 | 60.9  | 76.2  | 91.4                    | 79.0  | 118.5 | 140.0 | 140.0                   | 140.0 | 25.3 | 37.9 | 60.9                                | 63.2  | 75.8  | 23.7 | 35.6                    | 47.4 | 59.3  | 71.1  | 98.2  | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 6' - 0"           | 27.9  | 41.9 | 55.9  | 69.8  | 83.8                    | 72.4  | 108.6 | 140.0 | 140.0                   | 140.0 | 23.2 | 34.8 | 55.9                                | 57.9  | 69.5  | 21.7 | 32.6                    | 43.5 | 54.3  | 65.2  | 90.0  | 135.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 7' - 0"           | 25.8  | 38.7 | 51.6  | 64.5  | 77.4                    | 66.8  | 100.2 | 133.7 | 140.0                   | 140.0 | 21.4 | 32.1 | 51.6                                | 53.5  | 64.2  | 20.1 | 30.1                    | 40.1 | 50.2  | 60.2  | 83.1  | 124.6 | 140.0 | 140.0 | 140.0                |       |
| 14' - 0"             | 3' - 6"           | 46.2  | 69.3 | 92.4  | 115.4 | 138.5                   | 119.7 | 140.0 | 140.0 | 140.0                   | 140.0 | 38.3 | 57.5 | 92.4                                | 95.8  | 114.9 | 35.9 | 53.9                    | 71.9 | 89.8  | 107.8 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 4' - 0"           | 40.4  | 60.6 | 80.8  | 101.0 | 121.2                   | 104.7 | 140.0 | 140.0 | 140.0                   | 140.0 | 33.5 | 50.3 | 80.8                                | 83.8  | 100.5 | 31.4 | 47.2                    | 62.9 | 78.6  | 94.3  | 130.2 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 4' - 6"           | 35.9  | 53.9 | 71.8  | 89.8  | 107.7                   | 93.1  | 139.6 | 140.0 | 140.0                   | 140.0 | 29.8 | 44.7 | 71.8                                | 74.5  | 89.4  | 27.9 | 41.9                    | 55.9 | 69.9  | 83.8  | 115.7 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 5' - 0"           | 32.3  | 48.5 | 64.6  | 80.8  | 97.0                    | 83.8  | 125.7 | 140.0 | 140.0                   | 140.0 | 26.8 | 40.2 | 64.6                                | 67.0  | 80.4  | 25.1 | 37.7                    | 50.3 | 62.9  | 75.4  | 104.1 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 5' - 6"           | 29.4  | 44.1 | 58.8  | 73.5  | 88.2                    | 76.2  | 114.2 | 140.0 | 140.0                   | 140.0 | 24.4 | 36.6 | 58.8                                | 60.9  | 73.1  | 22.9 | 34.3                    | 45.7 | 57.2  | 68.6  | 94.7  | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 6' - 0"           | 26.9  | 40.4 | 53.9  | 67.3  | 80.8                    | 69.8  | 104.7 | 139.6 | 140.0                   | 140.0 | 22.3 | 33.5 | 53.9                                | 55.9  | 67.0  | 21.0 | 31.4                    | 41.9 | 52.4  | 62.9  | 86.8  | 130.2 | 140.0 | 140.0 | 140.0                |       |
|                      | 7' - 0"           | 24.9  | 37.3 | 49.7  | 62.2  | 74.6                    | 64.4  | 96.7  | 128.9 | 140.0                   | 140.0 | 20.6 | 30.9 | 49.7                                | 51.6  | 61.9  | 19.3 | 29.0                    | 38.7 | 48.4  | 58.0  | 80.1  | 120.1 | 140.0 | 140.0 | 140.0                |       |
| 14' - 6"             | 3' - 6"           | 44.6  | 66.9 | 89.2  | 111.5 | 133.8                   | 115.6 | 140.0 | 140.0 | 140.0                   | 140.0 | 37.0 | 55.5 | 89.2                                | 92.5  | 110.9 | 34.7 | 52.0                    | 69.4 | 86.7  | 104.1 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 4' - 0"           | 39.0  | 58.5 | 78.0  | 97.5  | 117.0                   | 101.1 | 140.0 | 140.0 | 140.0                   | 140.0 | 32.4 | 48.5 | 78.0                                | 80.9  | 97.1  | 30.4 | 45.5                    | 60.7 | 75.9  | 91.1  | 125.7 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 4' - 6"           | 34.7  | 52.0 | 69.4  | 86.7  | 104.0                   | 89.9  | 134.8 | 140.0 | 140.0                   | 140.0 | 28.8 | 43.1 | 69.4                                | 71.9  | 86.3  | 27.0 | 40.5                    | 54.0 | 67.4  | 80.9  | 111.7 | 140.0 | 140.0 | 140.0 | 140.0                |       |
|                      | 5' - 0"           | 31.2  | 46.8 | 62.4  | 78.0  | 93.6                    | 80.9  | 121.3 | 140.0 | 140.0                   |       |      |      |                                     |       |       |      |                         |      |       |       |       |       |       |       |                      |       |

# MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR MULLIONS & JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2

| MAXIMUM MULLION SPAN | EFFECTIVE SPACING | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE (CONTINUED) |      |      |       |       |                          |       |       |       |       |                                     |      |      |      |       |                          |      |      |      |       |                          |       |       |       |       |
|----------------------|-------------------|---|------|------|-------|-------|--------------------------|-------|-------|-------|-------|-------------------------------------|------|------|------|-------|--------------------------|------|------|------|-------|--------------------------|-------|-------|-------|-------|
|                      |                   | POURED CONCRETE SUBSTRATE   |      |      |       |       |                          |       |       |       |       | WOOD (2) 1 1/2" Min. THK. SUBSTRATE |      |      |      |       |                          |      |      |      |       | STEEL 1/4" Min. THK.     |       |       |       |       |
|                      |                   | FASTENERS TYPE A (1/4"Ø)  |      |      |       |       | FASTENERS TYPE B (3/8"Ø) |       |       |       |       | FASTENERS TYPE C (1/4"Ø)            |      |      |      |       | FASTENERS TYPE D (3/8"Ø) |      |      |      |       | FASTENERS TYPE E (3/8"Ø) |       |       |       |       |
| "L" (Ft-in)          | "b" (Ft-in)       | n=4   | n=6  | n=8  | n=10  | n=12  | n=4                      | n=6   | n=8   | n=10  | n=12  | n=4                                 | n=6  | n=8  | n=10 | n=12  | n=4                      | n=6  | n=8  | n=10 | n=12  | n=4                      | n=6   | n=8   | n=10  | n=12  |
| 15' - 0"             | 3' - 6"           | 43.1  | 64.6 | 86.2 | 107.7 | 129.3 | 111.7                    | 140.0 | 140.0 | 140.0 | 140.0 | 35.7                                | 53.6 | 86.2 | 89.4 | 107.2 | 33.5                     | 50.3 | 67.1 | 83.8 | 100.6 | 138.8                    | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 4' - 0"           | 37.7  | 56.6 | 75.4 | 94.3  | 113.1 | 97.7                     | 140.0 | 140.0 | 140.0 | 140.0 | 31.3                                | 46.9 | 75.4 | 78.2 | 93.8  | 29.3                     | 44.0 | 58.7 | 73.3 | 88.0  | 121.5                    | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 4' - 6"           | 33.5  | 50.3 | 67.0 | 83.8  | 100.6 | 86.9                     | 130.3 | 140.0 | 140.0 | 140.0 | 27.8                                | 41.7 | 67.0 | 69.5 | 83.4  | 26.1                     | 39.1 | 52.2 | 65.2 | 78.2  | 108.0                    | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 0"           | 30.2  | 45.3 | 60.3 | 75.4  | 90.5  | 78.2                     | 117.3 | 140.0 | 140.0 | 140.0 | 25.0                                | 37.5 | 60.3 | 62.6 | 75.1  | 23.5                     | 35.2 | 46.9 | 58.7 | 70.4  | 97.2                     | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 6"           | 27.4  | 41.1 | 54.9 | 68.6  | 82.3  | 71.1                     | 106.6 | 140.0 | 140.0 | 140.0 | 22.7                                | 34.1 | 54.9 | 56.9 | 68.2  | 21.3                     | 32.0 | 42.7 | 53.3 | 64.0  | 88.3                     | 132.5 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 0"           | 25.1  | 37.7 | 50.3 | 62.9  | 75.4  | 65.2                     | 97.7  | 130.3 | 140.0 | 140.0 | 20.9                                | 31.3 | 50.3 | 52.1 | 62.6  | 19.6                     | 29.3 | 39.1 | 48.9 | 58.7  | 81.0                     | 121.5 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 6"           | 23.2  | 34.8 | 46.4 | 58.0  | 69.6  | 60.1                     | 90.2  | 120.3 | 140.0 | 140.0 | 19.2                                | 28.9 | 46.4 | 48.1 | 57.7  | 18.1                     | 27.1 | 36.1 | 45.1 | 54.2  | 74.8                     | 112.1 | 140.0 | 140.0 | 140.0 |
| 7' - 0"              | 21.5              | 32.3  | 43.1 | 53.9 | 64.6  | 55.9  | 83.8                     | 111.7 | 139.6 | 140.0 | 17.9  | 26.8                                | 43.1 | 44.7 | 53.6 | 16.8  | 25.1                     | 33.5 | 41.9 | 50.3 | 69.4  | 104.1                    | 138.8 | 140.0 | 140.0 |       |
| 15' - 6"             | 3' - 6"           | 41.7  | 62.6 | 83.4 | 104.3 | 125.1 | 108.1                    | 140.0 | 140.0 | 140.0 | 140.0 | 34.6                                | 51.9 | 83.4 | 86.5 | 103.8 | 32.4                     | 48.7 | 64.9 | 81.1 | 97.3  | 134.4                    | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 4' - 0"           | 36.5  | 54.7 | 73.0 | 91.2  | 109.5 | 94.6                     | 140.0 | 140.0 | 140.0 | 140.0 | 30.3                                | 45.4 | 73.0 | 75.7 | 90.8  | 28.4                     | 42.6 | 56.8 | 71.0 | 85.2  | 117.6                    | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 4' - 6"           | 32.4  | 48.7 | 64.9 | 81.1  | 97.3  | 84.1                     | 126.1 | 140.0 | 140.0 | 140.0 | 26.9                                | 40.4 | 64.9 | 67.3 | 80.7  | 25.2                     | 37.9 | 50.5 | 63.1 | 75.7  | 104.5                    | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 0"           | 29.2  | 43.8 | 58.4 | 73.0  | 87.6  | 75.7                     | 113.5 | 140.0 | 140.0 | 140.0 | 24.2                                | 36.3 | 58.4 | 60.5 | 72.7  | 22.7                     | 34.1 | 45.4 | 56.8 | 68.1  | 94.0                     | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 6"           | 26.5  | 39.8 | 53.1 | 66.4  | 79.6  | 68.8                     | 103.2 | 137.6 | 140.0 | 140.0 | 22.0                                | 33.0 | 53.1 | 55.0 | 66.0  | 20.6                     | 31.0 | 41.3 | 51.6 | 61.9  | 85.5                     | 128.2 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 0"           | 24.3  | 36.5 | 48.7 | 60.8  | 73.0  | 63.1                     | 94.6  | 126.1 | 140.0 | 140.0 | 20.2                                | 30.3 | 48.7 | 50.5 | 60.5  | 18.9                     | 28.4 | 37.9 | 47.3 | 56.8  | 78.4                     | 117.6 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 6"           | 22.5  | 33.7 | 44.9 | 56.1  | 67.4  | 58.2                     | 87.3  | 116.4 | 140.0 | 140.0 | 18.6                                | 27.9 | 44.9 | 46.6 | 55.9  | 17.5                     | 26.2 | 34.9 | 43.7 | 52.4  | 72.3                     | 108.5 | 140.0 | 140.0 | 140.0 |
| 7' - 0"              | 20.9              | 31.3  | 41.7 | 52.1 | 62.6  | 54.0  | 81.1                     | 108.1 | 135.1 | 140.0 | 17.3  | 25.9                                | 41.7 | 43.2 | 51.9 | 16.2  | 24.3                     | 32.4 | 40.6 | 48.7 | 67.2  | 100.8                    | 134.4 | 140.0 | 140.0 |       |
| 15' - 9"             | 3' - 6"           | 41.0  | 61.6 | 82.1 | 102.6 | 123.1 | 106.4                    | 140.0 | 140.0 | 140.0 | 140.0 | 34.0                                | 51.1 | 82.1 | 85.1 | 102.1 | 31.9                     | 47.9 | 63.9 | 79.8 | 95.8  | 132.2                    | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 4' - 0"           | 35.9  | 53.9 | 71.8 | 89.8  | 107.7 | 93.1                     | 139.6 | 140.0 | 140.0 | 140.0 | 29.8                                | 44.7 | 71.8 | 74.5 | 89.4  | 27.9                     | 41.9 | 55.9 | 69.9 | 83.8  | 115.7                    | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 4' - 6"           | 31.9  | 47.9 | 63.8 | 79.8  | 95.8  | 82.7                     | 124.1 | 140.0 | 140.0 | 140.0 | 26.5                                | 39.7 | 63.8 | 66.2 | 79.4  | 24.8                     | 37.3 | 49.7 | 62.1 | 74.5  | 102.8                    | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 0"           | 28.7  | 43.1 | 57.5 | 71.8  | 86.2  | 74.5                     | 111.7 | 140.0 | 140.0 | 140.0 | 23.8                                | 35.7 | 57.5 | 59.6 | 71.5  | 22.4                     | 33.5 | 44.7 | 55.9 | 67.1  | 92.6                     | 138.8 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 6"           | 26.1  | 39.2 | 52.2 | 65.3  | 78.4  | 67.7                     | 101.5 | 135.4 | 140.0 | 140.0 | 21.7                                | 32.5 | 52.2 | 54.2 | 65.0  | 20.3                     | 30.5 | 40.6 | 50.8 | 61.0  | 84.1                     | 126.2 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 0"           | 23.9  | 35.9 | 47.9 | 59.9  | 71.8  | 62.1                     | 93.1  | 124.1 | 140.0 | 140.0 | 19.9                                | 29.8 | 47.9 | 49.7 | 59.6  | 18.6                     | 27.9 | 37.3 | 46.6 | 55.9  | 77.1                     | 115.7 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 6"           | 22.1  | 33.2 | 44.2 | 55.3  | 66.3  | 57.3                     | 85.9  | 114.6 | 140.0 | 140.0 | 18.3                                | 27.5 | 44.2 | 45.8 | 55.0  | 17.2                     | 25.8 | 34.4 | 43.0 | 51.6  | 71.2                     | 106.8 | 140.0 | 140.0 | 140.0 |
| 7' - 0"              | 20.5              | 30.8  | 41.0 | 51.3 | 61.6  | 53.2  | 79.8                     | 106.4 | 133.0 | 140.0 | 17.0  | 25.5                                | 41.0 | 42.6 | 51.1 | 16.0  | 24.0                     | 31.9 | 39.9 | 47.9 | 66.1  | 99.2                     | 132.2 | 140.0 | 140.0 |       |

### FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

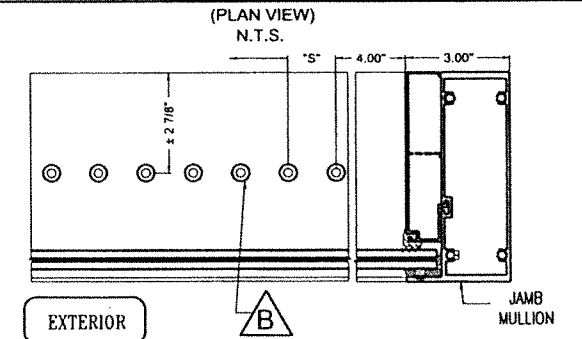
- A - 1/4"Ø DEWALT INC., ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min.  $f_c = 2,730$  ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B - 3/8"Ø DEWALT INC., WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min.  $f_c = 3,0$  ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C - 1/4"Ø DEWALT INC., ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HHB THRU BOLT W/ NUT & LOCK WASHER.



"n" FASTENERS  
n = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, EQUALLY INSTALLED AT EACH SIDE OF INTERIOR MULLION

\*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).

### SILL OR HEAD CONNECTION DETAIL @ REINFORCED OR UNREINFORCED INTERIOR MULLION



"n/2" FASTENERS  
n/2 = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, INSTALLED AT ONE SIDE OF JAMB MULLION

### SILL OR HEAD CONNECTION DETAIL @ JAMB MULLION

(PLAN VIEW)  
N.T.S.

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

WALTER A. TILLIT JR.  
 No. 44167  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 1/2/2023  
 P.E. SEAL/SIGNATURE/DATE

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| 23-213  |             | DRAWING No         |
| REV. No   | DESCRIPTION | DATE               |
| 1   | OLD 21-118  | 09/12/23           |
| 2   | -           | -                  |

# MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR MULLIONS & JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2

| MAXIMUM MULLION SPAN | EFFECTIVE SPACING | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. LOAD BEARING SHIM SPACE |      |       |       |       |       |                          |       |       |      |      |       |                              |       |      |       |       |       |                          |       |       |       |       |       |                                |       |       |       |       |       |
|----------------------|-------------------|--|------|-------|-------|-------|-------|--------------------------|-------|-------|------|------|-------|------------------------------|-------|------|-------|-------|-------|--------------------------|-------|-------|-------|-------|-------|--------------------------------|-------|-------|-------|-------|-------|
|                      |                   | POURED CONCRETE SUBSTRATE  |      |       |       |       |       |                          |       |       |      |      |       | WOOD (2) 2" x THK. SUBSTRATE |       |      |       |       |       |                          |       |       |       |       |       | STEEL 1/4" Min. THK. SUBSTRATE |       |       |       |       |       |
|                      |                   | FASTENERS TYPE A (1/4"ø)   |      |       |       |       |       | FASTENERS TYPE B (3/8"ø) |       |       |      |      |       | FASTENERS TYPE C (1/4"ø)     |       |      |       |       |       | FASTENERS TYPE D (3/8"ø) |       |       |       |       |       | FASTENERS TYPE E (3/8"ø)       |       |       |       |       |       |
|                      |                   | n=4  | n=6  | n=8   | n=10  | n=12  | n=4   | n=6                      | n=8   | n=10  | n=12 | n=4  | n=6   | n=8                          | n=10  | n=12 | n=4   | n=6   | n=8   | n=10                     | n=12  | n=4   | n=6   | n=8   | n=10  | n=12                           | n=4   | n=6   | n=8   | n=10  | n=12  |
| 8' - 0" OR LESS      | 3' - 6"           | 58.7   | 88.0 | 117.4 | 140.0 | 140.0 | 140.0 | 140.0                    | 140.0 | 140.0 | 58.7 | 88.0 | 117.4 | 140.0                        | 140.0 | 62.9 | 94.3  | 125.7 | 140.0 | 140.0                    | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 |       |
|                      | 4' - 0"           | 51.4   | 77.0 | 102.7 | 128.4 | 140.0 | 140.0 | 140.0                    | 140.0 | 140.0 | 51.4 | 77.0 | 102.7 | 128.4                        | 140.0 | 55.0 | 82.5  | 110.0 | 137.5 | 140.0                    | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 |       |
|                      | 4' - 6"           | 45.7   | 68.5 | 91.3  | 114.1 | 137.0 | 140.0 | 140.0                    | 140.0 | 140.0 | 45.7 | 68.5 | 91.3  | 114.1                        | 137.0 | 48.9 | 73.3  | 97.8  | 122.2 | 140.0                    | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 0"           | 41.1   | 61.6 | 82.2  | 102.7 | 123.3 | 121.6 | 140.0                    | 140.0 | 140.0 | 41.1 | 61.6 | 82.2  | 102.7                        | 123.3 | 44.0 | 66.0  | 88.0  | 110.0 | 132.0                    | 138.5 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 6"           | 37.4   | 56.0 | 74.7  | 93.4  | 112.1 | 110.5 | 140.0                    | 140.0 | 140.0 | 37.4 | 56.0 | 74.7  | 93.4                         | 112.1 | 40.0 | 60.0  | 80.0  | 100.0 | 120.0                    | 125.9 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 0"           | 34.2   | 51.4 | 68.5  | 85.6  | 102.7 | 101.3 | 140.0                    | 140.0 | 140.0 | 34.2 | 51.4 | 68.5  | 85.6                         | 102.7 | 36.7 | 55.0  | 73.3  | 91.7  | 110.0                    | 115.4 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 6"           | 31.6   | 47.4 | 63.2  | 79.0  | 94.8  | 93.5  | 140.0                    | 140.0 | 140.0 | 31.6 | 47.4 | 63.2  | 79.0                         | 94.8  | 33.9 | 50.8  | 67.7  | 84.6  | 101.6                    | 106.5 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
| 7' - 0"              | 29.3              | 44.0   | 58.7 | 73.4  | 88.0  | 86.8  | 130.3 | 140.0                    | 140.0 | 29.3  | 44.0 | 58.7 | 73.4  | 88.0                         | 31.4  | 47.2 | 62.9  | 78.6  | 94.3  | 98.9                     | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 |       |
| 8' - 6"              | 3' - 6"           | 55.2   | 82.9 | 110.5 | 138.1 | 140.0 | 140.0 | 140.0                    | 140.0 | 140.0 | 55.2 | 82.9 | 110.5 | 138.1                        | 140.0 | 59.2 | 88.8  | 118.3 | 140.0 | 140.0                    | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 |       |
|                      | 4' - 0"           | 48.3   | 72.5 | 96.7  | 120.8 | 140.0 | 140.0 | 140.0                    | 140.0 | 48.3  | 72.5 | 96.7 | 120.8 | 140.0                        | 51.8  | 77.7 | 103.6 | 129.4 | 140.0 | 140.0                    | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 |       |
|                      | 4' - 6"           | 43.0   | 64.5 | 85.9  | 107.4 | 128.9 | 127.1 | 140.0                    | 140.0 | 140.0 | 43.0 | 64.5 | 85.9  | 107.4                        | 128.9 | 46.0 | 69.0  | 92.0  | 115.1 | 138.1                    | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 0"           | 38.7   | 58.0 | 77.3  | 96.7  | 116.0 | 114.4 | 140.0                    | 140.0 | 140.0 | 38.7 | 58.0 | 77.3  | 96.7                         | 116.0 | 41.4 | 62.1  | 82.8  | 103.6 | 124.3                    | 130.3 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 6"           | 35.2   | 52.7 | 70.3  | 87.9  | 105.5 | 104.0 | 140.0                    | 140.0 | 140.0 | 35.2 | 52.7 | 70.3  | 87.9                         | 105.5 | 37.7 | 56.5  | 75.3  | 94.1  | 113.0                    | 118.5 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 0"           | 32.2   | 48.3 | 64.5  | 80.6  | 96.7  | 95.4  | 140.0                    | 140.0 | 140.0 | 32.2 | 48.3 | 64.5  | 80.6                         | 96.7  | 34.5 | 51.8  | 69.0  | 86.3  | 103.6                    | 108.6 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 6"           | 29.7   | 44.6 | 59.5  | 74.4  | 89.2  | 88.0  | 132.0                    | 140.0 | 140.0 | 29.7 | 44.6 | 59.5  | 74.4                         | 89.2  | 31.9 | 47.8  | 63.7  | 79.7  | 95.6                     | 100.3 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
| 7' - 0"              | 27.6              | 41.4   | 55.2 | 69.1  | 82.9  | 81.7  | 122.6 | 140.0                    | 140.0 | 27.6  | 41.4 | 55.2 | 69.1  | 82.9                         | 29.6  | 44.4 | 59.2  | 74.0  | 88.8  | 93.1                     | 139.7 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 |       |
| 9' - 0"              | 3' - 6"           | 52.2   | 78.3 | 104.4 | 130.4 | 140.0 | 140.0 | 140.0                    | 140.0 | 140.0 | 52.2 | 78.3 | 104.4 | 130.4                        | 140.0 | 55.9 | 83.8  | 111.8 | 139.7 | 140.0                    | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 |       |
|                      | 4' - 0"           | 45.7   | 68.5 | 91.3  | 114.1 | 137.0 | 135.1 | 140.0                    | 140.0 | 45.7  | 68.5 | 91.3 | 114.1 | 137.0                        | 48.9  | 73.3 | 97.8  | 122.2 | 140.0 | 140.0                    | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 |       |
|                      | 4' - 6"           | 40.6   | 60.9 | 81.2  | 101.5 | 121.7 | 120.1 | 140.0                    | 140.0 | 140.0 | 40.6 | 60.9 | 81.2  | 101.5                        | 121.7 | 43.5 | 65.2  | 86.9  | 108.7 | 130.4                    | 136.8 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 0"           | 36.5   | 54.8 | 73.0  | 91.3  | 109.6 | 108.1 | 140.0                    | 140.0 | 140.0 | 36.5 | 54.8 | 73.0  | 91.3                         | 109.6 | 39.1 | 58.7  | 78.2  | 97.8  | 117.4                    | 123.1 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 6"           | 33.2   | 49.8 | 66.4  | 83.0  | 99.6  | 98.3  | 140.0                    | 140.0 | 140.0 | 33.2 | 49.8 | 66.4  | 83.0                         | 99.6  | 35.6 | 53.3  | 71.1  | 88.9  | 106.7                    | 111.9 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 0"           | 30.4   | 45.7 | 60.9  | 76.1  | 91.3  | 90.1  | 135.1                    | 140.0 | 140.0 | 30.4 | 45.7 | 60.9  | 76.1                         | 91.3  | 32.6 | 48.9  | 65.2  | 81.5  | 97.8                     | 102.6 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 6"           | 28.1   | 42.1 | 56.2  | 70.2  | 84.3  | 83.1  | 124.7                    | 140.0 | 140.0 | 28.1 | 42.1 | 56.2  | 70.2                         | 84.3  | 30.1 | 45.1  | 60.2  | 75.2  | 90.3                     | 94.7  | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
| 7' - 0"              | 26.1              | 39.1   | 52.2 | 65.2  | 78.3  | 77.2  | 115.8 | 140.0                    | 140.0 | 26.1  | 39.1 | 52.2 | 65.2  | 78.3                         | 27.9  | 41.9 | 55.9  | 69.9  | 83.8  | 87.9                     | 131.9 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 |       |
| 9' - 6"              | 3' - 6"           | 49.4   | 74.1 | 98.9  | 123.6 | 140.0 | 140.0 | 140.0                    | 140.0 | 140.0 | 49.4 | 74.1 | 98.9  | 123.6                        | 140.0 | 52.9 | 79.4  | 105.9 | 132.4 | 140.0                    | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 |       |
|                      | 4' - 0"           | 43.3   | 64.9 | 86.5  | 108.1 | 129.8 | 128.0 | 140.0                    | 140.0 | 43.3  | 64.9 | 86.5 | 108.1 | 129.8                        | 46.3  | 69.5 | 92.7  | 115.8 | 139.0 | 140.0                    | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 |       |
|                      | 4' - 6"           | 38.4   | 57.7 | 76.9  | 96.1  | 115.3 | 113.8 | 140.0                    | 140.0 | 140.0 | 38.4 | 57.7 | 76.9  | 96.1                         | 115.3 | 41.2 | 61.8  | 82.4  | 102.9 | 123.5                    | 129.6 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 0"           | 34.6   | 51.9 | 69.2  | 86.5  | 103.8 | 102.4 | 140.0                    | 140.0 | 140.0 | 34.6 | 51.9 | 69.2  | 86.5                         | 103.8 | 37.1 | 55.6  | 74.1  | 92.7  | 111.2                    | 116.6 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 6"           | 31.5   | 47.2 | 62.9  | 78.6  | 94.4  | 93.1  | 139.6                    | 140.0 | 140.0 | 31.5 | 47.2 | 62.9  | 78.6                         | 94.4  | 33.7 | 50.5  | 67.4  | 84.2  | 101.1                    | 106.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 0"           | 28.8   | 43.3 | 57.7  | 72.1  | 86.5  | 85.3  | 128.0                    | 140.0 | 140.0 | 28.8 | 43.3 | 57.7  | 72.1                         | 86.5  | 30.9 | 46.3  | 61.8  | 77.2  | 92.7                     | 97.2  | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 6"           | 26.6   | 39.9 | 53.2  | 66.5  | 79.8  | 78.8  | 118.1                    | 140.0 | 140.0 | 26.6 | 39.9 | 53.2  | 66.5                         | 79.8  | 28.5 | 42.8  | 57.0  | 71.3  | 85.5                     | 89.7  | 134.6 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
| 7' - 0"              | 24.7              | 37.1   | 49.4 | 61.8  | 74.1  | 73.1  | 109.7 | 140.0                    | 140.0 | 24.7  | 37.1 | 49.4 | 61.8  | 74.1                         | 26.5  | 39.7 | 52.9  | 66.2  | 79.4  | 83.3                     | 125.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 |       |
| 10' - 0"             | 3' - 6"           | 47.0   | 70.4 | 93.9  | 117.4 | 140.0 | 139.0 | 140.0                    | 140.0 | 140.0 | 47.0 | 70.4 | 93.9  | 117.4                        | 140.0 | 50.3 | 75.4  | 100.6 | 125.7 | 140.0                    | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 |       |
|                      | 4' - 0"           | 41.1   | 61.6 | 82.2  | 102.7 | 123.3 | 121.6 | 140.0                    | 140.0 | 41.1  | 61.6 | 82.2 | 102.7 | 123.3                        | 44.0  | 66.0 | 88.0  | 110.0 | 132.0 | 138.5                    | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 |       |
|                      | 4' - 6"           | 36.5   | 54.8 | 73.0  | 91.3  | 109.6 | 108.1 | 140.0                    | 140.0 | 140.0 | 36.5 | 54.8 | 73.0  | 91.3                         | 109.6 | 39.1 | 58.7  | 78.2  | 97.8  | 117.4                    | 123.1 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 0"           | 32.9   | 49.3 | 65.7  | 82.2  | 98.6  | 97.3  | 140.0                    | 140.0 | 140.0 | 32.9 | 49.3 | 65.7  | 82.2                         | 98.6  | 35.2 | 52.8  | 70.4  | 88.0  | 105.6                    | 110.8 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 5' - 6"           | 29.9   | 44.8 | 59.8  | 74.7  | 89.6  | 88.4  | 132.6                    | 140.0 | 140.0 | 29.9 | 44.8 | 59.8  | 74.7                         | 89.6  | 32.0 | 48.0  | 64.0  | 80.0  | 96.0                     | 100.7 | 140.0 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 0"           | 27.4   | 41.1 | 54.8  | 68.5  | 82.2  | 81.1  | 121.6                    | 140.0 | 140.0 | 27.4 | 41.1 | 54.8  | 68.5                         | 82.2  | 29.3 | 44.0  | 58.7  | 73.3  | 88.0                     | 92.3  | 138.5 | 140.0 | 140.0 | 140.0 | 140.0                          | 140.0 | 140.0 | 140.0 | 140.0 | 140.0 |
|                      | 6' - 6"           | 25.3   | 37.9 | 50.6  | 63.2  | 75.9  | 74.8  | 112.2                    | 140.0 | 140.0 | 25.3 | 37.9 | 50.6  | 63.2                         | 75.9  | 27   |       |       |       |                          |       |       |       |       |       |                                |       |       |       |       |       |

# MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR MULLIONS & JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2

## FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

- A** - 1/4"Ø DEWALT INC., ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min.  $f_c = 2,730$  ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B** - 3/8"Ø DEWALT INC., WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min.  $f_c = 3.0$  ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C** - 1/4"Ø DEWALT INC., ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D** - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E** - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HEB THRU BOLT W/ NUT & LOCK WASHER.

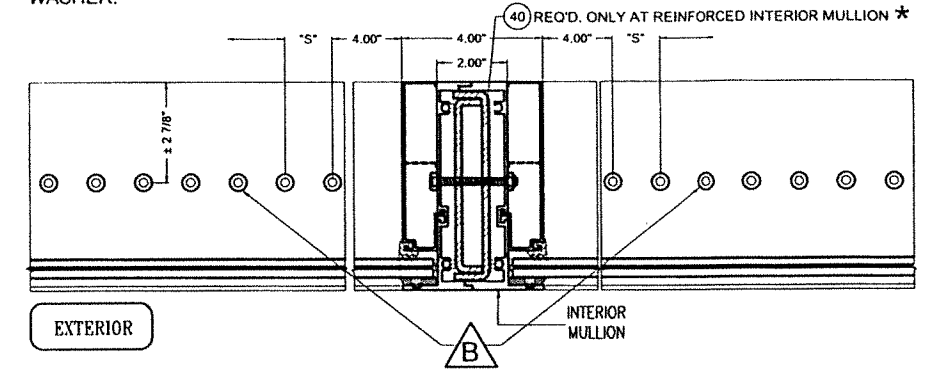
| MAXIMUM MULLION SPAN<br>"L" (Ft-in) | EFFECTIVE SPACING<br>"b" (Ft-in) | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. LOAD BEARING SHIM SPACE (CONTINUED) |      |      |       |                          |       |       |       |                          |       |      |      |                              |       |       |      |                          |      |       |       |       |       |       |       |                      |  |  |  |
|-------------------------------------|----------------------------------|--|------|------|-------|--------------------------|-------|-------|-------|--------------------------|-------|------|------|------------------------------|-------|-------|------|--------------------------|------|-------|-------|-------|-------|-------|-------|----------------------|--|--|--|
|                                     |                                  | POURED CONCRETE SUBSTRATE  |      |      |       |                          |       |       |       |                          |       |      |      | WOOD (2) 2" x THK. SUBSTRATE |       |       |      |                          |      |       |       |       |       |       |       | STEEL 1/4" Min. THK. |  |  |  |
|                                     |                                  | FASTENERS TYPE A (1/4"Ø)   |      |      |       | FASTENERS TYPE B (3/8"Ø) |       |       |       | FASTENERS TYPE C (1/4"Ø) |       |      |      | FASTENERS TYPE D (3/8"Ø)     |       |       |      | FASTENERS TYPE E (3/8"Ø) |      |       |       |       |       |       |       |                      |  |  |  |
|                                     |                                  | n=4  | n=6  | n=8  | n=10  | n=12                     | n=4   | n=6   | n=8   | n=10                     | n=12  | n=4  | n=6  | n=8                          | n=10  | n=12  | n=4  | n=6                      | n=8  | n=10  | n=12  | n=4   | n=6   | n=8   | n=10  | n=12                 |  |  |  |
| 11' - 6"                            | 3' - 6"                          | 40.8   | 61.2 | 81.7 | 102.1 | 122.5                    | 120.8 | 140.0 | 140.0 | 140.0                    | 140.0 | 40.8 | 61.2 | 81.7                         | 102.1 | 122.5 | 43.7 | 65.6                     | 87.5 | 109.3 | 131.2 | 137.6 | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 4' - 0"                          | 35.7   | 53.6 | 71.5 | 89.3  | 107.2                    | 105.7 | 140.0 | 140.0 | 140.0                    | 140.0 | 35.7 | 53.6 | 71.5                         | 89.3  | 107.2 | 38.3 | 57.4                     | 76.5 | 95.7  | 114.8 | 120.4 | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 4' - 6"                          | 31.8   | 47.6 | 63.5 | 79.4  | 95.3                     | 94.0  | 140.0 | 140.0 | 140.0                    | 140.0 | 31.8 | 47.6 | 63.5                         | 79.4  | 95.3  | 34.0 | 51.0                     | 68.0 | 85.0  | 102.1 | 107.0 | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 5' - 0"                          | 28.6   | 42.9 | 57.2 | 71.5  | 85.7                     | 84.6  | 126.9 | 140.0 | 140.0                    | 140.0 | 28.6 | 42.9 | 57.2                         | 71.5  | 85.7  | 30.6 | 45.9                     | 61.2 | 76.5  | 91.8  | 96.3  | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 5' - 6"                          | 26.0   | 39.0 | 52.0 | 65.0  | 78.0                     | 76.9  | 115.3 | 140.0 | 140.0                    | 140.0 | 26.0 | 39.0 | 52.0                         | 65.0  | 78.0  | 27.8 | 41.7                     | 55.7 | 69.6  | 83.5  | 87.6  | 131.4 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 6' - 0"                          | 23.8   | 35.7 | 47.6 | 59.5  | 71.5                     | 70.5  | 105.7 | 140.0 | 140.0                    | 140.0 | 23.8 | 35.7 | 47.6                         | 59.5  | 71.5  | 25.5 | 38.3                     | 51.0 | 63.8  | 76.5  | 80.3  | 120.4 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 6' - 6"                          | 22.0   | 33.0 | 44.0 | 55.0  | 66.0                     | 65.1  | 97.6  | 130.1 | 140.0                    | 140.0 | 22.0 | 33.0 | 44.0                         | 55.0  | 66.0  | 23.6 | 35.3                     | 47.1 | 58.9  | 70.7  | 74.1  | 111.2 | 140.0 | 140.0 | 140.0                |  |  |  |
| 7' - 0"                             | 20.4                             | 30.6   | 40.8 | 51.0 | 61.2  | 60.4                     | 90.6  | 120.8 | 140.0 | 140.0                    | 20.4  | 30.6 | 40.8 | 51.0                         | 61.2  | 21.9  | 32.8 | 43.7                     | 54.7 | 65.6  | 68.8  | 103.2 | 137.6 | 140.0 | 140.0 |                      |  |  |  |
| 12' - 0"                            | 3' - 6"                          | 39.1   | 58.7 | 78.3 | 97.8  | 117.4                    | 115.8 | 140.0 | 140.0 | 140.0                    | 140.0 | 39.1 | 58.7 | 78.3                         | 97.8  | 117.4 | 41.9 | 62.9                     | 83.8 | 104.8 | 125.7 | 131.9 | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 4' - 0"                          | 34.2   | 51.4 | 68.5 | 85.6  | 102.7                    | 101.3 | 140.0 | 140.0 | 140.0                    | 140.0 | 34.2 | 51.4 | 68.5                         | 85.6  | 102.7 | 36.7 | 55.0                     | 73.3 | 91.7  | 110.0 | 115.4 | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 4' - 6"                          | 30.4   | 45.7 | 60.9 | 76.1  | 91.3                     | 90.1  | 135.1 | 140.0 | 140.0                    | 140.0 | 30.4 | 45.7 | 60.9                         | 76.1  | 91.3  | 32.6 | 48.9                     | 65.2 | 81.5  | 97.8  | 102.6 | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 5' - 0"                          | 27.4   | 41.1 | 54.8 | 68.5  | 82.2                     | 81.1  | 121.6 | 140.0 | 140.0                    | 140.0 | 27.4 | 41.1 | 54.8                         | 68.5  | 82.2  | 29.3 | 44.0                     | 58.7 | 73.3  | 88.0  | 92.3  | 138.5 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 5' - 6"                          | 24.9   | 37.4 | 49.8 | 62.3  | 74.7                     | 73.7  | 110.5 | 140.0 | 140.0                    | 140.0 | 24.9 | 37.4 | 49.8                         | 62.3  | 74.7  | 26.7 | 40.0                     | 53.3 | 66.7  | 80.0  | 83.9  | 125.9 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 6' - 0"                          | 22.8   | 34.2 | 45.7 | 57.1  | 68.5                     | 67.5  | 101.3 | 135.1 | 140.0                    | 140.0 | 22.8 | 34.2 | 45.7                         | 57.1  | 68.5  | 24.4 | 36.7                     | 48.9 | 61.1  | 73.3  | 76.9  | 115.4 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 6' - 6"                          | 21.1   | 31.6 | 42.1 | 52.7  | 63.2                     | 62.4  | 93.5  | 124.7 | 140.0                    | 140.0 | 21.1 | 31.6 | 42.1                         | 52.7  | 63.2  | 22.6 | 33.9                     | 45.1 | 56.4  | 67.7  | 71.0  | 106.5 | 140.0 | 140.0 | 140.0                |  |  |  |
| 7' - 0"                             | 19.6                             | 29.3   | 39.1 | 48.9 | 58.7  | 57.9                     | 86.8  | 115.8 | 140.0 | 140.0                    | 19.6  | 29.3 | 39.1 | 48.9                         | 58.7  | 21.0  | 31.4 | 41.9                     | 52.4 | 62.9  | 65.9  | 98.9  | 131.9 | 140.0 | 140.0 |                      |  |  |  |
| 12' - 6"                            | 3' - 6"                          | 37.6   | 56.3 | 75.1 | 93.9  | 112.7                    | 111.2 | 140.0 | 140.0 | 140.0                    | 140.0 | 37.6 | 56.3 | 75.1                         | 93.9  | 112.7 | 40.2 | 60.4                     | 80.5 | 100.6 | 120.7 | 126.6 | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 4' - 0"                          | 32.9   | 49.3 | 65.7 | 82.2  | 98.6                     | 97.3  | 140.0 | 140.0 | 140.0                    | 140.0 | 32.9 | 49.3 | 65.7                         | 82.2  | 98.6  | 35.2 | 52.8                     | 70.4 | 88.0  | 105.6 | 110.8 | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 4' - 6"                          | 29.2   | 43.8 | 58.4 | 73.0  | 87.7                     | 86.5  | 129.7 | 140.0 | 140.0                    | 140.0 | 29.2 | 43.8 | 58.4                         | 73.0  | 87.7  | 31.3 | 46.9                     | 62.6 | 78.2  | 93.9  | 98.5  | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 5' - 0"                          | 26.3   | 39.4 | 52.6 | 65.7  | 78.9                     | 77.8  | 116.7 | 140.0 | 140.0                    | 140.0 | 26.3 | 39.4 | 52.6                         | 65.7  | 78.9  | 28.2 | 42.2                     | 56.3 | 70.4  | 84.5  | 88.6  | 132.9 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 5' - 6"                          | 23.9   | 35.9 | 47.8 | 59.8  | 71.7                     | 70.7  | 106.1 | 140.0 | 140.0                    | 140.0 | 23.9 | 35.9 | 47.8                         | 59.8  | 71.7  | 25.6 | 38.4                     | 51.2 | 64.0  | 76.8  | 80.6  | 120.9 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 6' - 0"                          | 21.9   | 32.9 | 43.8 | 54.8  | 65.7                     | 64.8  | 97.3  | 129.7 | 140.0                    | 140.0 | 21.9 | 32.9 | 43.8                         | 54.8  | 65.7  | 23.5 | 35.2                     | 46.9 | 58.7  | 70.4  | 73.9  | 110.8 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 6' - 6"                          | 20.2   | 30.3 | 40.5 | 50.6  | 60.7                     | 59.9  | 89.8  | 119.7 | 140.0                    | 140.0 | 20.2 | 30.3 | 40.5                         | 50.6  | 60.7  | 21.7 | 32.5                     | 43.3 | 54.2  | 65.0  | 68.2  | 102.3 | 136.4 | 140.0 | 140.0                |  |  |  |
| 7' - 0"                             | 18.1                             | 27.1   | 36.1 | 45.2 | 54.2  | 53.4                     | 80.2  | 106.9 | 133.6 | 140.0                    | 18.1  | 27.1 | 36.1 | 45.2                         | 54.2  | 19.3  | 29.0 | 38.7                     | 48.4 | 58.0  | 60.9  | 91.3  | 121.7 | 140.0 | 140.0 |                      |  |  |  |
| 13' - 0"                            | 3' - 6"                          | 36.1   | 54.2 | 72.2 | 90.3  | 108.4                    | 106.9 | 140.0 | 140.0 | 140.0                    | 140.0 | 36.1 | 54.2 | 72.2                         | 90.3  | 108.4 | 38.7 | 58.0                     | 77.4 | 96.7  | 116.1 | 121.7 | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 4' - 0"                          | 31.6   | 47.4 | 63.2 | 79.0  | 94.8                     | 93.5  | 140.0 | 140.0 | 140.0                    | 140.0 | 31.6 | 47.4 | 63.2                         | 79.0  | 94.8  | 33.9 | 50.8                     | 67.7 | 84.6  | 101.6 | 106.5 | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 4' - 6"                          | 28.1   | 42.1 | 56.2 | 70.2  | 84.3                     | 83.1  | 124.7 | 140.0 | 140.0                    | 140.0 | 28.1 | 42.1 | 56.2                         | 70.2  | 84.3  | 30.1 | 45.1                     | 60.2 | 75.2  | 90.3  | 94.7  | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 5' - 0"                          | 25.3   | 37.9 | 50.6 | 63.2  | 75.9                     | 74.8  | 112.2 | 140.0 | 140.0                    | 140.0 | 25.3 | 37.9 | 50.6                         | 63.2  | 75.9  | 27.1 | 40.6                     | 54.2 | 67.7  | 81.2  | 85.2  | 127.8 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 5' - 6"                          | 23.0   | 34.5 | 46.0 | 57.5  | 69.0                     | 68.0  | 102.0 | 136.0 | 140.0                    | 140.0 | 23.0 | 34.5 | 46.0                         | 57.5  | 69.0  | 24.6 | 36.9                     | 49.2 | 61.6  | 73.9  | 77.5  | 116.2 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 6' - 0"                          | 21.1   | 31.6 | 42.1 | 52.7  | 63.2                     | 62.4  | 93.5  | 124.7 | 140.0                    | 140.0 | 21.1 | 31.6 | 42.1                         | 52.7  | 63.2  | 22.6 | 33.9                     | 45.1 | 56.4  | 67.7  | 71.0  | 106.5 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 6' - 6"                          | 18.7   | 28.1 | 37.5 | 46.8  | 56.2                     | 55.4  | 83.1  | 110.8 | 138.6                    | 140.0 | 18.7 | 28.1 | 37.5                         | 46.8  | 56.2  | 20.1 | 30.1                     | 40.1 | 50.2  | 60.2  | 63.1  | 94.7  | 126.3 | 140.0 | 140.0                |  |  |  |
| 7' - 0"                             | 17.4                             | 26.1   | 34.8 | 43.5 | 52.2  | 51.5                     | 77.2  | 102.9 | 128.7 | 140.0                    | 17.4  | 26.1 | 34.8 | 43.5                         | 52.2  | 18.6  | 27.9 | 37.3                     | 46.6 | 55.9  | 58.6  | 87.9  | 117.2 | 140.0 | 140.0 |                      |  |  |  |
| 13' - 6"                            | 3' - 6"                          | 34.8   | 52.2 | 69.6 | 87.0  | 104.4                    | 102.9 | 140.0 | 140.0 | 140.0                    | 140.0 | 34.8 | 52.2 | 69.6                         | 87.0  | 104.4 | 37.3 | 55.9                     | 74.5 | 93.1  | 111.8 | 117.2 | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 4' - 0"                          | 30.4   | 45.7 | 60.9 | 76.1  | 91.3                     | 90.1  | 135.1 | 140.0 | 140.0                    | 140.0 | 30.4 | 45.7 | 60.9                         | 76.1  | 91.3  | 32.6 | 48.9                     | 65.2 | 81.5  | 97.8  | 102.6 | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 4' - 6"                          | 27.1   | 40.6 | 54.1 | 67.6  | 81.2                     | 80.1  | 120.1 | 140.0 | 140.0                    | 140.0 | 27.1 | 40.6 | 54.1                         | 67.6  | 81.2  | 29.0 | 43.5                     | 58.0 | 72.4  | 86.9  | 91.2  | 136.8 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 5' - 0"                          | 24.3   | 36.5 | 48.7 | 60.9  | 73.0                     | 72.1  | 108.1 | 140.0 | 140.0                    | 140.0 | 24.3 | 36.5 | 48.7                         | 60.9  | 73.0  | 26.1 | 39.1                     | 52.2 | 65.2  | 78.2  | 82.1  | 123.1 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 5' - 6"                          | 22.1   | 33.2 | 44.3 | 55.3  | 66.4                     | 65.5  | 98.3  | 131.0 | 140.0                    | 140.0 | 22.1 | 33.2 | 44.3                         | 55.3  | 66.4  | 23.7 | 35.6                     | 47.4 | 59.3  | 71.1  | 74.6  | 111.9 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 6' - 0"                          | 18.9   | 28.3 | 37.8 | 47.2  | 56.7                     | 55.9  | 83.9  | 111.8 | 139.8                    | 140.0 | 18.9 | 28.3 | 37.8                         | 47.2  | 56.7  | 20.2 | 30.4                     | 40.5 | 50.6  | 60.7  | 63.7  | 95.5  | 127.3 | 140.0 | 140.0                |  |  |  |
|                                     | 6' - 6"                          | 17.4   | 26.2 | 34.9 | 43.6  | 52.3                     | 51.6  | 77.4  | 103.2 | 129.0                    | 140.0 | 17.4 | 26.2 | 34.9                         | 43.6  | 52.3  | 18.7 | 28.0                     | 37.4 | 46.7  | 56.0  | 58.8  | 88.2  | 117.6 | 140.0 | 140.0                |  |  |  |
| 7' - 0"                             | 16.2                             | 24.3   | 32.4 | 40.5 | 48.6  | 47.9                     | 71.9  | 95.8  | 119.8 | 140.0                    | 16.2  | 24.3 | 32.4 | 40.5                         | 48.6  | 17.3  | 26.0 | 34.7                     | 43.4 | 52.0  | 54.6  | 81.9  | 109.2 | 136.4 | 140.0 |                      |  |  |  |
| 14' - 6"                            | 3' - 6"                          | 32.4   | 48.6 | 64.8 | 81.0  | 97.2                     | 95.8  | 140.0 | 140.0 | 140.0                    | 140.0 | 32.4 | 48.6 | 64.8                         | 81.0  | 97.2  | 34.7 | 52.0                     | 69.4 | 86.7  | 104.1 | 109.2 | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 4' - 0"                          | 28.3   | 42.5 | 56.7 | 70.8  | 85.0                     | 83.9  | 125.8 | 140.0 | 140.0                    | 140.0 | 28.3 | 42.5 | 56.7                         | 70.8  | 85.0  | 30.4 | 45.5                     | 60.7 | 75.9  | 91.1  | 95.5  | 140.0 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 4' - 6"                          | 25.2   | 37.8 | 50.4 | 63.0  | 75.6                     | 74.5  | 111.8 | 140.0 | 140.0                    | 140.0 | 25.2 | 37.8 | 50.4                         | 63.0  | 75.6  | 27.0 | 40.5                     | 54.0 | 67.4  | 80.9  | 84.9  | 127.3 | 140.0 | 140.0 | 140.0                |  |  |  |
|                                     | 5' - 0"                          | 22.7   | 34.0 | 45.3 | 56.7  | 68.0                     | 67.1  | 100.6 | 134.2 | 140.0                    | 140.0 | 22.7 | 34.0 | 45.3                         | 56.7  | 68.0  | 24.3 | 36.4                     | 48.6 | 60.7  | 7     |       |       |       |       |                      |  |  |  |

# MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR MULLIONS & JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2

## FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

- A - 1/4"Ø DEWALT INC., ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. f<sub>c</sub> = 2,730 ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B - 3/8"Ø DEWALT INC., WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. f<sub>c</sub> = 3.0 ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C - 1/4"Ø DEWALT INC.S, ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HHB THRU BOLT W/ NUT & LOCK WASHER.

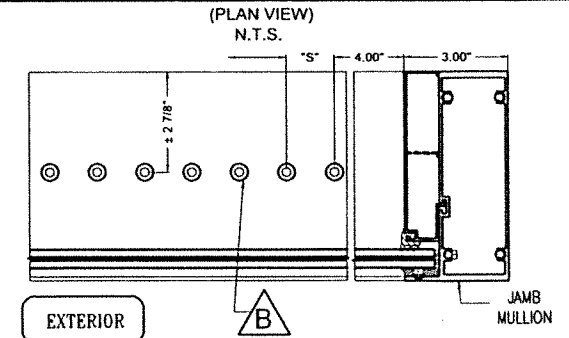
| MAXIMUM MULLION SPAN | EFFECTIVE SPACING | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. LOAD BEARING SHIM SPACE (CONTINUED) |      |      |      |                          |      |       |       |                          |       |      |      |                              |      |      |      |                          |      |      |       |       |       |       |       |                      |  |
|----------------------|-------------------|--|------|------|------|--------------------------|------|-------|-------|--------------------------|-------|------|------|------------------------------|------|------|------|--------------------------|------|------|-------|-------|-------|-------|-------|----------------------|--|
|                      |                   | POURED CONCRETE SUBSTRATE  |      |      |      |                          |      |       |       |                          |       |      |      | WOOD (2) 2" x THK. SUBSTRATE |      |      |      |                          |      |      |       |       |       |       |       | STEEL 1/4" Min. THK. |  |
|                      |                   | FASTENERS TYPE A (1/4"Ø)   |      |      |      | FASTENERS TYPE B (3/8"Ø) |      |       |       | FASTENERS TYPE C (1/4"Ø) |       |      |      | FASTENERS TYPE D (3/8"Ø)     |      |      |      | FASTENERS TYPE E (3/8"Ø) |      |      |       |       |       |       |       |                      |  |
| "L" (Ft-in)          | "b" (Ft-in)       | n=4  | n=6  | n=8  | n=10 | n=12                     | n=4  | n=6   | n=8   | n=10                     | n=12  | n=4  | n=6  | n=8                          | n=10 | n=12 | n=4  | n=6                      | n=8  | n=10 | n=12  | n=4   | n=6   | n=8   | n=10  | n=12                 |  |
| 15' - 0"             | 3' - 6"           | 31.3   | 47.0 | 62.6 | 78.3 | 93.9                     | 92.6 | 139.0 | 140.0 | 140.0                    | 140.0 | 31.3 | 47.0 | 62.6                         | 78.3 | 93.9 | 33.5 | 50.3                     | 67.1 | 83.8 | 100.6 | 105.5 | 140.0 | 140.0 | 140.0 | 140.0                |  |
|                      | 4' - 0"           | 27.4   | 41.1 | 54.8 | 68.5 | 82.2                     | 81.1 | 121.6 | 140.0 | 140.0                    | 140.0 | 27.4 | 41.1 | 54.8                         | 68.5 | 82.2 | 29.3 | 44.0                     | 58.7 | 73.3 | 88.0  | 92.3  | 138.5 | 140.0 | 140.0 | 140.0                |  |
|                      | 4' - 6"           | 24.3   | 36.5 | 48.7 | 60.9 | 73.0                     | 72.1 | 108.1 | 140.0 | 140.0                    | 140.0 | 24.3 | 36.5 | 48.7                         | 60.9 | 73.0 | 26.1 | 39.1                     | 52.2 | 65.2 | 78.2  | 82.1  | 123.1 | 140.0 | 140.0 | 140.0                |  |
|                      | 5' - 0"           | 21.2   | 31.8 | 42.4 | 53.0 | 63.6                     | 62.8 | 94.1  | 125.5 | 140.0                    | 140.0 | 21.2 | 31.8 | 42.4                         | 53.0 | 63.6 | 22.7 | 34.1                     | 45.4 | 56.8 | 68.1  | 71.5  | 107.2 | 140.0 | 140.0 | 140.0                |  |
|                      | 5' - 6"           | 19.3   | 28.9 | 38.6 | 48.2 | 57.8                     | 57.0 | 85.6  | 114.1 | 140.0                    | 140.0 | 19.3 | 28.9 | 38.6                         | 48.2 | 57.8 | 20.6 | 31.0                     | 41.3 | 51.6 | 61.9  | 65.0  | 97.5  | 130.0 | 140.0 | 140.0                |  |
|                      | 6' - 0"           | 17.7   | 26.5 | 35.3 | 44.2 | 53.0                     | 52.3 | 78.4  | 104.6 | 130.7                    | 140.0 | 17.7 | 26.5 | 35.3                         | 44.2 | 53.0 | 18.9 | 28.4                     | 37.9 | 47.3 | 56.8  | 59.6  | 89.3  | 119.1 | 140.0 | 140.0                |  |
| 15' - 6"             | 3' - 6"           | 30.3   | 45.4 | 60.6 | 75.7 | 90.9                     | 89.6 | 134.5 | 140.0 | 140.0                    | 140.0 | 30.3 | 45.4 | 60.6                         | 75.7 | 90.9 | 32.4 | 48.7                     | 64.9 | 81.1 | 97.3  | 102.1 | 140.0 | 140.0 | 140.0 | 140.0                |  |
|                      | 4' - 0"           | 26.5   | 39.8 | 53.0 | 66.3 | 79.5                     | 78.4 | 117.7 | 140.0 | 140.0                    | 140.0 | 26.5 | 39.8 | 53.0                         | 66.3 | 79.5 | 28.4 | 42.6                     | 56.8 | 71.0 | 85.2  | 89.3  | 134.0 | 140.0 | 140.0 | 140.0                |  |
|                      | 4' - 6"           | 23.2   | 34.8 | 46.4 | 58.0 | 69.6                     | 68.6 | 102.9 | 137.2 | 140.0                    | 140.0 | 23.2 | 34.8 | 46.4                         | 58.0 | 69.6 | 24.8 | 37.3                     | 49.7 | 62.1 | 74.5  | 78.2  | 117.2 | 140.0 | 140.0 | 140.0                |  |
|                      | 5' - 0"           | 20.9   | 31.3 | 41.7 | 52.2 | 62.6                     | 61.8 | 92.6  | 123.5 | 140.0                    | 140.0 | 20.9 | 31.3 | 41.7                         | 52.2 | 62.6 | 22.4 | 33.5                     | 44.7 | 55.9 | 67.1  | 70.3  | 105.5 | 140.0 | 140.0 | 140.0                |  |
|                      | 5' - 6"           | 19.0   | 28.5 | 37.9 | 47.4 | 56.9                     | 56.1 | 84.2  | 112.3 | 140.0                    | 140.0 | 19.0 | 28.5 | 37.9                         | 47.4 | 56.9 | 20.3 | 30.5                     | 40.6 | 50.8 | 61.0  | 63.9  | 95.9  | 127.9 | 140.0 | 140.0                |  |
|                      | 6' - 0"           | 17.4   | 26.1 | 34.8 | 43.5 | 52.2                     | 51.5 | 77.2  | 102.9 | 128.7                    | 140.0 | 17.4 | 26.1 | 34.8                         | 43.5 | 52.2 | 18.6 | 27.9                     | 37.3 | 46.6 | 55.9  | 58.6  | 87.9  | 117.2 | 140.0 | 140.0                |  |
| 15' - 9"             | 3' - 6"           | 29.8   | 44.7 | 59.6 | 74.5 | 89.4                     | 88.2 | 132.3 | 140.0 | 140.0                    | 140.0 | 29.8 | 44.7 | 59.6                         | 74.5 | 89.4 | 31.9 | 47.9                     | 63.9 | 79.8 | 95.8  | 100.5 | 140.0 | 140.0 | 140.0 | 140.0                |  |
|                      | 4' - 0"           | 26.1   | 39.1 | 52.2 | 65.2 | 78.3                     | 77.2 | 115.8 | 140.0 | 140.0                    | 140.0 | 26.1 | 39.1 | 52.2                         | 65.2 | 78.3 | 27.9 | 41.9                     | 55.9 | 69.9 | 83.8  | 87.9  | 131.9 | 140.0 | 140.0 | 140.0                |  |
|                      | 4' - 6"           | 23.2   | 34.8 | 46.4 | 58.0 | 69.6                     | 68.6 | 102.9 | 137.2 | 140.0                    | 140.0 | 23.2 | 34.8 | 46.4                         | 58.0 | 69.6 | 24.8 | 37.3                     | 49.7 | 62.1 | 74.5  | 78.2  | 117.2 | 140.0 | 140.0 | 140.0                |  |
|                      | 5' - 0"           | 20.9   | 31.3 | 41.7 | 52.2 | 62.6                     | 61.8 | 92.6  | 123.5 | 140.0                    | 140.0 | 20.9 | 31.3 | 41.7                         | 52.2 | 62.6 | 22.4 | 33.5                     | 44.7 | 55.9 | 67.1  | 70.3  | 105.5 | 140.0 | 140.0 | 140.0                |  |
|                      | 5' - 6"           | 19.0   | 28.5 | 37.9 | 47.4 | 56.9                     | 56.1 | 84.2  | 112.3 | 140.0                    | 140.0 | 19.0 | 28.5 | 37.9                         | 47.4 | 56.9 | 20.3 | 30.5                     | 40.6 | 50.8 | 61.0  | 63.9  | 95.9  | 127.9 | 140.0 | 140.0                |  |
|                      | 6' - 0"           | 17.4   | 26.1 | 34.8 | 43.5 | 52.2                     | 51.5 | 77.2  | 102.9 | 128.7                    | 140.0 | 17.4 | 26.1 | 34.8                         | 43.5 | 52.2 | 18.6 | 27.9                     | 37.3 | 46.6 | 55.9  | 58.6  | 87.9  | 117.2 | 140.0 | 140.0                |  |



n = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, EQUALLY INSTALLED AT EACH SIDE OF INTERIOR MULLION

\*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).

### SILL OR HEAD CONNECTION DETAIL @ REINFORCED OR UNREINFORCED INTERIOR MULLION



n/2 = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, INSTALLED AT ONE SIDE OF JAMB MULLION

### SILL OR HEAD CONNECTION DETAIL @ JAMB MULLION

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

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PROFESSIONAL ENGINEER  
*W. A. Tillit Jr.*  
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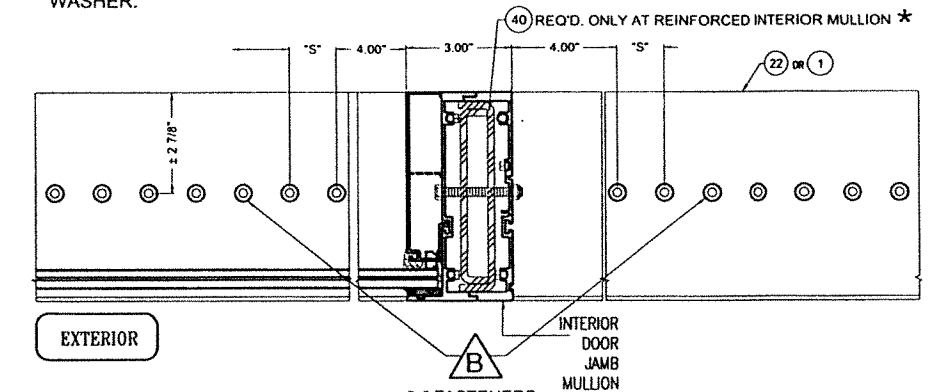
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**TILTECO INC.**  
TILLIT TESTING & ENGINEERING COMPANY  
6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33166  
Phone : (305)871-1530 . Fax : (305)871-1531  
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| HIGH IMPACT GREEN WORLD FIXED GLASS WALL SERIES 12000 LARGE MISSILE LAMINATED & INSULATED GLASS  |  | W.H.<br>DRAWN BY     |
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| REV. No    DESCRIPTION    DATE    REV. No    DESCRIPTION    DATE<br>1    OLD 21-118    09/12/23    3    -    -<br>2    -    -    4    -    - |  | 23-213<br>DRAWING No |
|  |  | SHEET 39 OF 51       |

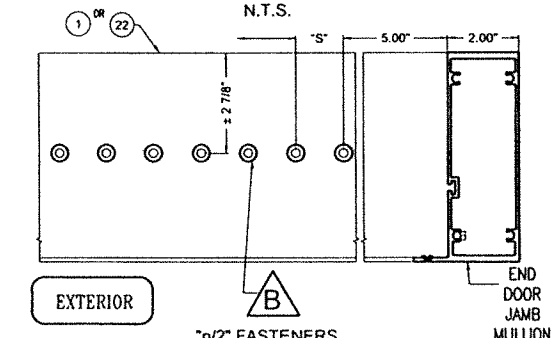
# MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR DOOR JAMB MULLIONS & END DOOR JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2

## FASTENERS TYPES & SUBSTRATES REQUIREMENTS:

- A** - 1/4"Ø DEWALT INC., ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. f<sub>c</sub> = 2.730 ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B** - 3/8"Ø DEWALT INC., WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. f<sub>c</sub> = 3.0 ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C** - 1/4"Ø DEWALT INC.S, ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D** - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E** - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HHB THRU BOLT W/ NUT & LOCK WASHER.



(PLAN VIEW)  
N.T.S.  
**SILL OR HEAD CONNECTION DETAIL @ REINFORCED OR UNREINFORCED INTERIOR DOOR JAMB MULLION (IDJM 1 & 2)**



(PLAN VIEW)  
N.T.S.  
**SILL OR HEAD CONNECTION DETAIL @ END DOOR JAMB MULLION (EDJM 1 & 2)**

| MAXIMUM MULLION SPAN<br>"L"(Ft-in) | EFFECTIVE SPACING<br>"b"(Ft-in) | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE |      |       |       |       |                          |       |       |       |       |                                     |      |       |       |       |                          |      |      |       |       |                                |       |       |       |
|------------------------------------|---------------------------------|---|------|-------|-------|-------|--------------------------|-------|-------|-------|-------|-------------------------------------|------|-------|-------|-------|--------------------------|------|------|-------|-------|--------------------------------|-------|-------|-------|
|                                    |                                 | POURED CONCRETE SUBSTRATE                                       |      |       |       |       |                          |       |       |       |       | WOOD (2) 1 1/2" MIN. THK. SUBSTRATE |      |       |       |       |                          |      |      |       |       | STEEL 1/4" MIN. THK. SUBSTRATE |       |       |       |
|                                    |                                 | FASTENERS TYPE A (1/4"Ø)  |      |       |       |       | FASTENERS TYPE B (3/8"Ø) |       |       |       |       | FASTENERS TYPE C (1/4"Ø)            |      |       |       |       | FASTENERS TYPE D (3/8"Ø) |      |      |       |       | FASTENERS TYPE E (3/8"Ø)       |       |       |       |
|                                    |                                 | n=4   | n=6  | n=8   | n=10  | n=12  | n=4                      | n=6   | n=8   | n=10  | n=12  | n=4                                 | n=6  | n=8   | n=10  | n=12  | n=4                      | n=6  | n=8  | n=10  | n=12  | n=4                            | n=6   | n=8   | n=10  |
| 8'-0"                              | 5'-2"                           | 51.4  | 77.1 | 102.8 | 128.6 | 140.0 | 133.3                    | 140.0 | 140.0 | 140.0 | 140.0 | 42.7                                | 64.0 | 102.8 | 106.6 | 128.0 | 40.0                     | 60.0 | 80.0 | 100.0 | 120.0 | 140.0                          | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 47.1  | 70.7 | 94.3  | 117.8 | 140.0 | 122.2                    | 140.0 | 140.0 | 140.0 | 140.0 | 39.1                                | 58.7 | 94.3  | 97.8  | 117.3 | 36.7                     | 55.0 | 73.3 | 91.7  | 110.0 | 140.0                          | 140.0 | 140.0 | 140.0 |
| 8'-6"                              | 5'-2"                           | 48.4  | 72.8 | 96.8  | 121.0 | 140.0 | 125.4                    | 140.0 | 140.0 | 140.0 | 140.0 | 40.1                                | 60.2 | 96.8  | 100.4 | 120.4 | 37.7                     | 58.5 | 75.3 | 94.1  | 113.0 | 140.0                          | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 44.4  | 66.5 | 88.7  | 110.9 | 133.1 | 115.0                    | 140.0 | 140.0 | 140.0 | 140.0 | 36.8                                | 55.2 | 88.7  | 92.0  | 110.4 | 34.5                     | 51.8 | 69.0 | 86.3  | 103.6 | 140.0                          | 140.0 | 140.0 | 140.0 |
| 9'-0"                              | 5'-2"                           | 45.7  | 68.6 | 91.4  | 104.3 | 137.1 | 118.5                    | 140.0 | 140.0 | 140.0 | 140.0 | 37.9                                | 56.9 | 91.4  | 94.8  | 113.7 | 35.6                     | 53.3 | 71.1 | 88.9  | 106.7 | 140.0                          | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 41.9  | 62.9 | 83.8  | 104.8 | 125.7 | 108.8                    | 140.0 | 140.0 | 140.0 | 140.0 | 34.8                                | 52.1 | 83.8  | 86.9  | 104.3 | 32.6                     | 48.9 | 65.2 | 81.5  | 97.8  | 135.0                          | 140.0 | 140.0 | 140.0 |
| 9'-6"                              | 5'-2"                           | 43.3  | 65.0 | 86.6  | 108.3 | 129.9 | 112.2                    | 140.0 | 140.0 | 140.0 | 140.0 | 36.9                                | 53.9 | 86.6  | 89.8  | 107.8 | 33.7                     | 50.5 | 67.4 | 84.2  | 101.1 | 139.5                          | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 39.7  | 59.5 | 79.4  | 99.2  | 119.1 | 102.9                    | 140.0 | 140.0 | 140.0 | 140.0 | 32.9                                | 49.4 | 79.4  | 82.3  | 98.8  | 30.9                     | 46.3 | 61.8 | 77.2  | 92.7  | 127.9                          | 140.0 | 140.0 | 140.0 |
| 10'-0"                             | 5'-2"                           | 41.1  | 61.7 | 82.3  | 102.8 | 123.4 | 106.6                    | 140.0 | 140.0 | 140.0 | 140.0 | 34.1                                | 51.2 | 82.3  | 85.3  | 102.4 | 32.0                     | 48.0 | 64.0 | 80.0  | 96.0  | 132.5                          | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 37.7  | 56.6 | 75.4  | 94.3  | 113.1 | 97.7                     | 140.0 | 140.0 | 140.0 | 140.0 | 31.3                                | 46.9 | 75.4  | 78.2  | 93.8  | 29.3                     | 44.0 | 58.7 | 73.3  | 88.0  | 121.9                          | 140.0 | 140.0 | 140.0 |
| 10'-6"                             | 5'-2"                           | 43.1  | 64.6 | 86.2  | 107.7 | 129.3 | 111.7                    | 140.0 | 140.0 | 140.0 | 140.0 | 35.7                                | 53.6 | 86.2  | 89.4  | 107.2 | 33.5                     | 50.3 | 67.1 | 83.8  | 100.6 | 138.8                          | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 39.2  | 58.8 | 78.4  | 97.9  | 117.5 | 101.5                    | 140.0 | 140.0 | 140.0 | 140.0 | 32.5                                | 48.7 | 78.4  | 81.2  | 97.5  | 30.5                     | 45.7 | 61.0 | 76.2  | 91.4  | 126.2                          | 140.0 | 140.0 | 140.0 |
| 11'-0"                             | 5'-2"                           | 41.1  | 61.7 | 82.3  | 102.8 | 123.4 | 106.6                    | 140.0 | 140.0 | 140.0 | 140.0 | 34.1                                | 51.2 | 82.3  | 85.3  | 102.4 | 32.0                     | 48.0 | 64.0 | 80.0  | 96.0  | 132.5                          | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 37.4  | 56.1 | 74.8  | 93.5  | 112.2 | 96.9                     | 140.0 | 140.0 | 140.0 | 140.0 | 31.0                                | 46.5 | 74.8  | 77.6  | 93.1  | 29.1                     | 43.8 | 58.2 | 72.7  | 87.3  | 120.5                          | 140.0 | 140.0 | 140.0 |
| 11'-6"                             | 5'-2"                           | 35.8  | 53.7 | 71.5  | 89.4  | 107.3 | 92.7                     | 139.1 | 140.0 | 140.0 | 140.0 | 29.7                                | 44.5 | 71.5  | 74.2  | 89.0  | 27.8                     | 41.7 | 55.7 | 69.6  | 83.5  | 115.2                          | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 32.8  | 49.2 | 65.6  | 82.0  | 98.4  | 85.0                     | 127.5 | 140.0 | 140.0 | 140.0 | 27.2                                | 40.8 | 65.6  | 68.0  | 91.6  | 25.5                     | 38.3 | 51.0 | 63.8  | 76.5  | 105.6                          | 140.0 | 140.0 | 140.0 |
| 12'-0"                             | 5'-2"                           | 34.3  | 51.4 | 68.6  | 85.7  | 102.8 | 88.9                     | 133.3 | 140.0 | 140.0 | 140.0 | 28.4                                | 42.7 | 68.6  | 71.1  | 85.3  | 26.7                     | 40.0 | 53.3 | 66.7  | 80.0  | 110.4                          | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 31.4  | 47.1 | 62.9  | 78.6  | 84.3  | 81.4                     | 122.2 | 140.0 | 140.0 | 140.0 | 26.1                                | 39.1 | 62.9  | 65.2  | 78.2  | 24.4                     | 36.7 | 48.9 | 61.1  | 73.3  | 101.2                          | 140.0 | 140.0 | 140.0 |
| 12'-6"                             | 5'-2"                           | 32.9  | 49.4 | 65.8  | 82.3  | 98.7  | 85.3                     | 127.9 | 140.0 | 140.0 | 140.0 | 27.3                                | 40.9 | 65.8  | 68.2  | 81.9  | 25.6                     | 38.4 | 51.2 | 64.0  | 76.8  | 106.0                          | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 30.2  | 45.3 | 60.3  | 75.4  | 90.5  | 78.2                     | 117.3 | 140.0 | 140.0 | 140.0 | 25.0                                | 37.5 | 60.3  | 62.6  | 75.1  | 23.5                     | 35.2 | 46.9 | 58.7  | 70.4  | 97.2                           | 140.0 | 140.0 | 140.0 |
| 13'-0"                             | 5'-2"                           | 31.6  | 47.5 | 63.3  | 79.1  | 94.9  | 82.0                     | 123.0 | 140.0 | 140.0 | 140.0 | 26.2                                | 39.4 | 63.3  | 65.6  | 78.7  | 24.6                     | 36.9 | 49.2 | 61.6  | 73.9  | 101.9                          | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 29.0  | 43.5 | 58.0  | 72.5  | 87.0  | 75.2                     | 112.8 | 140.0 | 140.0 | 140.0 | 24.1                                | 36.1 | 58.0  | 60.2  | 72.2  | 22.6                     | 33.9 | 45.1 | 56.4  | 67.7  | 93.4                           | 140.0 | 140.0 | 140.0 |
| 13'-6"                             | 5'-2"                           | 30.5  | 45.7 | 60.9  | 76.2  | 91.4  | 79.0                     | 118.5 | 140.0 | 140.0 | 140.0 | 25.3                                | 37.9 | 60.9  | 63.2  | 75.8  | 23.7                     | 35.6 | 47.4 | 59.3  | 71.1  | 98.2                           | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 27.9  | 41.9 | 55.9  | 69.8  | 83.8  | 72.4                     | 108.6 | 140.0 | 140.0 | 140.0 | 23.2                                | 34.8 | 55.9  | 57.9  | 69.5  | 21.7                     | 32.6 | 43.5 | 54.3  | 65.2  | 90.0                           | 135.0 | 140.0 | 140.0 |

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23-213  
DRAWING No

| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
|---------|-------------|----------|---------|-------------|------|
| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

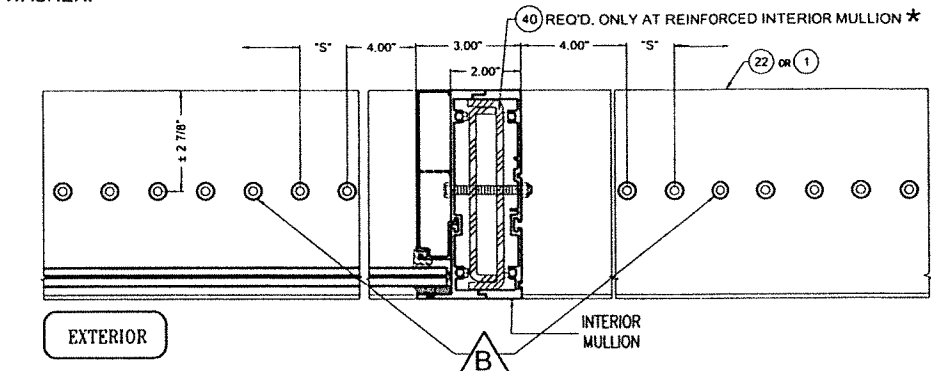
SHEET 40 OF 51

**MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR DOOR JAMB MULLIONS & END DOOR JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2**

**FASTENERS TYPES & SUBSTRATES REQUIREMENTS:**

- A - 1/4"Ø DEWALT INC., ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min.  $f_c = 2.730$  ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B - 3/8"Ø DEWALT INC., WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min.  $f_c = 3.0$  ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C - 1/4"Ø DEWALT INC.S, ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HHB THRU BOLT W/ NUT & LOCK WASHER.

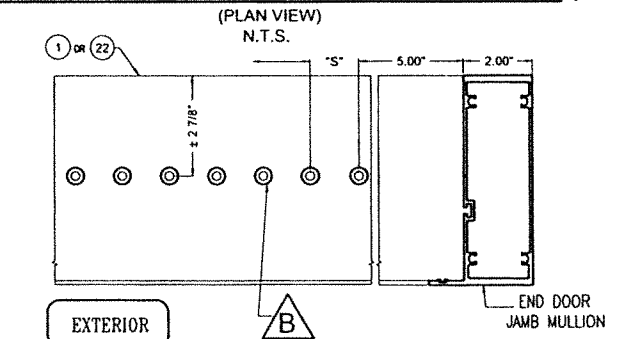
| MAXIMUM MULLION SPAN<br>"L"(Ft-in) | EFFECTIVE SPACING<br>"b"(Ft-in) | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 1/4" MAX. SHIM SPACE |      |      |      |      |                          |       |       |       |       |                                     |      |      |      |      |                          |      |      |      |      |                                |       |       |       |       |
|------------------------------------|---------------------------------|---|------|------|------|------|--------------------------|-------|-------|-------|-------|-------------------------------------|------|------|------|------|--------------------------|------|------|------|------|--------------------------------|-------|-------|-------|-------|
|                                    |                                 | POURED CONCRETE SUBSTRATE                                       |      |      |      |      |                          |       |       |       |       | WOOD (2) 1 1/2" MIN. THK. SUBSTRATE |      |      |      |      |                          |      |      |      |      | STEEL 1/4" MIN. THK. SUBSTRATE |       |       |       |       |
|                                    |                                 | FASTENERS TYPE A (1/4"Ø)  |      |      |      |      | FASTENERS TYPE B (3/8"Ø) |       |       |       |       | FASTENERS TYPE C (1/4"Ø)            |      |      |      |      | FASTENERS TYPE D (3/8"Ø) |      |      |      |      | FASTENERS TYPE E (3/8"Ø)       |       |       |       |       |
|                                    |                                 | n=4   | n=6  | n=8  | n=10 | n=12 | n=4                      | n=6   | n=8   | n=10  | n=12  | n=4                                 | n=6  | n=8  | n=10 | n=12 | n=4                      | n=6  | n=8  | n=10 | n=12 | n=4                            | n=6   | n=8   | n=10  | n=12  |
| 14'-0"                             | 5'-2"                           | 29.4  | 44.1 | 58.8 | 73.5 | 88.2 | 76.2                     | 114.2 | 140.0 | 140.0 | 140.0 | 24.4                                | 36.6 | 58.8 | 60.9 | 73.1 | 22.9                     | 34.3 | 45.7 | 57.2 | 68.6 | 94.7                           | 140.0 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 26.9  | 40.4 | 53.9 | 67.3 | 80.8 | 69.8                     | 104.7 | 139.6 | 140.0 | 140.0 | 22.3                                | 33.5 | 53.9 | 55.9 | 67.0 | 21.0                     | 31.4 | 41.9 | 52.4 | 62.9 | 86.8                           | 130.2 | 140.0 | 140.0 | 140.0 |
| 14'-6"                             | 5'-2"                           | 28.4  | 42.6 | 56.7 | 70.9 | 85.1 | 73.5                     | 110.3 | 140.0 | 140.0 | 140.0 | 23.5                                | 35.3 | 56.7 | 58.8 | 70.6 | 22.1                     | 33.1 | 44.1 | 55.2 | 66.2 | 91.4                           | 137.1 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 26.0  | 39.0 | 52.0 | 65.0 | 78.0 | 67.4                     | 101.1 | 134.8 | 140.0 | 140.0 | 21.6                                | 32.4 | 52.0 | 53.9 | 64.7 | 20.2                     | 30.4 | 40.5 | 50.6 | 60.7 | 83.8                           | 125.7 | 140.0 | 140.0 | 140.0 |
| 15'-0"                             | 5'-2"                           | 27.4  | 41.1 | 54.9 | 68.6 | 82.3 | 71.1                     | 106.6 | 140.0 | 140.0 | 140.0 | 22.7                                | 34.1 | 54.9 | 56.9 | 68.2 | 21.3                     | 32.0 | 42.7 | 53.3 | 64.0 | 88.3                           | 132.5 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 25.1  | 37.7 | 50.3 | 62.9 | 75.4 | 65.2                     | 97.7  | 130.3 | 140.0 | 140.0 | 20.9                                | 31.3 | 50.3 | 52.1 | 62.6 | 19.6                     | 29.3 | 39.1 | 48.9 | 58.7 | 81.0                           | 121.5 | 140.0 | 140.0 | 140.0 |
| 15'-6"                             | 5'-2"                           | 26.5  | 39.8 | 53.1 | 66.4 | 79.6 | 68.8                     | 103.2 | 137.6 | 140.0 | 140.0 | 22.0                                | 33.0 | 53.1 | 55.0 | 66.0 | 20.6                     | 31.0 | 41.3 | 51.6 | 61.9 | 85.5                           | 128.2 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 24.3  | 36.5 | 48.7 | 60.8 | 73.0 | 63.1                     | 94.6  | 126.1 | 140.0 | 140.0 | 20.2                                | 30.3 | 48.7 | 50.5 | 60.5 | 18.9                     | 28.4 | 37.9 | 47.3 | 56.8 | 78.4                           | 117.6 | 140.0 | 140.0 | 140.0 |
| 15'-9"                             | 5'-2"                           | 26.1  | 39.2 | 52.2 | 65.3 | 78.4 | 67.7                     | 101.5 | 135.4 | 140.0 | 140.0 | 21.7                                | 32.5 | 52.2 | 54.2 | 65.0 | 20.3                     | 30.5 | 40.6 | 50.8 | 61.0 | 84.1                           | 126.2 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 23.9  | 35.9 | 47.9 | 59.9 | 71.8 | 62.1                     | 93.1  | 124.1 | 140.0 | 140.0 | 19.9                                | 29.8 | 47.9 | 49.7 | 59.6 | 18.6                     | 27.9 | 37.3 | 46.6 | 55.9 | 77.1                           | 115.7 | 140.0 | 140.0 | 140.0 |



"n" FASTENERS  
n = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, EQUALLY INSTALLED AT EACH SIDE OF INTERIOR MULLION

\*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).

**SILL OR HEAD CONNECTION DETAIL @ REINFORCED OR UNREINFORCED INTERIOR MULLION (IDJM 1 & 2)**



"n/2" FASTENERS  
n/2 = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, INSTALLED AT ONE SIDE OF JAMB MULLION

**SILL OR HEAD CONNECTION DETAIL @ END DOOR JAMB MULLION (EDJM 1 & 2)**

(PLAN VIEW)  
N.T.S.

**FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)**

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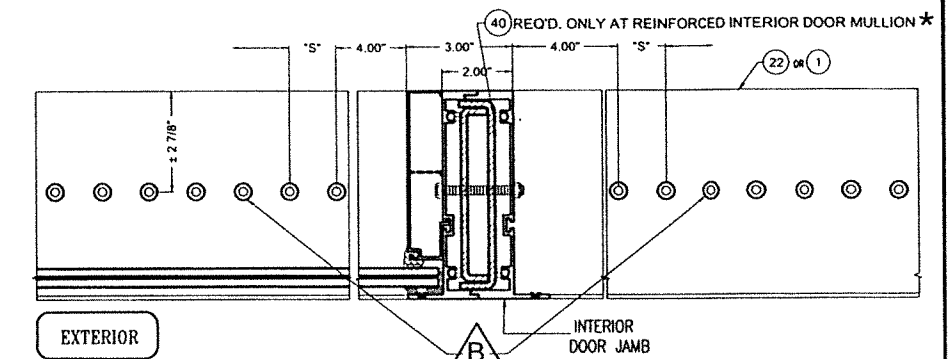
W.H. DRAWN BY  
09/12/2023 DATE  
23-213 DRAWING No  
SHEET 41 OF 51

| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
|---------|-------------|----------|---------|-------------|------|
| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

**MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR DOOR JAMB MULLIONS & END DOOR JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2**

| MAXIMUM MULLION SPAN<br>"L"(Ft-in) | EFFECTIVE SPACING<br>"b"(Ft-in) | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. SHIM SPACE |      |      |      |       |                          |       |       |       |       |                                     |      |       |       |       |                          |      |      |       |       |                                |       |       |       |       |
|------------------------------------|---------------------------------|---|------|------|------|-------|--------------------------|-------|-------|-------|-------|-------------------------------------|------|-------|-------|-------|--------------------------|------|------|-------|-------|--------------------------------|-------|-------|-------|-------|
|                                    |                                 | POURED CONCRETE SUBSTRATE                                       |      |      |      |       |                          |       |       |       |       | WOOD (2) 1 1/2" MIN. THK. SUBSTRATE |      |       |       |       |                          |      |      |       |       | STEEL 1/4" MIN. THK. SUBSTRATE |       |       |       |       |
|                                    |                                 | FASTENERS TYPE A (1/4"Ø)  |      |      |      |       | FASTENERS TYPE B (3/8"Ø) |       |       |       |       | FASTENERS TYPE C (1/4"Ø)            |      |       |       |       | FASTENERS TYPE D (3/8"Ø) |      |      |       |       | FASTENERS TYPE E (3/8"Ø)       |       |       |       |       |
|                                    |                                 | n=4   | n=6  | n=8  | n=10 | n=12  | n=4                      | n=6   | n=8   | n=10  | n=12  | n=4                                 | n=6  | n=8   | n=10  | n=12  | n=4                      | n=6  | n=8  | n=10  | n=12  | n=4                            | n=6   | n=8   | n=10  | n=12  |
| 8'-0" OR LESS                      | 5'-2"                           | 37.4  | 56.0 | 74.7 | 93.4 | 112.1 | 110.5                    | 140.0 | 140.0 | 140.0 | 140.0 | 37.4                                | 64.0 | 102.8 | 106.6 | 128.0 | 40.0                     | 60.0 | 80.0 | 100.0 | 120.0 | 25.9                           | 140.0 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 34.2  | 51.4 | 68.5 | 85.6 | 102.7 | 101.3                    | 140.0 | 140.0 | 140.0 | 140.0 | 34.2                                | 58.7 | 94.3  | 97.8  | 117.3 | 36.7                     | 55.0 | 73.3 | 91.7  | 110.0 | 15.4                           | 140.0 | 140.0 | 140.0 | 140.0 |
| 8'-6"                              | 5'-2"                           | 35.2  | 52.7 | 70.3 | 87.9 | 105.5 | 104.0                    | 140.0 | 140.0 | 140.0 | 140.0 | 35.2                                | 62.7 | 102.3 | 106.1 | 128.0 | 40.0                     | 60.0 | 80.0 | 100.0 | 120.0 | 18.5                           | 140.0 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 32.2  | 48.3 | 64.5 | 80.6 | 96.7  | 95.4                     | 140.0 | 140.0 | 140.0 | 140.0 | 32.2                                | 48.3 | 64.5  | 80.6  | 96.7  | 34.5                     | 51.8 | 69.0 | 86.3  | 103.6 | 108.6                          | 140.0 | 140.0 | 140.0 | 140.0 |
| 9'-0"                              | 5'-2"                           | 33.2  | 49.8 | 66.4 | 83.0 | 99.6  | 98.3                     | 140.0 | 140.0 | 140.0 | 140.0 | 33.2                                | 49.8 | 66.4  | 83.0  | 99.6  | 35.6                     | 53.3 | 71.1 | 88.9  | 106.7 | 111.9                          | 140.0 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 30.4  | 45.7 | 60.9 | 76.1 | 91.3  | 90.1                     | 135.1 | 140.0 | 140.0 | 140.0 | 30.4                                | 45.7 | 60.9  | 76.1  | 91.3  | 32.6                     | 48.9 | 65.2 | 81.5  | 97.8  | 102.6                          | 140.0 | 140.0 | 140.0 | 140.0 |
| 9'-6"                              | 5'-2"                           | 31.5  | 47.2 | 62.9 | 78.6 | 94.4  | 93.1                     | 139.6 | 140.0 | 140.0 | 140.0 | 31.5                                | 47.2 | 62.9  | 78.6  | 94.4  | 33.7                     | 50.5 | 67.4 | 84.2  | 101.1 | 139.5                          | 140.0 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 28.8  | 43.3 | 57.7 | 72.1 | 86.5  | 85.3                     | 128.0 | 140.0 | 140.0 | 140.0 | 28.8                                | 43.3 | 57.7  | 72.1  | 86.5  | 30.9                     | 46.3 | 61.8 | 77.2  | 92.7  | 127.9                          | 140.0 | 140.0 | 140.0 | 140.0 |
| 10'-0"                             | 5'-2"                           | 29.9  | 44.8 | 59.8 | 74.7 | 89.6  | 88.4                     | 132.6 | 140.0 | 140.0 | 140.0 | 29.9                                | 44.8 | 59.8  | 74.7  | 89.6  | 32.0                     | 48.0 | 64.0 | 80.0  | 96.0  | 132.5                          | 140.0 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 27.4  | 41.1 | 54.8 | 68.5 | 82.2  | 81.1                     | 121.6 | 140.0 | 140.0 | 140.0 | 27.4                                | 41.1 | 54.8  | 68.5  | 82.2  | 29.3                     | 44.0 | 58.7 | 73.3  | 88.0  | 121.9                          | 140.0 | 140.0 | 140.0 | 140.0 |
| 10'-6"                             | 5'-2"                           | 28.5  | 42.7 | 56.9 | 71.1 | 85.4  | 84.2                     | 126.3 | 140.0 | 140.0 | 140.0 | 28.5                                | 42.7 | 56.9  | 71.1  | 85.4  | 30.5                     | 45.7 | 61.0 | 76.2  | 91.4  | 95.9                           | 140.0 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 26.1  | 39.1 | 52.2 | 65.2 | 78.3  | 77.2                     | 115.8 | 140.0 | 140.0 | 140.0 | 26.1                                | 39.1 | 52.2  | 65.2  | 78.3  | 27.9                     | 41.9 | 55.9 | 69.9  | 83.8  | 87.9                           | 131.0 | 140.0 | 140.0 | 140.0 |
| 11'-0"                             | 5'-2"                           | 27.2  | 40.7 | 54.3 | 67.9 | 81.5  | 80.4                     | 120.6 | 140.0 | 140.0 | 140.0 | 27.2                                | 40.7 | 54.3  | 67.9  | 81.5  | 29.1                     | 43.6 | 58.2 | 72.7  | 87.3  | 91.6                           | 137.3 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 24.9  | 37.4 | 49.8 | 62.3 | 74.7  | 73.7                     | 110.5 | 140.0 | 140.0 | 140.0 | 24.9                                | 37.4 | 49.8  | 62.3  | 74.7  | 26.7                     | 40.0 | 53.3 | 66.7  | 80.0  | 83.9                           | 125.9 | 140.0 | 140.0 | 140.0 |
| 11'-6"                             | 5'-2"                           | 26.0  | 39.0 | 52.0 | 65.0 | 78.0  | 76.9                     | 115.3 | 140.0 | 140.0 | 140.0 | 26.0                                | 39.0 | 52.0  | 65.0  | 78.0  | 27.8                     | 41.7 | 55.7 | 69.6  | 83.5  | 115.2                          | 140.0 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 23.8  | 35.7 | 47.6 | 59.5 | 71.5  | 70.5                     | 105.7 | 140.0 | 140.0 | 140.0 | 23.8                                | 35.7 | 47.6  | 59.5  | 71.5  | 25.5                     | 38.3 | 51.0 | 63.8  | 76.5  | 105.6                          | 140.0 | 140.0 | 140.0 | 140.0 |
| 12'-0"                             | 5'-2"                           | 24.9  | 37.4 | 49.8 | 62.3 | 74.7  | 73.7                     | 110.5 | 140.0 | 140.0 | 140.0 | 24.9                                | 37.4 | 49.8  | 62.3  | 74.7  | 26.7                     | 40.0 | 53.3 | 66.7  | 80.0  | 110.4                          | 140.0 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 22.8  | 34.2 | 45.7 | 57.1 | 68.5  | 67.5                     | 101.3 | 135.1 | 140.0 | 140.0 | 22.8                                | 34.2 | 45.7  | 57.1  | 68.5  | 24.4                     | 36.7 | 48.9 | 61.1  | 73.3  | 101.2                          | 140.0 | 140.0 | 140.0 | 140.0 |
| 12'-6"                             | 5'-2"                           | 23.9  | 35.9 | 47.8 | 59.8 | 71.7  | 70.7                     | 106.1 | 140.0 | 140.0 | 140.0 | 23.9                                | 35.9 | 47.8  | 59.8  | 71.7  | 25.6                     | 38.4 | 51.2 | 64.0  | 76.8  | 80.6                           | 120.9 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 21.9  | 32.9 | 43.8 | 54.8 | 65.7  | 64.8                     | 97.3  | 129.7 | 140.0 | 140.0 | 21.9                                | 32.9 | 43.8  | 54.8  | 65.7  | 23.5                     | 35.2 | 46.9 | 58.7  | 70.4  | 73.9                           | 110.8 | 140.0 | 140.0 | 140.0 |
| 13'-0"                             | 5'-2"                           | 23.0  | 34.5 | 46.0 | 57.5 | 69.0  | 68.0                     | 102.0 | 136.0 | 140.0 | 140.0 | 23.0                                | 34.5 | 46.0  | 57.5  | 69.0  | 24.6                     | 36.9 | 49.2 | 61.6  | 73.9  | 77.5                           | 116.2 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 21.1  | 31.6 | 42.1 | 52.7 | 63.2  | 62.4                     | 93.5  | 124.7 | 140.0 | 140.0 | 21.1                                | 31.6 | 42.1  | 52.7  | 63.2  | 22.6                     | 33.9 | 45.1 | 56.4  | 67.7  | 71.0                           | 106.5 | 140.0 | 140.0 | 140.0 |
| 13'-6"                             | 5'-2"                           | 22.1  | 33.2 | 44.3 | 55.3 | 66.4  | 65.5                     | 98.3  | 131.0 | 140.0 | 140.0 | 22.1                                | 33.2 | 44.3  | 55.3  | 66.4  | 23.7                     | 35.6 | 47.4 | 59.3  | 71.1  | 74.6                           | 111.0 | 140.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 18.9  | 28.3 | 37.8 | 47.2 | 56.7  | 55.9                     | 83.9  | 111.8 | 140.0 | 140.0 | 18.9                                | 28.3 | 37.8  | 47.2  | 56.7  | 20.2                     | 30.4 | 40.5 | 50.6  | 60.7  | 63.7                           | 95.5  | 127.3 | 140.0 | 140.0 |

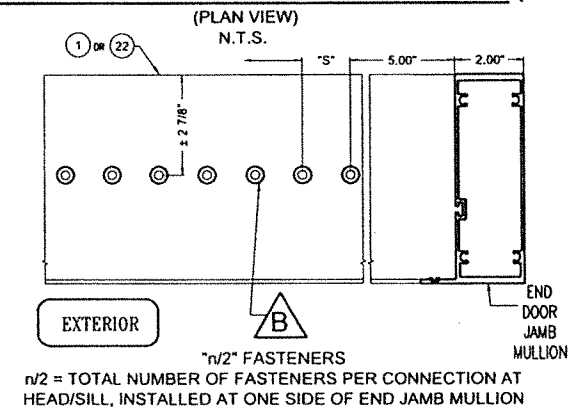
- FASTENERS TYPES & SUBSTRATES REQUIREMENTS:**
- A** - 1/4"Ø DEWALT INC., ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. Fc = 2,730 ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
  - B** - 3/8"Ø DEWALT INC., WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. Fc = 3,0 ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
  - C** - 1/4"Ø DEWALT INC.S, ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
  - D** - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
  - E** - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HHB THRU BOLT W/ NUT & LOCK WASHER.



n = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, EQUALLY INSTALLED AT EACH SIDE OF INTERIOR DOOR JAMB MULLION

\*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).

**SILL OR HEAD CONNECTION DETAIL @ REINFORCED OR UNREINFORCED INTERIOR DOOR JAMB MULLION (IDJM 1 & 2)**

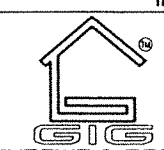


**SILL OR HEAD CONNECTION DETAIL @ END DOOR JAMB MULLION (EDJM 1 & 2)**

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

WALTER A. TILLIT JR.  
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No. 44167  
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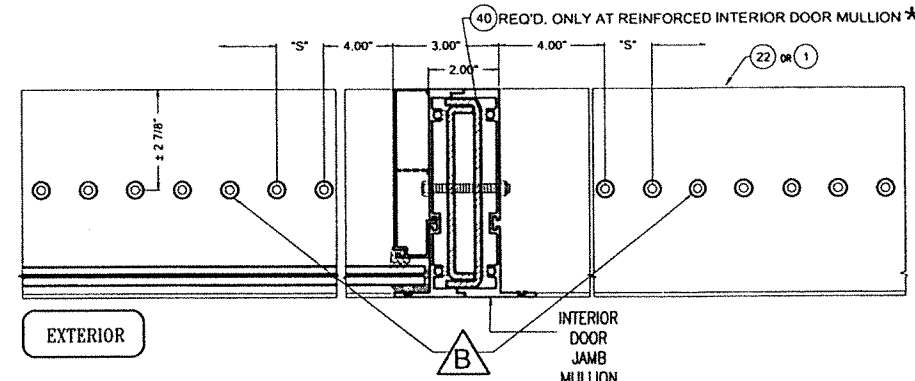
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|  |             |          | 23-213<br>DRAWING No |             |      |
| REV. No  | DESCRIPTION | DATE     | REV. No              | DESCRIPTION | DATE |
| 1  | OLD 21-118  | 09/12/23 | 3                    | -           | -    |
| 2  | -           | -        | 4                    | -           | -    |

**MAXIMUM A.S.D. DESIGN PRESSURE RATING SCHEDULE FOR REINFORCED OR UNREINFORCED INTERIOR DOOR JAMB MULLIONS & END DOOR JAMB MULLIONS HEAD/SILL CONNECTIONS: OPTIONAL SYSTEM # 2**

**FASTENERS TYPES & SUBSTRATES REQUIREMENTS:**

- A - 1/4"Ø DEWALT INC., ULTRACON ANCHOR W/ 1 3/4" Min. EMBEDMENT INTO POURED CONCRETE (Min. f<sub>c</sub> = 2,730 ksi), W/ S = 4" MIN. SPACING & 2 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- B - 3/8"Ø DEWALT INC., WEDGE-BOLT ANCHOR W/ 2" Min. EMBEDMENT INTO POURED CONCRETE (Min. f<sub>c</sub> = 3.0 ksi), W/ S = 3" MIN. SPACING & 3 1/4" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- C - 1/4"Ø DEWALT INC.S, ULTRACON ANCHOR TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- D - 3/8"Ø LAG SCREW TO (2) 2" x WOOD BUCKS (G=0.55) W/ 3" Min. PENETRATION INTO WOOD, W/ S = 2" Min. SPACING & 1 1/2" MIN. EDGE DISTANCE. FOR MAXIMUM SPACING, EMBEDMENT & EDGE DISTANCE ARE BEYOND ANY FINISH MATERIAL.
- E - 3/8"Ø TYPE "F" BOLT TO 1/4" Min. THK. ASTM A-36 STEEL W/ S = 2" MIN. SPACING & 1" MIN. EDGE DISTANCE OR 3/8"Ø SAE GRADE 5 GALVANIZED STEEL HHB THRU BOLT W/ NUT & LOCK WASHER.

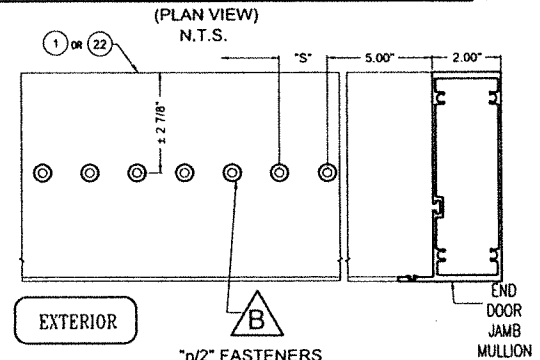
| MAXIMUM MULLION SPAN<br>"L"(Ft-in) | EFFECTIVE SPACING<br>"b"(Ft-in) | MAXIMUM DESIGN PRESSURE RATING W (psf) FOR 3/8" MAX. SHIM SPACE |      |      |      |      |                          |      |       |       |       |                                     |      |      |      |      |                          |      |      |      |      |                                |       |       |       |       |
|------------------------------------|---------------------------------|---|------|------|------|------|--------------------------|------|-------|-------|-------|-------------------------------------|------|------|------|------|--------------------------|------|------|------|------|--------------------------------|-------|-------|-------|-------|
|                                    |                                 | POURED CONCRETE SUBSTRATE                                       |      |      |      |      |                          |      |       |       |       | WOOD (2) 1 1/2" MIN. THK. SUBSTRATE |      |      |      |      |                          |      |      |      |      | STEEL 1/4" MIN. THK. SUBSTRATE |       |       |       |       |
|                                    |                                 | FASTENERS TYPE A (1/4"Ø)  |      |      |      |      | FASTENERS TYPE B (3/8"Ø) |      |       |       |       | FASTENERS TYPE C (1/4"Ø)            |      |      |      |      | FASTENERS TYPE D (3/8"Ø) |      |      |      |      | FASTENERS TYPE E (3/8"Ø)       |       |       |       |       |
|                                    |                                 | n=4   | n=6  | n=8  | n=10 | n=12 | n=4                      | n=6  | n=8   | n=10  | n=12  | n=4                                 | n=6  | n=8  | n=10 | n=12 | n=4                      | n=6  | n=8  | n=10 | n=12 | n=4                            | n=6   | n=8   | n=10  | n=12  |
| 14'-6"                             | 5'-2"                           | 19.9  | 29.9 | 39.8 | 49.8 | 59.8 | 59.0                     | 88.4 | 117.9 | 140.0 | 140.0 | 19.9                                | 29.9 | 39.8 | 49.8 | 59.8 | 21.3                     | 32.0 | 42.7 | 53.3 | 64.0 | 67.1                           | 100.7 | 134.3 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 18.3  | 27.4 | 36.5 | 45.7 | 54.8 | 54.0                     | 81.1 | 108.1 | 135.1 | 140.0 | 18.3                                | 27.4 | 36.5 | 45.7 | 54.8 | 19.6                     | 29.3 | 39.1 | 48.9 | 58.7 | 61.6                           | 92.3  | 123.1 | 140.0 | 140.0 |
| 15'-0"                             | 5'-2"                           | 19.3  | 28.9 | 38.6 | 48.2 | 57.8 | 57.0                     | 85.6 | 114.1 | 140.0 | 140.0 | 19.3                                | 28.9 | 38.6 | 48.2 | 57.8 | 20.6                     | 31.0 | 41.3 | 51.6 | 61.9 | 65.0                           | 97.5  | 130.0 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 17.7  | 26.5 | 35.3 | 44.2 | 53.0 | 52.3                     | 78.4 | 104.6 | 130.7 | 140.0 | 17.7                                | 26.5 | 35.3 | 44.2 | 53.0 | 18.9                     | 28.4 | 37.9 | 47.3 | 56.8 | 59.6                           | 89.3  | 119.1 | 140.0 | 140.0 |
| 15'-6"                             | 5'-2"                           | 19.0  | 28.5 | 37.9 | 47.4 | 56.9 | 56.1                     | 84.2 | 112.3 | 140.0 | 140.0 | 19.0                                | 28.5 | 37.9 | 47.4 | 56.9 | 20.3                     | 30.5 | 40.6 | 50.8 | 61.0 | 63.9                           | 95.9  | 127.9 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 17.4  | 26.1 | 34.8 | 43.5 | 52.2 | 51.5                     | 77.2 | 102.9 | 128.7 | 140.0 | 17.4                                | 26.1 | 34.8 | 43.5 | 52.2 | 18.6                     | 27.9 | 37.3 | 46.6 | 55.9 | 58.6                           | 87.9  | 117.2 | 140.0 | 140.0 |
| 15'-9"                             | 5'-2"                           | 19.0  | 28.5 | 37.9 | 47.4 | 56.9 | 56.1                     | 84.2 | 112.3 | 140.0 | 140.0 | 19.0                                | 28.5 | 37.9 | 47.4 | 56.9 | 20.3                     | 30.5 | 40.6 | 50.8 | 61.0 | 63.9                           | 95.9  | 127.9 | 140.0 | 140.0 |
|                                    | 5'-8"                           | 17.4  | 26.1 | 34.8 | 43.5 | 52.2 | 51.5                     | 77.2 | 102.9 | 128.7 | 140.0 | 17.4                                | 26.1 | 34.8 | 43.5 | 52.2 | 18.6                     | 27.9 | 37.3 | 46.6 | 55.9 | 58.6                           | 87.9  | 117.2 | 140.0 | 140.0 |



"n" FASTENERS  
n = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, EQUALLY INSTALLED AT EACH SIDE OF INTERIOR DOOR JAMB MULLION

\*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).

**SILL OR HEAD CONNECTION DETAIL @ REINFORCED OR UNREINFORCED INTERIOR DOOR JAMB MULLION (IDJM 1 & 2)**



"n/2" FASTENERS  
n/2 = TOTAL NUMBER OF FASTENERS PER CONNECTION AT HEAD/SILL, INSTALLED AT ONE SIDE OF END JAMB MULLION

**SILL OR HEAD CONNECTION DETAIL @ END DOOR JAMB MULLION (EDJM 1 & 2)**

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

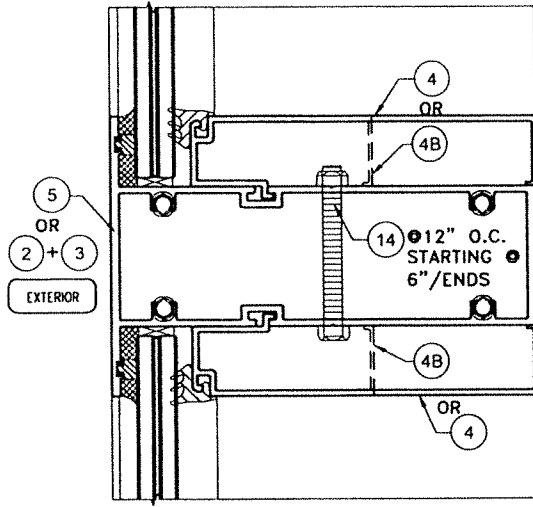
WALTER A. TILLIT JR.  
LICENSE  
No. 44167  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
P.E. SEAL/SIGNATURE/DATE

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Phone : (305)871-1530, Fax : (305)871-1531  
e-mail: tilteco@aol.com  
CA-0006719  
WALTER A. TILLIT Jr. P.E.  
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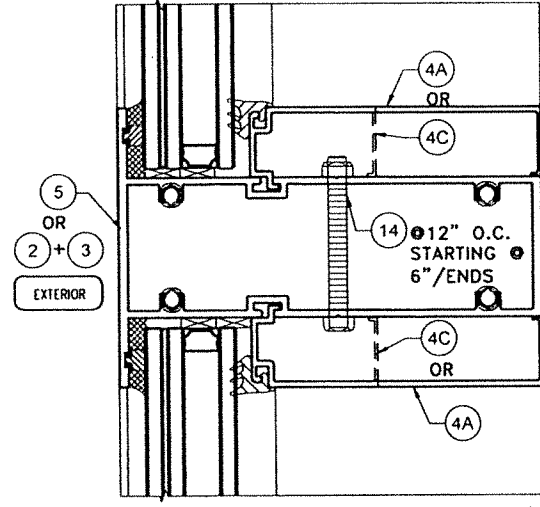
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09/12/2023 DATE  
23-213 DRAWING No  
SHEET 43 OF 51

| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
|---------|-------------|----------|---------|-------------|------|
| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

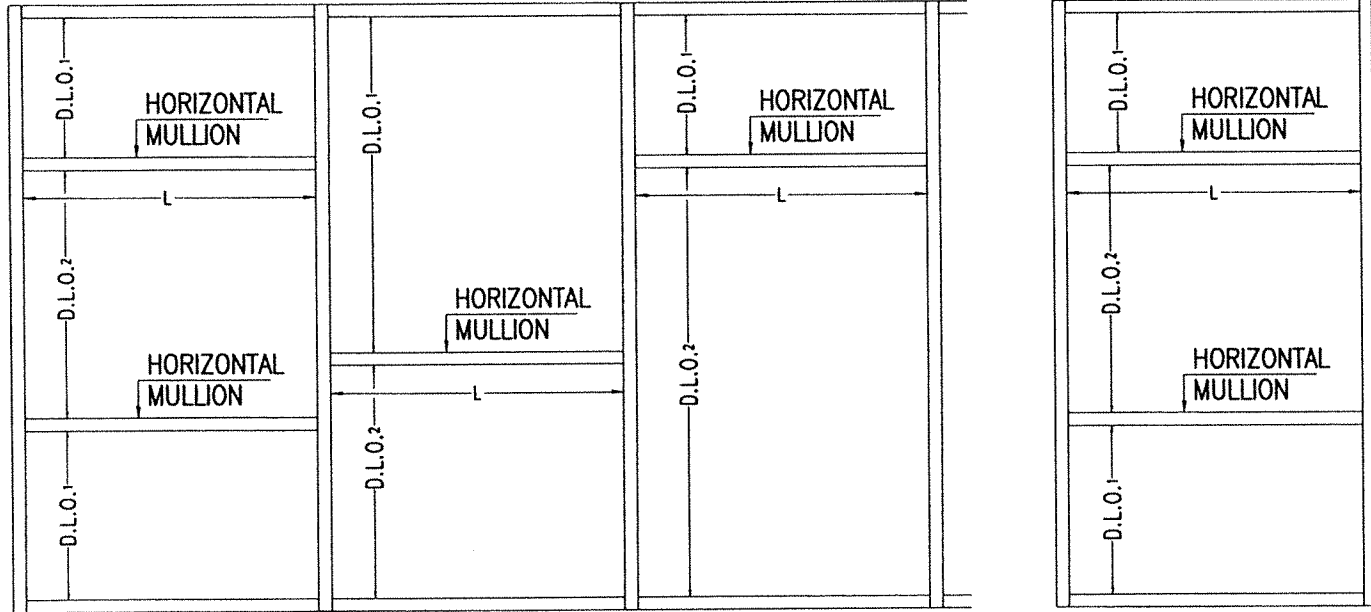


LAMINATED GLASS CASE



INSULATED GLASS CASE

**SECTION AT HORIZONTAL MULLIONS**



MULTIPLE PANELS

SINGLE PANEL

**ELEVATIONS W/ HORIZONTAL MULLIONS**

"L" = MAXIMUM HORIZONTAL MULLION SPAN

"D.L.O." = HORIZONTAL MULLION MAX. EFFECTIVE DAY LIGHT OPENING =  $\frac{D.L.O.1 + D.L.O.2}{2}$

**MAXIMUM HORIZONTAL MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf)**

| MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf) | MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in) | MAXIMUM HORIZONTAL MULLION SPAN    |
|---|--|------------------------------------|
|   |  | LAMINATED/INSULATED GLASS "L" (Ft) |
| ± 40.0                                      | 2'-0"  | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              |
|   | 5'-0"  | 7'-0"                              |
|   | 5'-6"  | 7'-0"                              |
| ± 45.0                                      | 2'-0"  | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              |
|   | 5'-0"  | 7'-0"                              |
|   | 5'-6"  | 7'-0"                              |
| ± 50.0                                      | 2'-0"  | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              |
|   | 5'-0"  | 7'-0"                              |
|   | 5'-6"  | 7'-0"                              |
| ± 55.0                                      | 2'-0"  | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              |
|   | 5'-0"  | 7'-0"                              |
|   | 5'-6"  | 7'-0"                              |

**MAXIMUM HORIZONTAL MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) (CONTINUED)**

| MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf) | MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in) | MAXIMUM HORIZONTAL MULLION SPAN    |
|---|--|------------------------------------|
|   |  | LAMINATED/INSULATED GLASS "L" (Ft) |
| ± 60.0                                      | 2'-0"  | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              |
|   | 5'-0"  | 7'-0"                              |
|   | 5'-6"  | 7'-0"                              |
| ± 65.0                                      | 2'-0"  | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              |
|   | 5'-0"  | 7'-0"                              |
|   | 5'-6"  | 7'-0"                              |
| ± 70.0                                      | 2'-0"  | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              |
|   | 5'-0"  | 7'-0"                              |
|   | 5'-6"  | 7'-0"                              |
| ± 75.0                                      | 2'-0"  | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              |
|   | 5'-0"  | 7'-0"                              |
|   | 5'-6"  | 7'-0"                              |

**MAXIMUM HORIZONTAL MULLION SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) (CONTINUED)**

| MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf) | MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in) | MAXIMUM HORIZONTAL MULLION SPAN    |
|---|--|------------------------------------|
|   |  | LAMINATED/INSULATED GLASS "L" (Ft) |
| ± 80.0                                      | 2'-0"  | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              |
|   | 5'-0"  | 7'-0"                              |
|   | 5'-6"  | 7'-0"                              |
| ± 85.0                                      | 2'-0"  | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              |
|   | 5'-0"  | 7'-0"                              |
|   | 5'-6"  | 7'-0"                              |
| ± 90.0                                      | 2'-0"  | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              |
|   | 5'-0"  | 7'-0"                              |
|   | 5'-6"  | 7'-0"                              |
| ± 95.0                                      | 2'-0"  | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              |
|   | 5'-0"  | 7'-0"                              |
|   | 5'-6"  | 7'-0"                              |

**OPTIONAL SYSTEM # 2**

WALTER A. TILLIT JR.  
LICENSE  
No. 44167  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
12/2023  
P.E. SEAL/SIGNATURE/DATE

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

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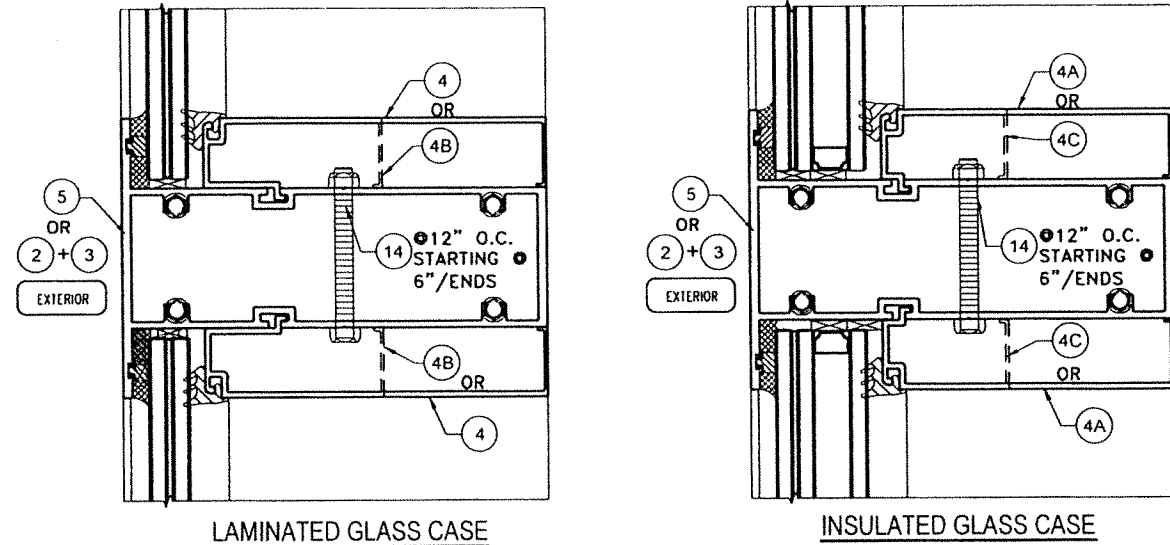
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09/12/2023 DATE

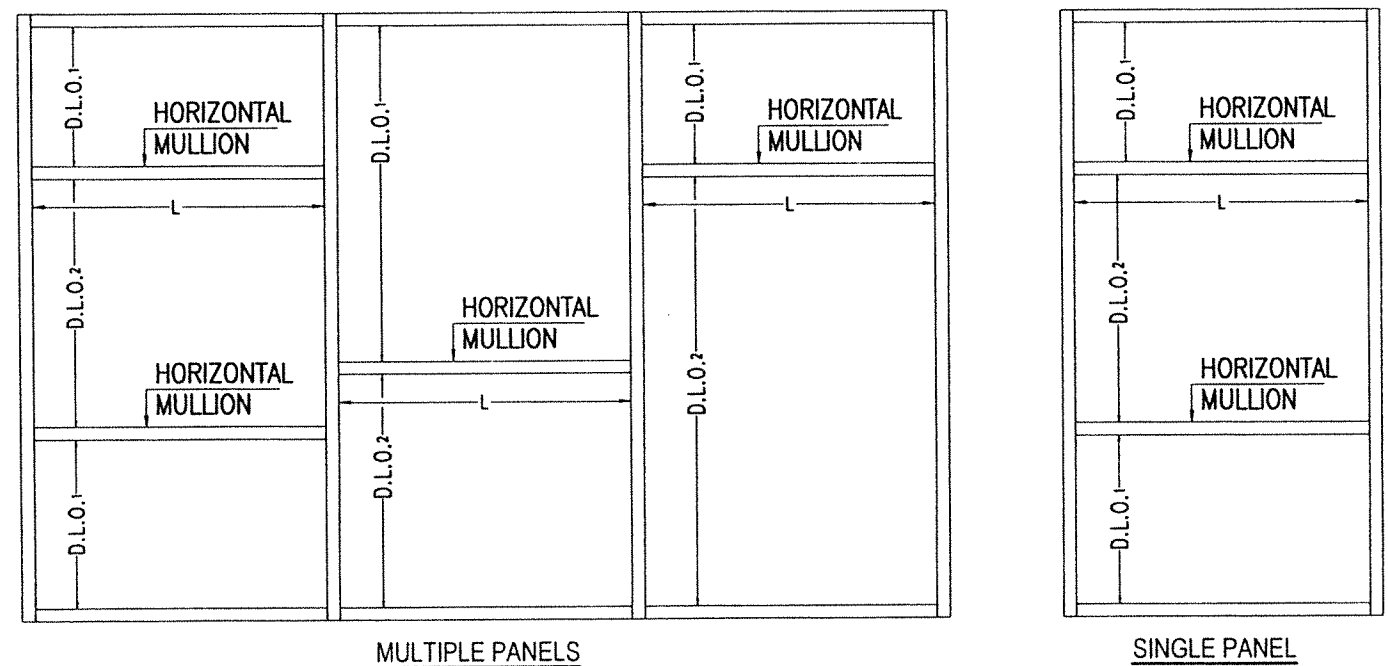
23-213 DRAWING No

| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
|---------|-------------|----------|---------|-------------|------|
| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

SHEET 44 OF 51



SECTION AT HORIZONTAL MULLIONS



ELEVATIONS W/ HORIZONTAL MULLIONS

"L" = MAXIMUM HORIZONTAL MULLION SPAN  
 "D.L.O." = HORIZONTAL MULLION EFFECTIVE DAY LIGHT OPENING =  $\frac{D.L.O.1 + D.L.O.2}{2}$

MAXIMUM HORIZONTAL SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN A.S.D. DESIGN PRESSURE RATING (psf) (CONTINUED)

| MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf) | MAX. EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in) | MAXIMUM HORIZONTAL RAILS SPAN      |                                    |
|---|--|------------------------------------|------------------------------------|
|   |  | LAMINATED/INSULATED GLASS "L" (Ft) | LAMINATED/INSULATED GLASS "L" (Ft) |
| ± 100.0                                     | 2'-0"  | 7'-0"                              | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              | 7'-0"                              |
|   | 5'-0"  | 7'-0"                              | 7'-0"                              |
|   | 6'-0"  | 6'-3"                              | 6'-3"                              |
|   | 6'-6"  | 5'-9"                              | 5'-9"                              |
|   | 7'-0"  | 5'-4"                              | 5'-4"                              |
| ± 105.0                                     | 2'-0"  | 7'-0"                              | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              | 7'-0"                              |
|   | 5'-0"  | 7'-0"                              | 7'-0"                              |
|   | 6'-0"  | 6'-0"                              | 6'-0"                              |
|   | 6'-6"  | 5'-6"                              | 5'-6"                              |
|   | 7'-0"  | 5'-1"                              | 5'-1"                              |
| ± 110.0                                     | 2'-0"  | 7'-0"                              | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              | 7'-0"                              |
|   | 5'-0"  | 6'-10"                             | 6'-10"                             |
|   | 6'-0"  | 5'-8"                              | 5'-8"                              |
|   | 6'-6"  | 5'-3"                              | 5'-3"                              |
|   | 7'-0"  | 4'-11"                             | 4'-11"                             |
| ± 115.0                                     | 2'-0"  | 7'-0"                              | 7'-0"                              |
|   | 2'-6"  | 7'-0"                              | 7'-0"                              |
|   | 3'-0"  | 7'-0"                              | 7'-0"                              |
|   | 3'-6"  | 7'-0"                              | 7'-0"                              |
|   | 4'-0"  | 7'-0"                              | 7'-0"                              |
|   | 4'-6"  | 7'-0"                              | 7'-0"                              |
|   | 5'-0"  | 6'-6"                              | 6'-6"                              |
|   | 6'-0"  | 5'-5"                              | 5'-5"                              |
|   | 6'-6"  | 5'-0"                              | 5'-0"                              |
|   | 7'-0"  | 4'-8"                              | 4'-8"                              |
| 7'-6"                                       | 4'-4"  | 4'-4"                              |                                    |

MAXIMUM HORIZONTAL SPAN "L"(FT) SCHEDULE FOR A GIVEN HORIZONTAL MULLION EFFECTIVE "D.L.O."(FT) AND A GIVEN DESIGN PRESSURE RATING (psf) (CONTINUED)

| MAXIMUM A.S.D. DESIGN PRESSURE RATING (psf) | MAXIMUM EFFECTIVE DAY LIGHT OPENING "DLO" (Ft-in) | MAXIMUM HORIZONTAL RAILS SPAN      |                                    |
|---|---|------------------------------------|------------------------------------|
|   |   | LAMINATED/INSULATED GLASS "L" (Ft) | LAMINATED/INSULATED GLASS "L" (Ft) |
| ± 120.0                                     | 2'-0"   | 7'-0"                              | 7'-0"                              |
|   | 2'-6"   | 7'-0"                              | 7'-0"                              |
|   | 3'-0"   | 7'-0"                              | 7'-0"                              |
|   | 3'-6"   | 7'-0"                              | 7'-0"                              |
|   | 4'-0"   | 7'-0"                              | 7'-0"                              |
|   | 4'-6"   | 6'-11"                             | 6'-11"                             |
|   | 5'-0"   | 6'-3"                              | 6'-3"                              |
|   | 6'-0"   | 5'-3"                              | 5'-3"                              |
|   | 6'-6"   | 4'-10"                             | 4'-10"                             |
|   | 7'-0"   | 4'-6"                              | 4'-6"                              |
| ± 125.0                                     | 2'-0"   | 7'-0"                              | 7'-0"                              |
|   | 2'-6"   | 7'-0"                              | 7'-0"                              |
|   | 3'-0"   | 7'-0"                              | 7'-0"                              |
|   | 3'-6"   | 7'-0"                              | 7'-0"                              |
|   | 4'-0"   | 7'-0"                              | 7'-0"                              |
|   | 4'-6"   | 6'-8"                              | 6'-8"                              |
|   | 5'-0"   | 6'-0"                              | 6'-0"                              |
|   | 6'-0"   | 5'-0"                              | 5'-0"                              |
|   | 6'-6"   | 4'-7"                              | 4'-7"                              |
|   | 7'-0"   | 4'-4"                              | 4'-4"                              |
| ± 130.0                                     | 2'-0"   | 7'-0"                              | 7'-0"                              |
|   | 2'-6"   | 7'-0"                              | 7'-0"                              |
|   | 3'-0"   | 7'-0"                              | 7'-0"                              |
|   | 3'-6"   | 7'-0"                              | 7'-0"                              |
|   | 4'-0"   | 7'-0"                              | 7'-0"                              |
|   | 4'-6"   | 6'-5"                              | 6'-5"                              |
|   | 5'-0"   | 5'-9"                              | 5'-9"                              |
|   | 6'-0"   | 4'-10"                             | 4'-10"                             |
|   | 6'-6"   | 4'-5"                              | 4'-5"                              |
|   | 7'-0"   | 4'-2"                              | 4'-2"                              |
| +130.0- 135.0                               | 2'-0"   | 7'-0"                              | 7'-0"                              |
|   | 2'-6"   | 7'-0"                              | 7'-0"                              |
|   | 3'-0"   | 7'-0"                              | 7'-0"                              |
|   | 3'-6"   | 7'-0"                              | 7'-0"                              |
|   | 4'-0"   | 6'-11"                             | 6'-11"                             |
|   | 4'-6"   | 6'-2"                              | 6'-2"                              |
|   | 5'-0"   | 5'-7"                              | 5'-7"                              |
|   | 6'-0"   | 4'-8"                              | 4'-8"                              |
|   | 6'-6"   | 4'-3"                              | 4'-3"                              |
|   | 7'-0"   | 4'-0"                              | 4'-0"                              |
| +130.0- 140.0                               | 2'-0"   | 7'-0"                              | 7'-0"                              |
|   | 2'-6"   | 7'-0"                              | 7'-0"                              |
|   | 3'-0"   | 7'-0"                              | 7'-0"                              |
|   | 3'-6"   | 7'-0"                              | 7'-0"                              |
|   | 4'-0"   | 6'-8"                              | 6'-8"                              |
|   | 4'-6"   | 6'-0"                              | 6'-0"                              |
|   | 5'-0"   | 5'-4"                              | 5'-4"                              |
|   | 6'-0"   | 4'-6"                              | 4'-6"                              |
|   | 6'-6"   | 4'-2"                              | 4'-2"                              |
|   | 7'-0"   | 3'-10"                             | 3'-10"                             |
| 7'-6"                                       | 3'-7"   | 3'-7"                              |                                    |

OPTIONAL SYSTEM # 2

WALTER A. TILLIT JR.  
 LICENSE No. 44167  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 12/2023  
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 e-mail: tilteco@aol.com

CA-0006719  
 WALTER A. TILLIT Jr. P.E.  
 FLORIDA Lic. # 44167

HIGH IMPACT GREEN WORLD FIXED GLASS WALL  
 SERIES 12000 LARGE MISSILE LAMINATED &  
 INSULATED GLASS

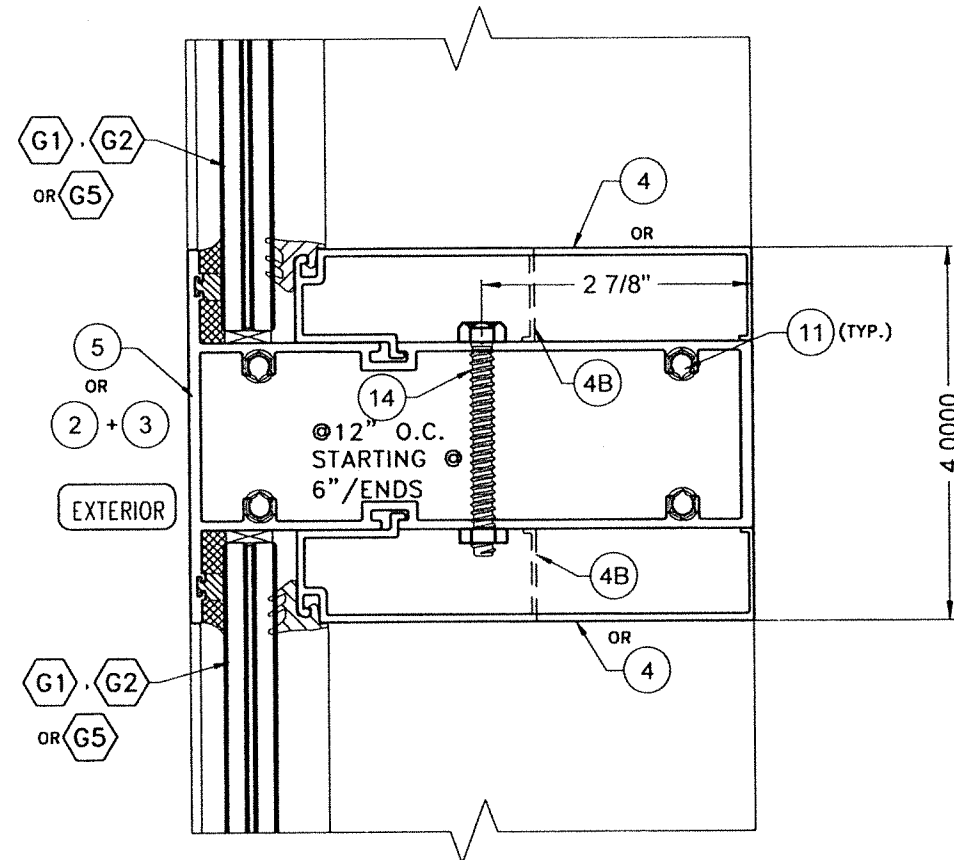
W.H. DRAWN BY  
 09/12/2023 DATE  
 23-213 DRAWING No  
 SHEET 44A OF 51

290 WEST 78 ROAD  
 HIALEAH, FL 33014  
 PH: (954)226-5555/(305)558-8103  
 FAX: (305)558-6665  
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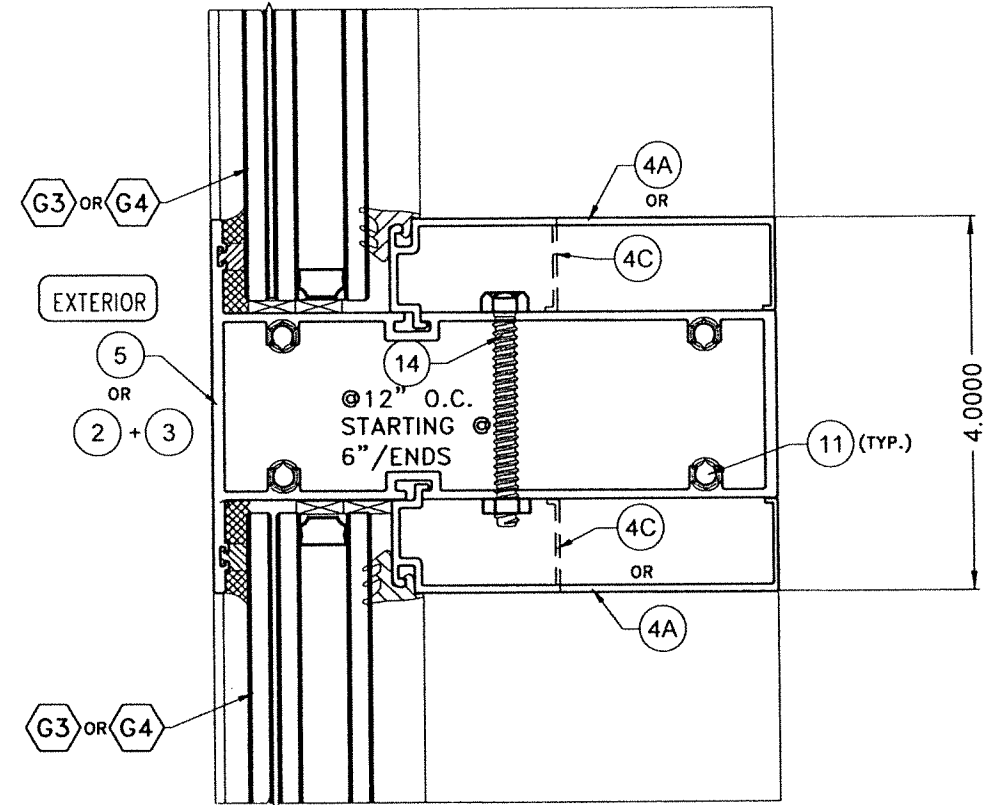
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| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

# HORIZONTAL MULLION DETAILS

## OPTIONAL SYSTEM # 2



7  
HORIZONTAL MULLION



7A  
HORIZONTAL MULLION

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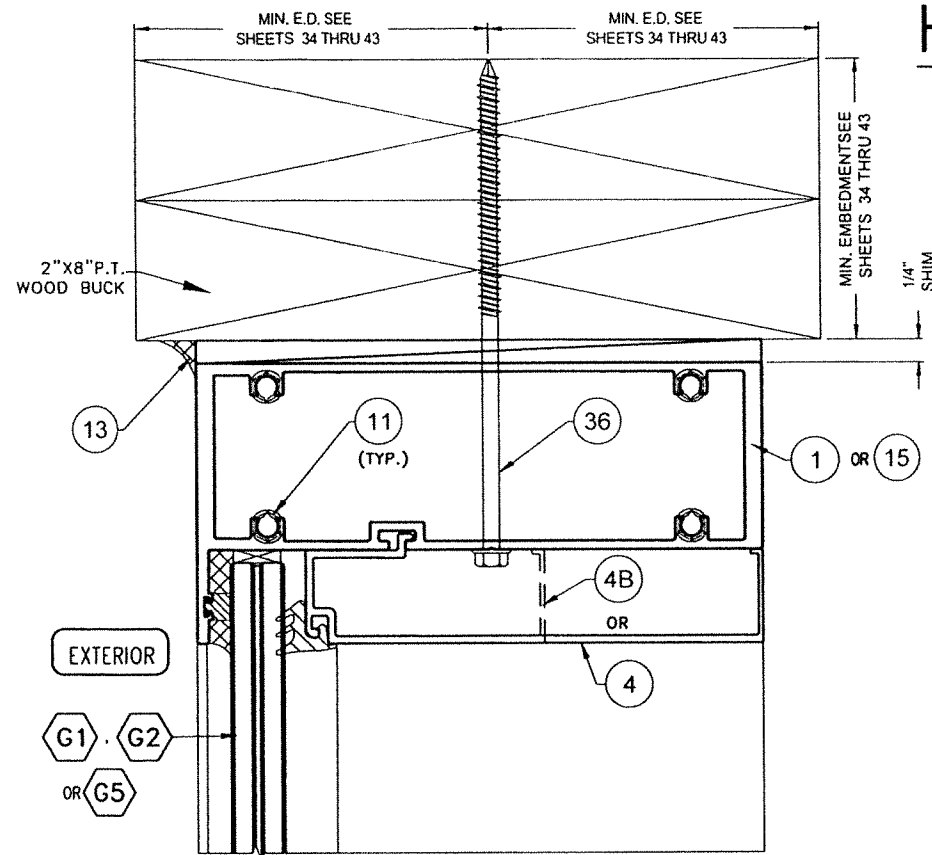
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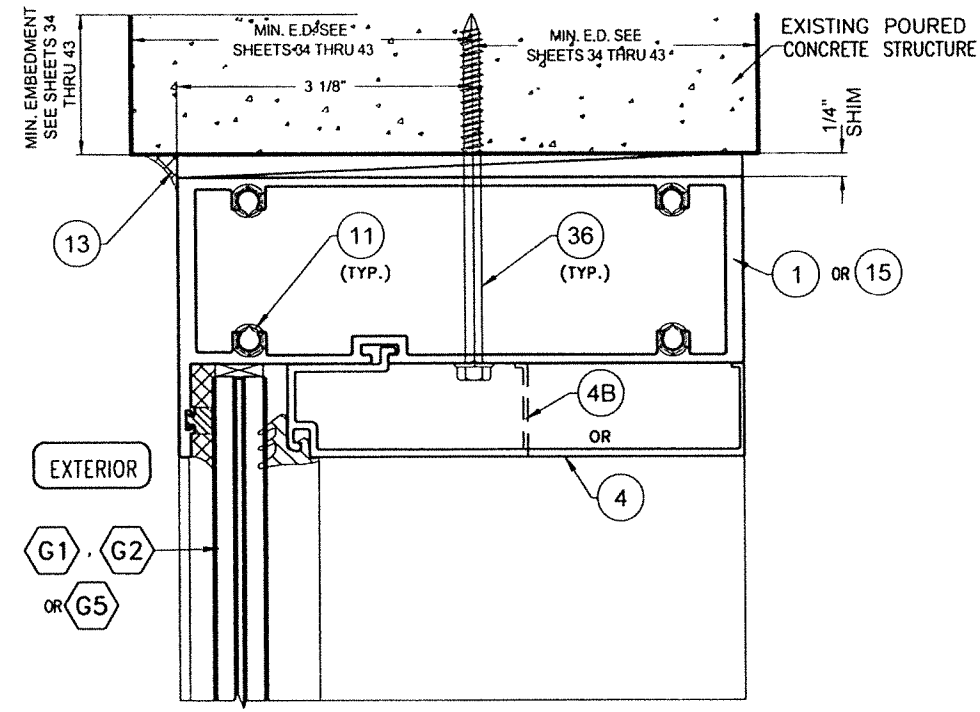
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| 2       | -           | -        | 4       | -           | -    |

SHEET 45 OF 51

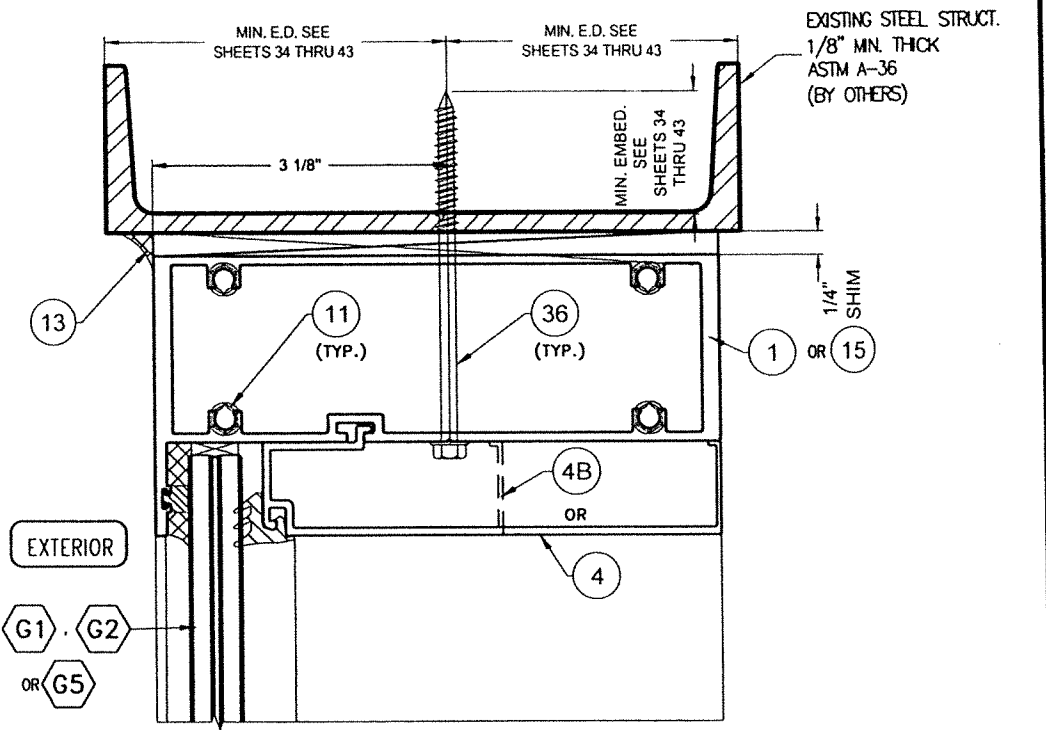
# HEAD & SILL CONNECTIONS DETAILS



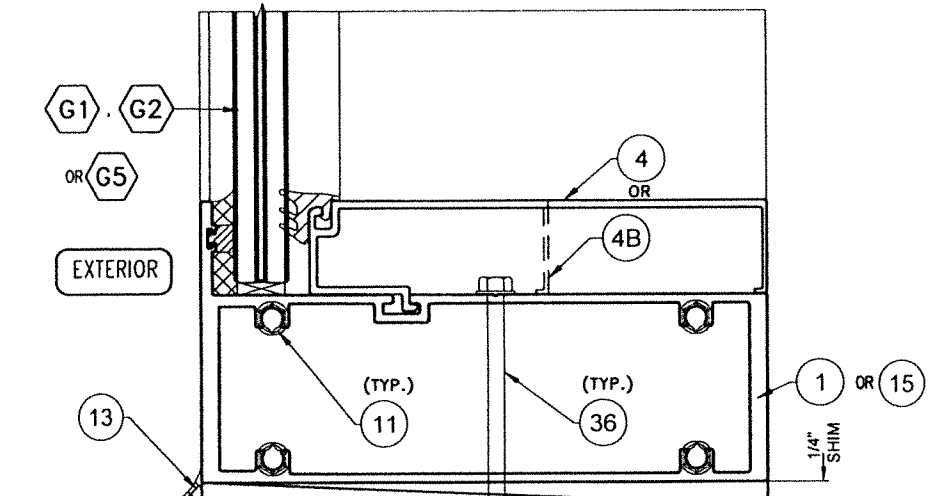
**1 HEAD**



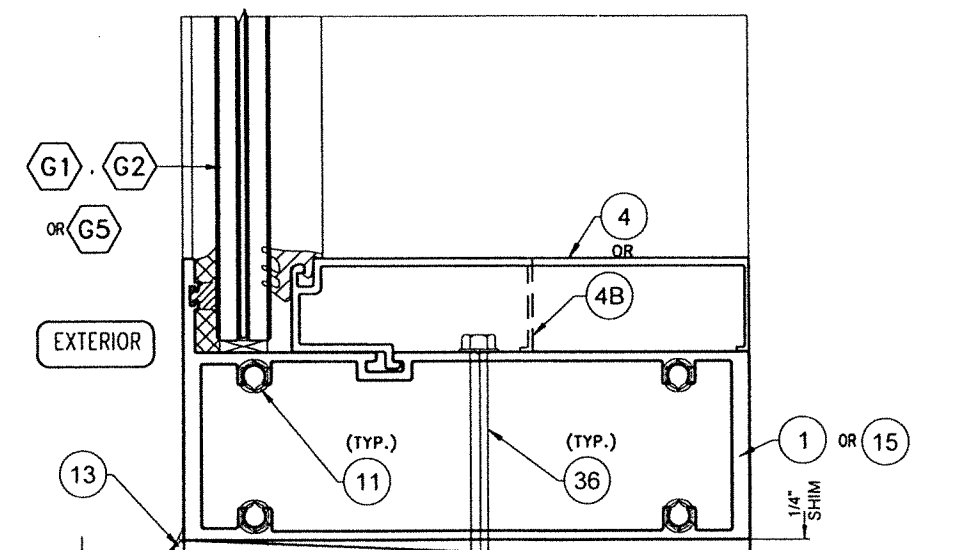
**1A HEAD**



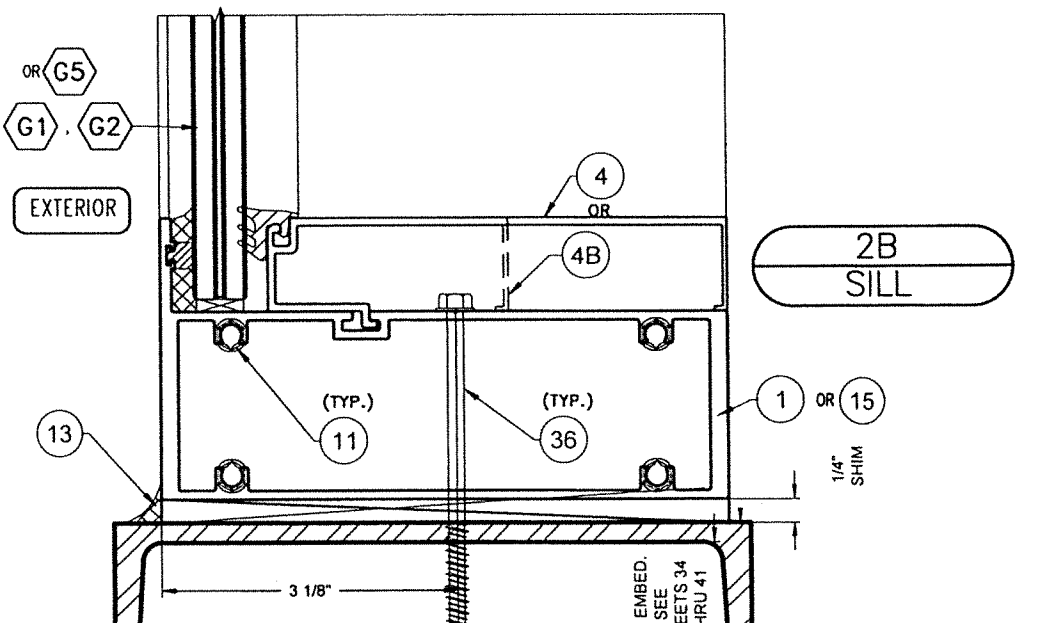
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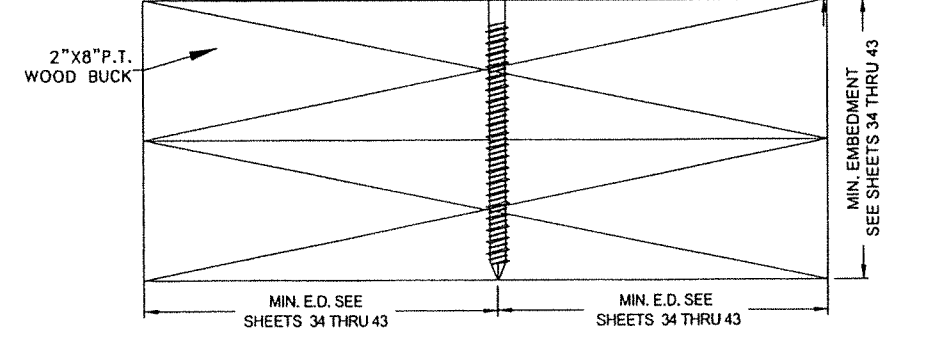
**2 HEAD**



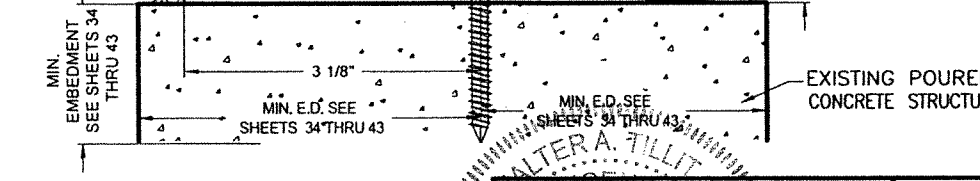
**2A HEAD**



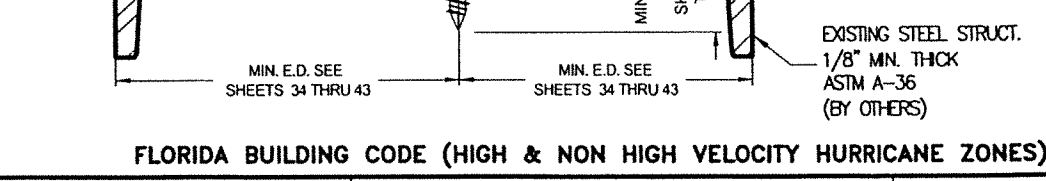
**2B HEAD**



**2 SILL**



**2A SILL**



**2B SILL**

## OPTIONAL SYSTEM # 2

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONES)

WALTER A. TILLIT JR.  
 LICENSE  
 No. 44167  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
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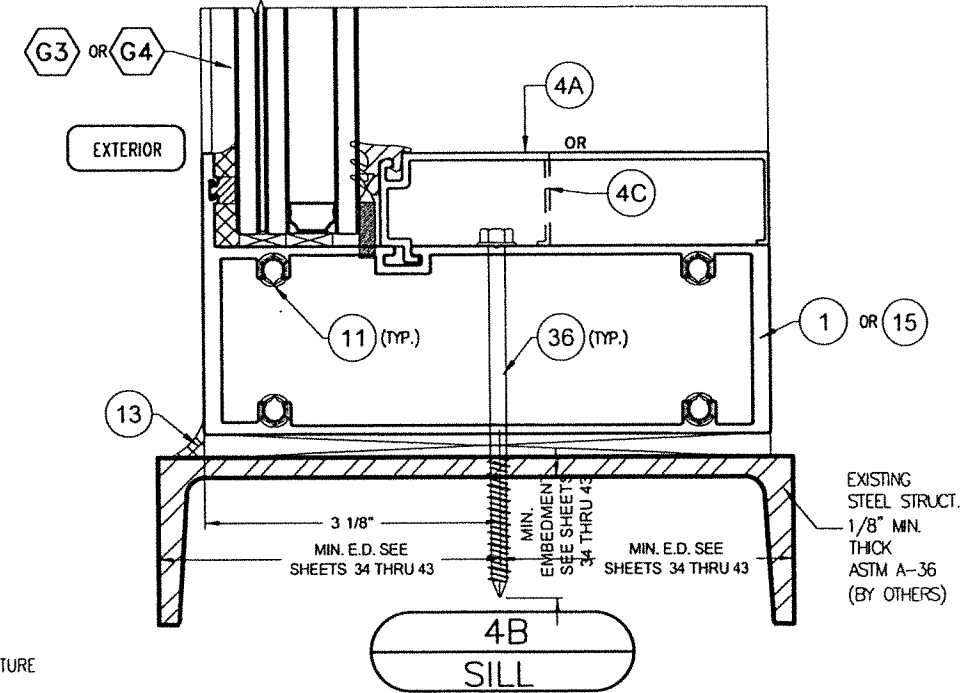
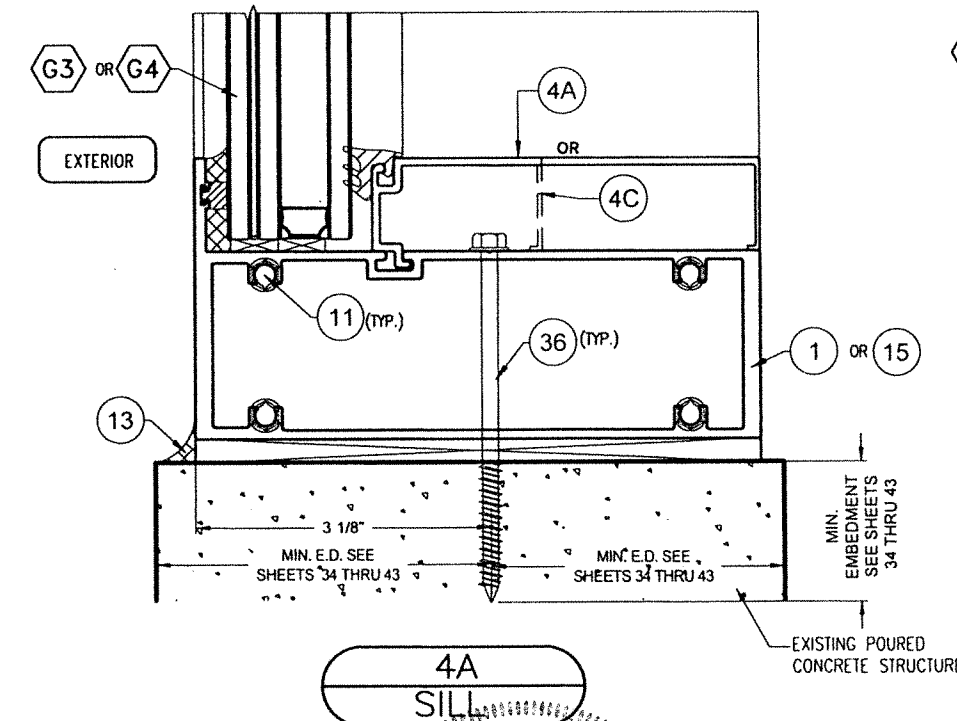
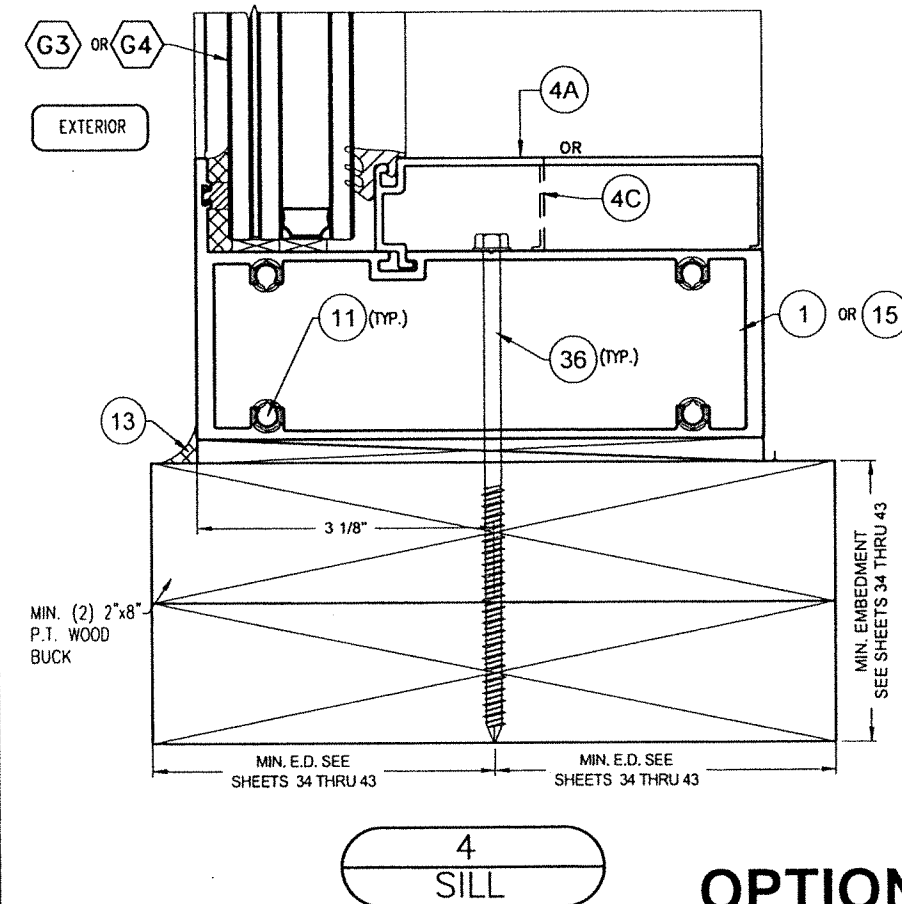
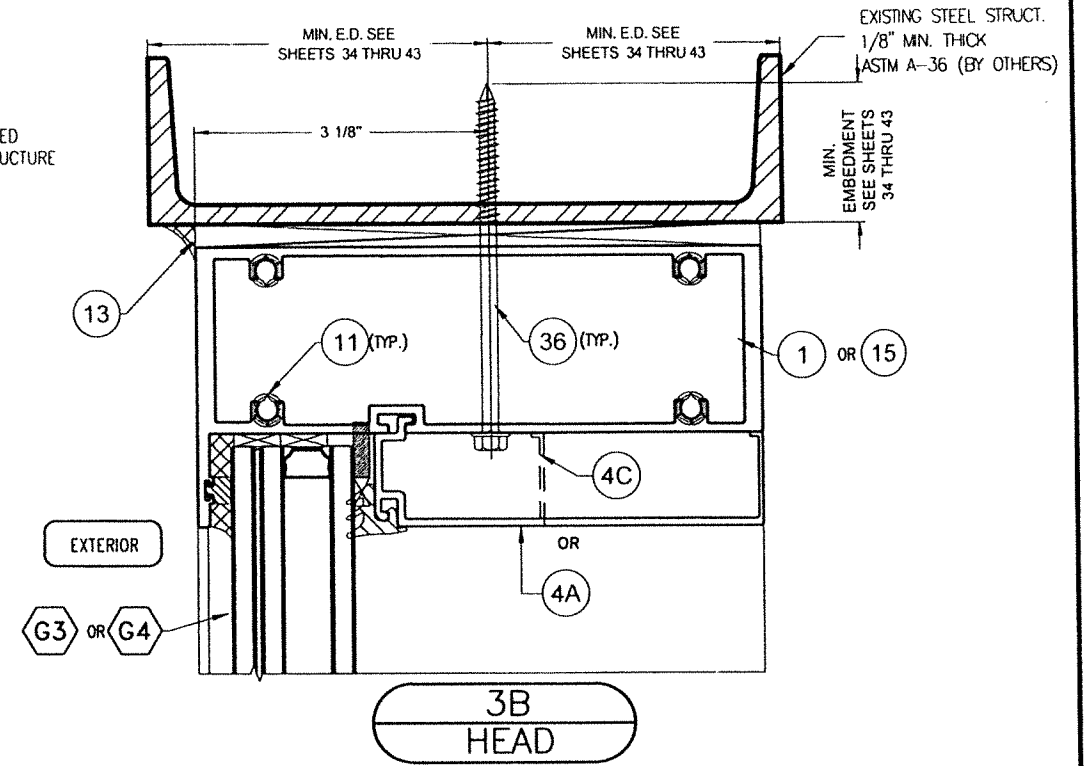
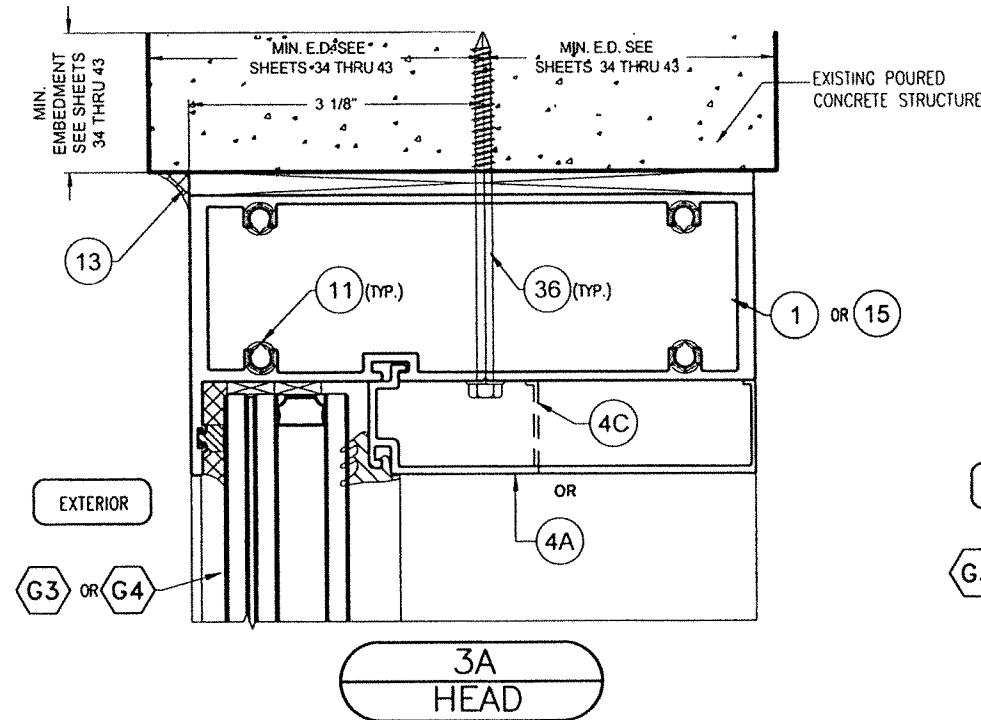
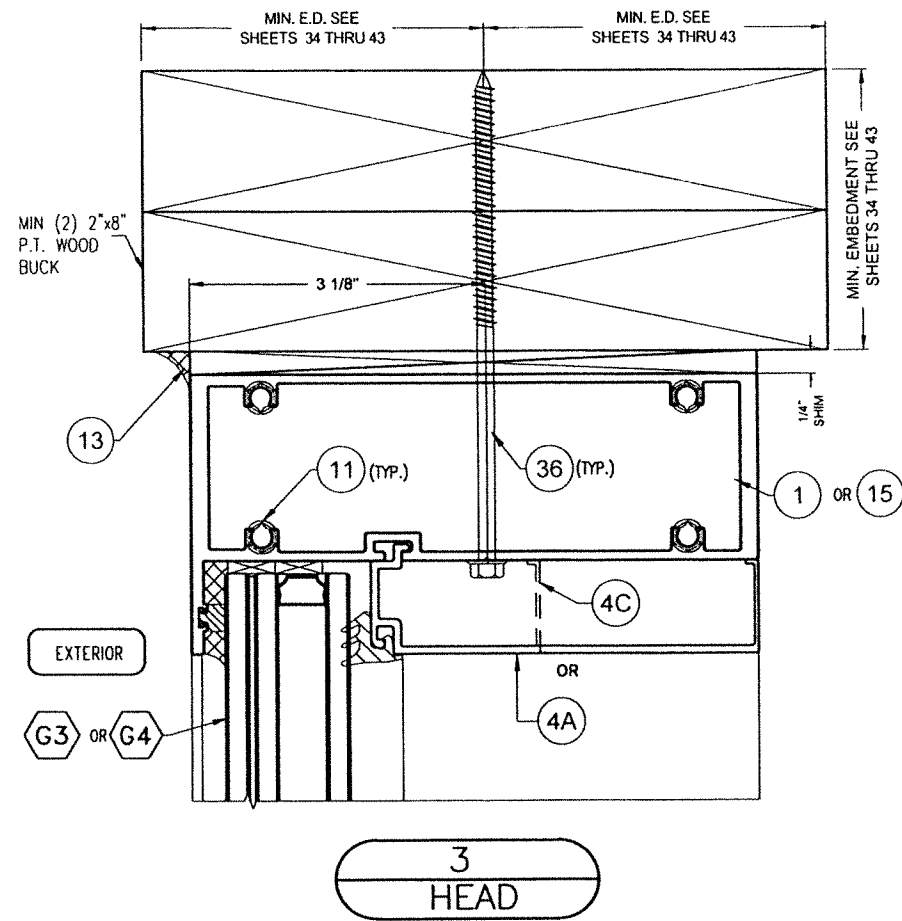
09/12/2023  
 DATE

23-213  
 DRAWING No

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| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
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| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

# HEAD & SILL CONNECTIONS DETAILS (CONTINUED)



## OPTIONAL SYSTEM # 2

WALTER A. TILLIT JR.  
 LICENSE  
 No. 44167  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 09/12/2023  
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 WALTER A. TILLIT Jr. P.E.  
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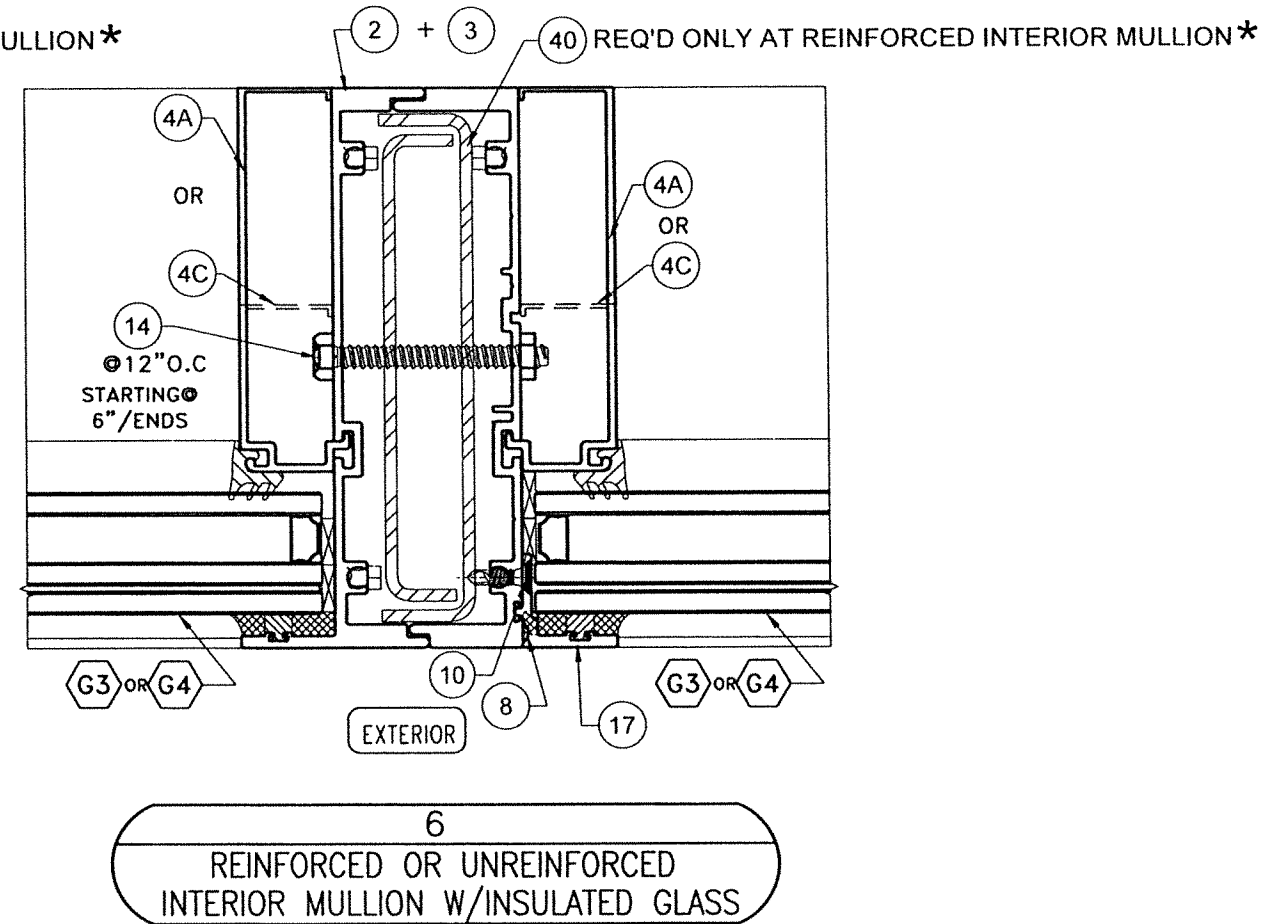
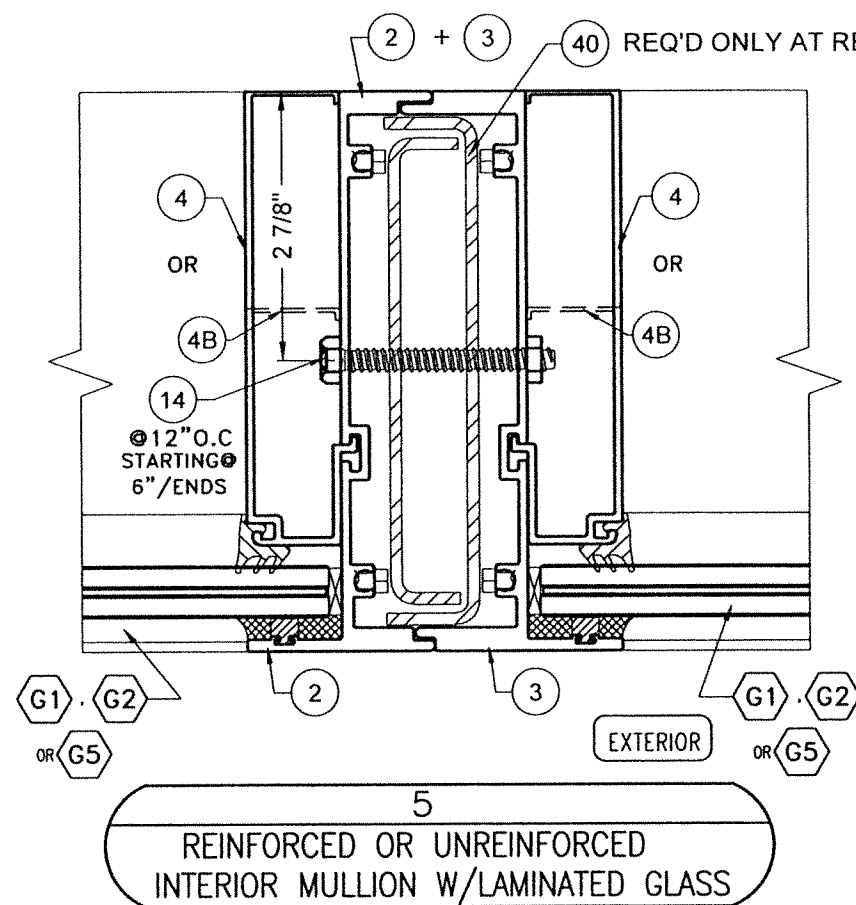
|  |             |          |                      |             |      |
|--|-------------|----------|----------------------|-------------|------|
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| REV. No  | DESCRIPTION | DATE     | REV. No              | DESCRIPTION | DATE |
| 1  | OLD 21-118  | 09/12/23 | 3                    | -           | -    |
| 2  | -           | -        | 4                    | -           | -    |

SHEET 47 OF 51

# HORIZONTAL SECTIONS AT REINFORCED OR UNREINFORCED INTERIOR MULLIONS

## AT STRAIGHT GLASS WALL APPLICATIONS

### OPTIONAL SYSTEM # 2



\*COMPONENT (41) MAY BE USED AS AN OPTION TO COMPONENT (40).

WALTER A. TILLIT JR.  
LICENSE  
No. 44167  
STATE OF  
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PROFESSIONAL ENGINEER  
9/2023

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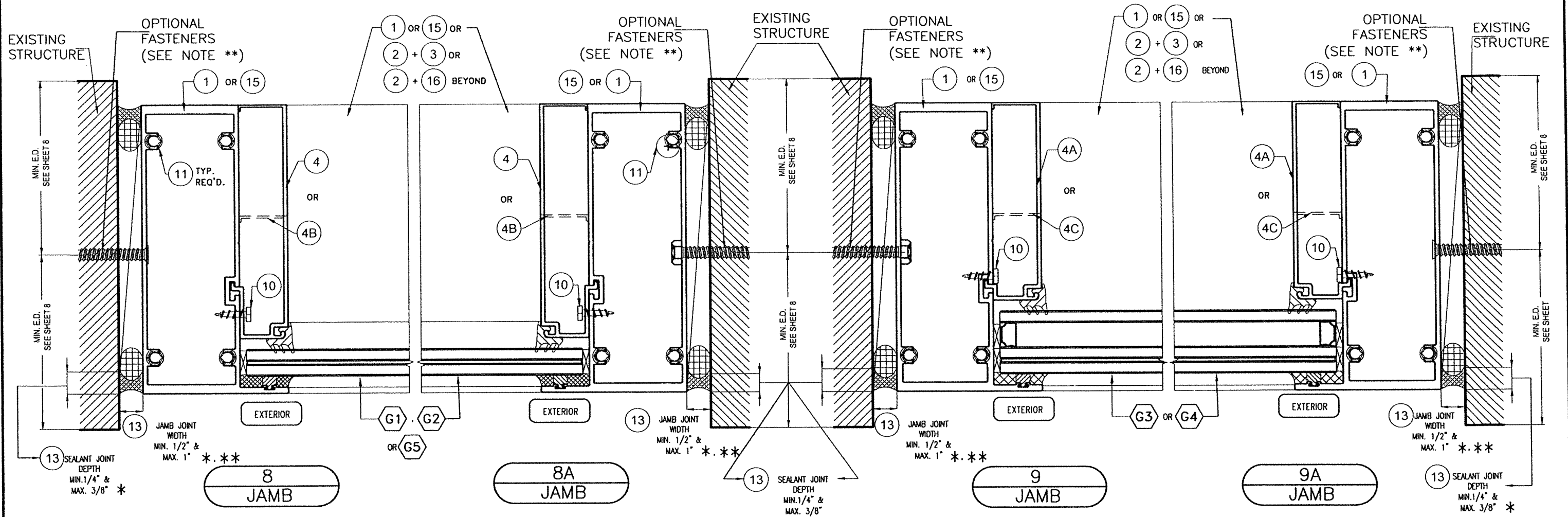
23-213  
DRAWING No

| REV. No | DESCRIPTION | DATE     | REV. No | DESCRIPTION | DATE |
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| 1       | OLD 21-118  | 09/12/23 | 3       | -           | -    |
| 2       | -           | -        | 4       | -           | -    |

SHEET 48 OF 51



# HORIZONTAL SECTIONS AT JAMB MULLION AT STRAIGHT GLASS WALL APPLICATIONS : OPTIONAL SYSTEM # 2

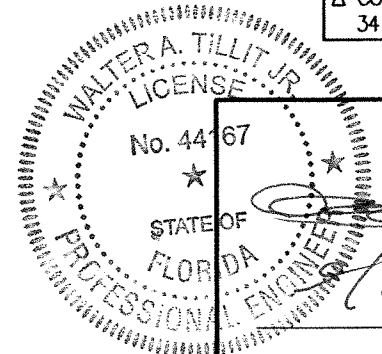


\*\* ALTERNATIVELY, JAMB JOINT WIDTH MAY BE REDUCED TO A WIDTH LESS THAN 1/2" IF JAMB PROFILE IS ATTACHED TO WALL FULL HEIGHT W/ THE FOLLOWING FASTENERS.

\* NOTE: ABOVE INDICATED MAXIMUM AND MINIMUM VALUES FOR SPECIFIED SEALANT VERTICAL JOINT WIDTH AT JAMBS NOT CONNECTED TO WALL (FREE STANDING) HAVE BEEN DETERMINED ONLY TAKING INTO CONSIDERATION THE ACTUAL MOVEMENT OF GLASS WALL AT JAMBS DUE TO THERMAL, WIND AND ITS OWN CONSTRUCTION TOLERANCE, AND NOT PERFORMANCE FACTORS FROM THE SURROUNDING STRUCTURE.

| SUBSTRATE Δ                                    | FASTENERS TYPES Δ       |                          | SPACING |
|--|-------------------------|--------------------------|---------|
|  | 3/8" SHIM SPACE OR LESS | >3/8" , <1/2" SHIM SPACE |         |
| POURED CONCRETE                                | FASTENER TYPE A         | FASTENER TYPE B          | 6" O.C. |
| 2500 psi GROUT FILLED ASTM C-90 CONCRETE BLOCK | FASTENER TYPE A         | FASTENER TYPE B          | 6" O.C. |
| STEEL OR ALUMINUM                              | FASTENER TYPE E         | FASTENER TYPE E          | 6" O.C. |
| WOOD   | FASTENER TYPES C & D    | FASTENER TYPE D          | 5" O.C. |

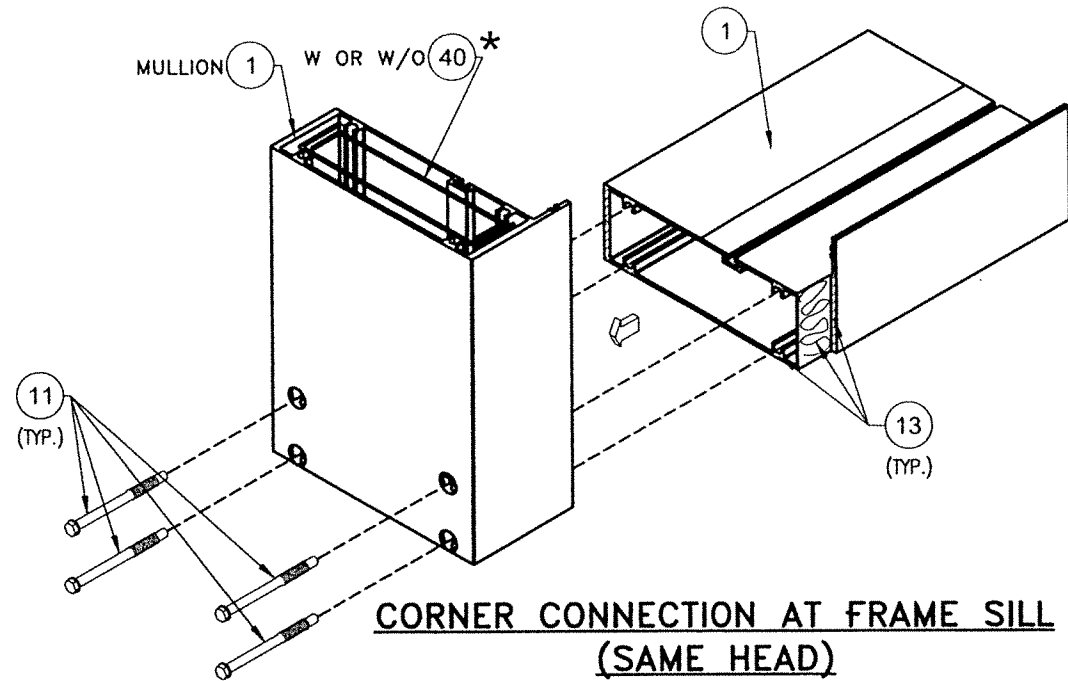
Δ CORRESPONDS TO FASTENERS TYPES AND SUBSTRATES CHARACTERISTICS (AS APPLICABLE) DESCRIBED ON SHEET'S 34 THRU 43.



P.E. SEAL/SIGNATURE/DATE

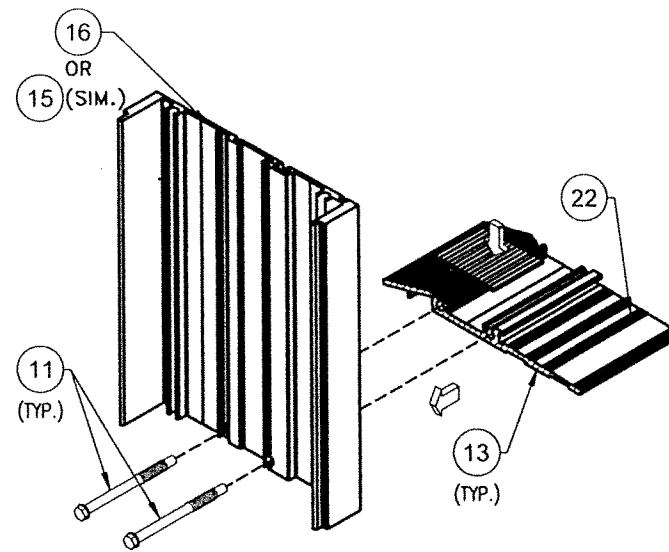
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| REV. No   | DESCRIPTION   | DATE   | REV. No | DESCRIPTION | DATE        |      |   |            |          |   |   |   |   |   |   |   |   |   |                |  |
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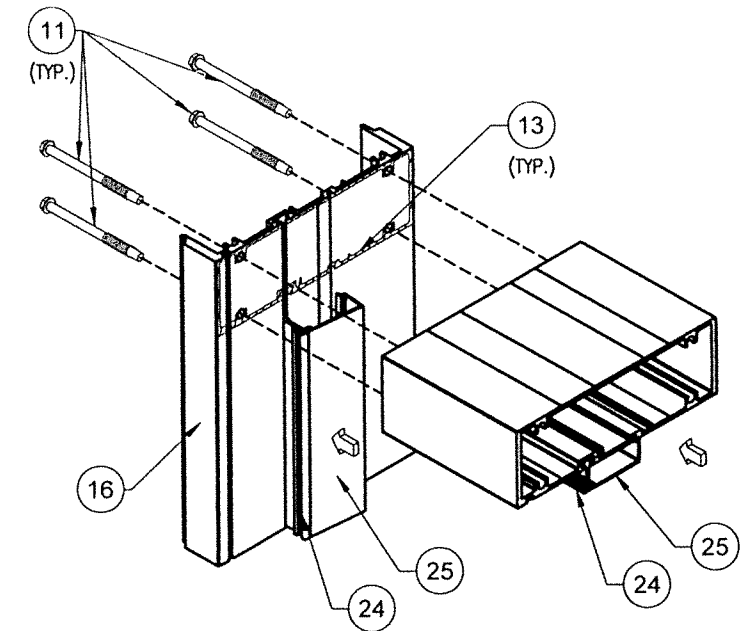


**CORNER CONNECTION AT FRAME SILL**  
**(SAME HEAD)**  
NTS

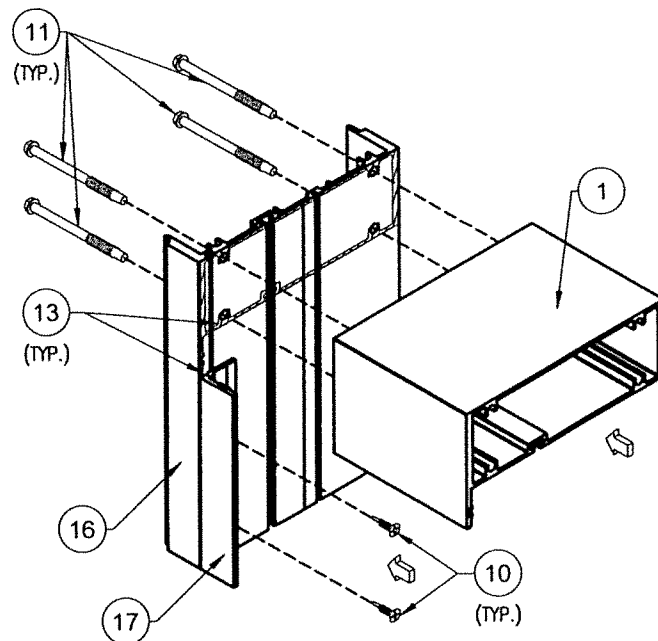
\*COMPONENT 41 MAY BE USED AS AN OPTION TO COMPONENT 40.



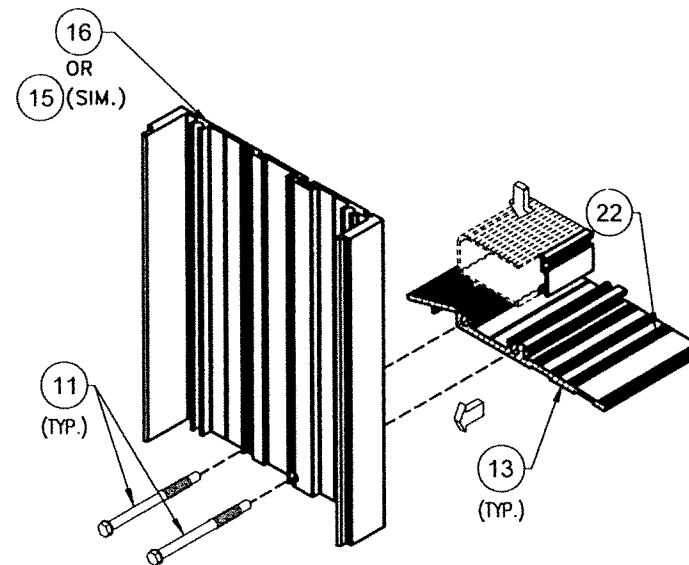
**CORNER CONNECTION AT**  
**DOOR FRAME SILL**  
NTS



**CORNER CONNECTION AT**  
**DOOR FRAME HEAD**  
NTS



**CORNER CONNECTION AT DOOR**  
**TRANSOM HEAD**  
NTS



**CORNER CONNECTION AT DOOR FRAME SILL**  
**(WATER RESISTANT)**  
NTS

**CORNER DETAILS:**  
**OPTIONAL SYSTEM # 2**  
**(ISOMETRIC)**  
NTS

WALTER A. TILLIT JR.  
LICENSE  
No. 44167  
STATE OF  
FLORIDA  
PROFESSIONAL ENGINEER  
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| 2       | -           | -        | 4       | -           | -    |

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