

YKK AP AMERICA

YVS-410TUH SERIES WINDOWS

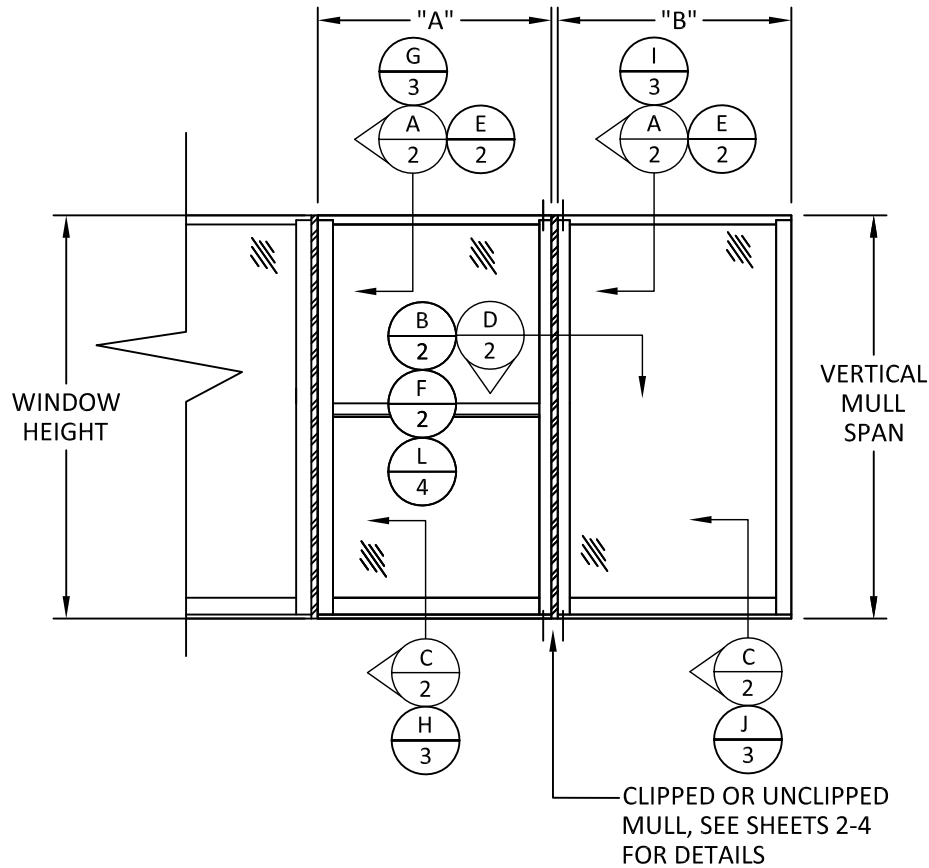
STACKING MULLIONS - 4652

INSTALLATION NOTES:

- THE NUMBER OF INSTALLATION ANCHORS DEPICTED IS THE MINIMUM NUMBER OF ANCHORS TO BE USED FOR PRODUCT INSTALLATION.
- INSTALL INDIVIDUAL ANCHORS WITHIN A TOLERANCE OF +/-1/2 INCH OF THE DEPICTED LOCATION AS SPECIFIED. TOLERANCES ARE NOT CONSIDERED CUMULATIVE FROM ONE LOCATION TO THE NEXT.
- FOR MULLION CLIP: USE FOUR (4) #12 WOOD SCREWS, PER CLIP, OF SUFFICIENT LENGTH TO ACHIEVE MINIMUM EMBEDMENT OF 1 1/2" INTO WOOD FRAMING. (SEE INSTALLATION DETAILS ON SHEET 2).
- FOR MULLION CLIP: USE FOUR (4) 1/4" ITW TAPCONS PER MULLION END, TWO (2) PER CLIP, OF SUFFICIENT LENGTH TO ACHIEVE MINIMUM EMBEDMENT OF 1 1/4" INTO CONCRETE OR MASONRY. (SEE INSTALLATION DETAILS ON SHEET 2).
- FOR MULLION CLIP: USE FOUR (4) 1/4-20 SAE GR. 5 SELF-DRILLING OR SELF-TAPPING SCREWS, PER CLIP, OF SUFFICIENT LENGTH TO ACHIEVE A MINIMUM 3 THREADS PENETRATION BEYOND METAL SUBSTRATE. (SEE INSTALLATION DETAILS ON SHEET 2).
- FOR UNCLIPPED MULLIONS: USE FOUR (4) #12 WOOD SCREWS, PER MULLION END, OF SUFFICIENT LENGTH TO ACHIEVE MINIMUM EMBEDMENT OF 1 1/2" INTO WOOD FRAMING. (SEE INSTALLATION DETAILS ON SHEET 3).
- FOR UNCLIPPED MULLIONS: USE FOUR (4) 1/4" ITW TAPCONS, PER MULLION END, OF SUFFICIENT LENGTH TO ACHIEVE MINIMUM EMBEDMENT OF 1 1/4" INTO CONCRETE OR MASONRY (SEE INSTALLATION DETAILS ON SHEET 3).
- FOR UNCLIPPED MULLIONS: USE FOUR (4) 1/4-20 SAE GR. 5 SELF-DRILLING OR SELF-TAPPING SCREWS, PER MULLION END, OF SUFFICIENT LENGTH TO ACHIEVE A MINIMUM 3 THREADS PENETRATION BEYOND METAL SUBSTRATE. (SEE INSTALLATION DETAILS ON SHEET 3).
- MINIMUM EDGE DISTANCES ARE BASED ON 3/4" FOR #12 WOOD SCREWS, 2-1/2" FOR 1/4" TAPCONS, & 5/8" FOR 1/4-20 GR. 5 SELF-TAPPING OR SELF-DRILLING SCREWS.
- MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISHES INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK, VENEER, AND SIDING.
- INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:
 - WOOD - MINIMUM SPECIFIC GRAVITY OF 0.55.
 - CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
 - CMU - SHALL CONFORM TO MIN. REQUIREMENTS OF ASTM C90
 - STEEL - MINIMUM YIELD STRENGTH OF 33 KSI. MINIMUM 20 GA. (0.0359") WALL THICKNESS.
 - ALUMINUM - ALLOY SHALL BE 6063-T5 OR EQUIVALENT. MINIMUM (0.090") WALL THICKNESS.

GENERAL NOTES:

- THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE CURRENT EDITION FBC, SECTION 1709.8, INCLUDING HVHZ, AND HAS BEEN TESTED & EVALUATED IN ACCORDANCE WITH:
 - TAS 201-94
 - TAS 202-94
 - TAS 203-94
- APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED ON THESE PRODUCTS IN WIND BORNE DEBRIS REGIONS ZONE 4 OR LESS SUCH THAT ADJOINING WINDOWS ARE EQUALLY IMPACT RATED.
- 2X WOOD BUCKS AND METAL STUDS TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE AND IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
- THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT IN NON-HVHZ AREAS. IN HVHZ AREAS, A ONE-TIME NOA OR APPROVAL FROM THE AUTHORITY HAVING JURISDICTION (AHJ) MAY BE REQUIRED.
- THIS MULLION IS ONLY VALID WHEN USED IN CONJUNCTION WITH APPLICABLE YKK AP AMERICA PRODUCTS. QUALIFIED CONFIGURATIONS INCLUDE FIXED-FIXED, FIXED-OPERABLE, & OPERABLE-OPERABLE CONFIGURATIONS OF SINGLE HUNG AND FIXED WINDOW PRODUCTS.
- ALL WINDOWS USED WITH THIS MULLION SHALL BE QUALIFIED UNDER SEPARATE APPROVAL. THE LESSER DESIGN PRESSURE RATING OF THE WINDOW OR THE MULLION OF INSTALLATION SHALL GOVERN THE OVERALL DESIGN PRESSURE OF THE ASSEMBLY.
- MULLION MATERIAL: 6063-T5 ALUMINUM.
- CLIP MATERIAL: 6063-T5 ALUMINUM.
- IN ACCORDANCE WITH THE CURRENT EDITION FBC, DISSIMILAR METALS INCLUDING FASTENERS THAT MAY COME INTO CONTACT WITH ALUMINUM UNIT FRAMING SHALL BE PROTECTED.



VERTICAL MULLION

SEE GEN. NOTE 5 FOR QUALIFIED CONFIGURATIONS

TABLE OF CONTENTS		
SHEET	REVISION	SHEET DESCRIPTION
1	B	GENERAL NOTES & ELEVATION
2	B	CLIPPED MULL INSTALLATION DETAILS
3	B	UNCLIPPED MULL INSTALLATION DETAILS
4	B	4652 UNCLIPPED MULL DP CHART & INSTALLATION DETAILS
5	B	4652 CLIPPED MULL DP CHART, COMPONENTS, & B.O.M.
6	B	COMPONENTS & 4652 MULL ASSEMBLY ISO VIEW



YKK AP AMERICA

1229 HWY 441 BYPASS
DUBLIN, GEORGIA 31021
PH: (478)277-1955 FAX: (678)838-6001

TITLE:
SERIES 4562 STACKING MULLIONS

GENERAL NOTES AND ELEVATION

PREPARED BY:

BUILDING DROPS, INC.

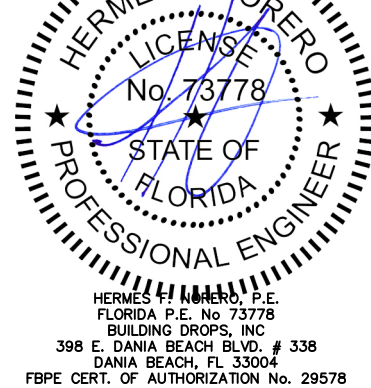
398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004
PH: (954)399-8478
FAX: (954)744-4738
WEB: www.buildingdrops.com



REMARKS	BY	DATE
A - 5TH EDITION FBC UPDATE	SM	02.23.15
B - 6TH EDITION FBC UPDATE	FM	08.22.17

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Digitally signed by Hermes F. Norero, P.E.
Reason: I am approving this document
Date: 2017.10.25 16:32:50 -0400



FL #:

FL15710

DATE: 8.22.17

DWG. BY:
FM

CHK. BY:
HFN

SCALE: NTS

DWG. #: YKK231

SHEET:

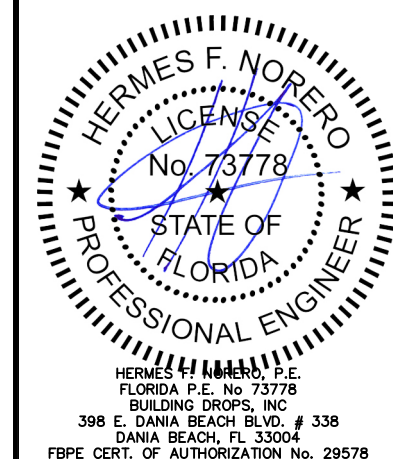
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OF 6

CLIPPED MULL INSTALLATION DETAILS

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B - 6TH EDITION FBC UPDATE	FM	08.22.17

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DATE: 8.22.17

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CHK. BY:	HFN
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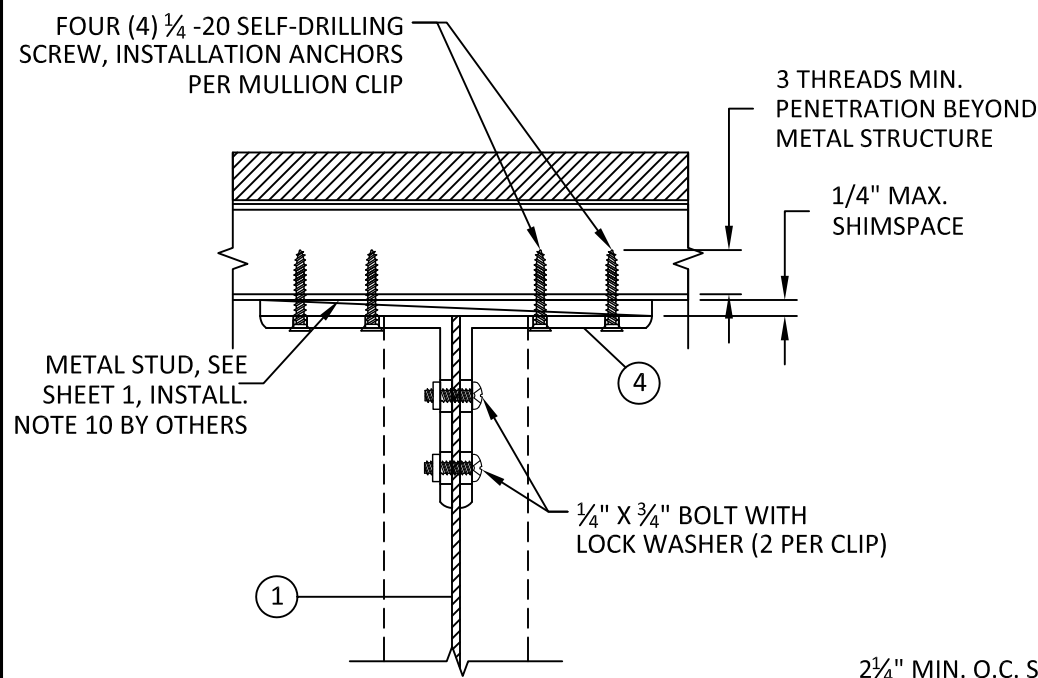
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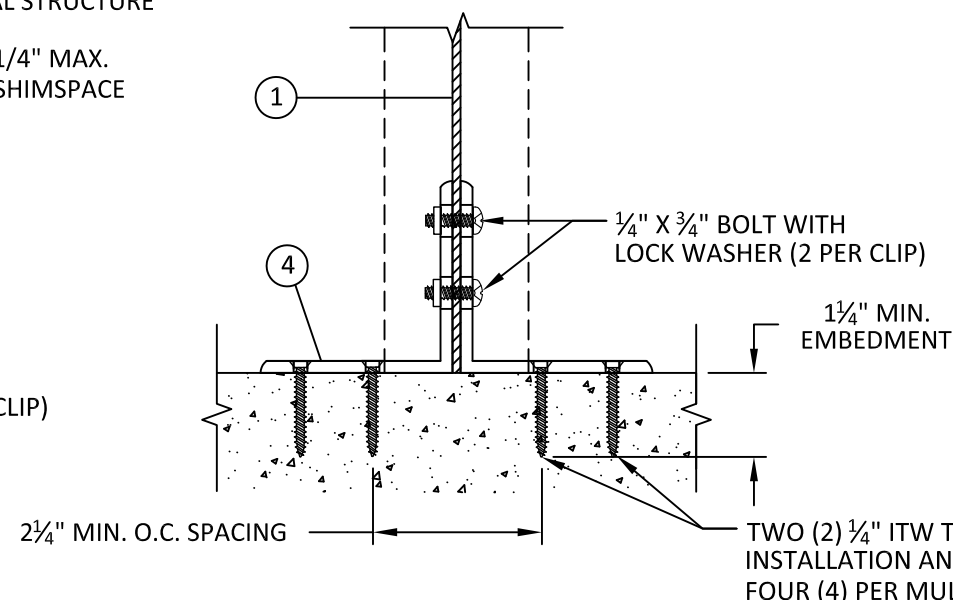
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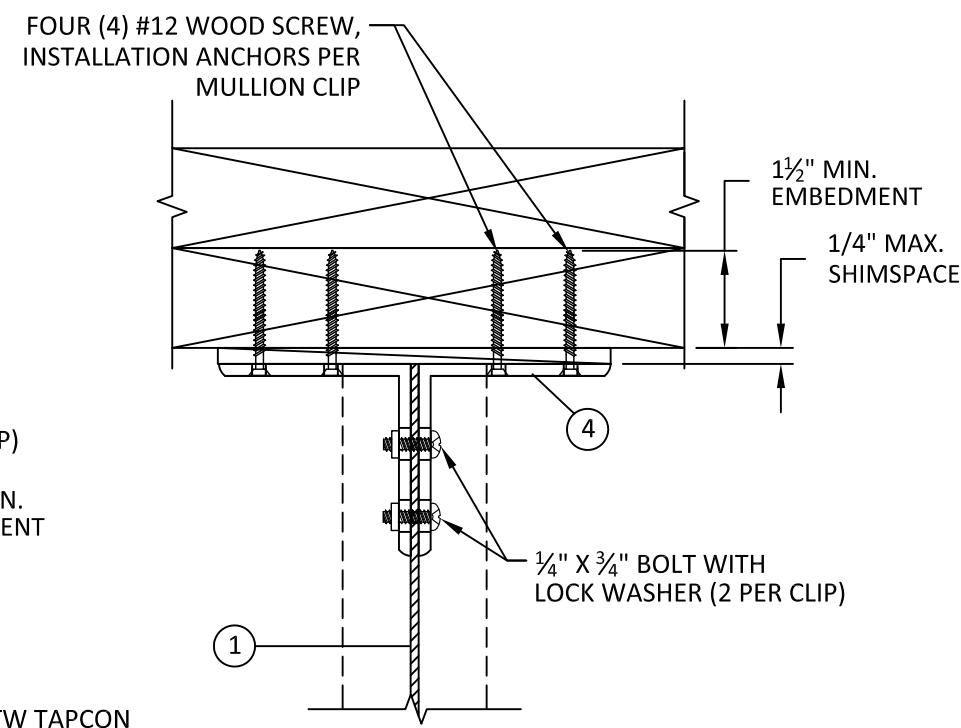
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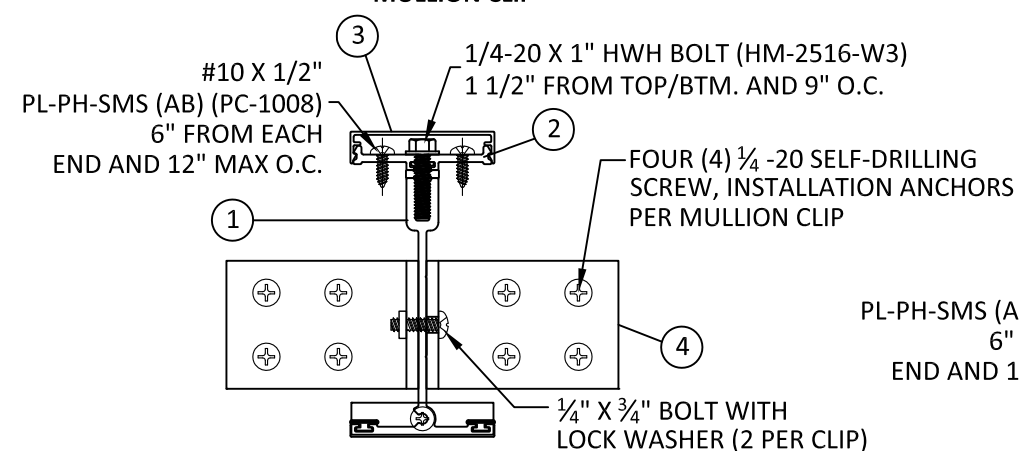
FRONT VIEW



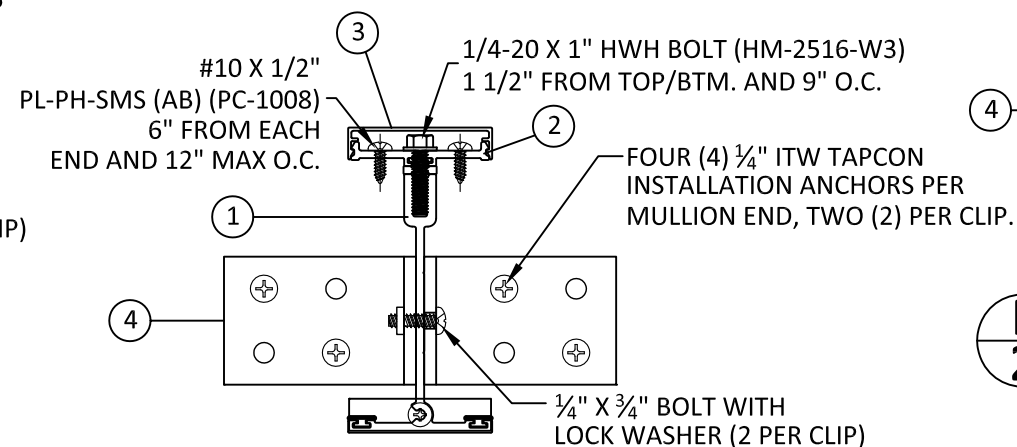
C 2 FRONT VIEW SILL - CONCRETE/MASONRY MULLION CLIP



E 2 FRONT VIEW HEAD - 2X WOOD MULLION CLIP

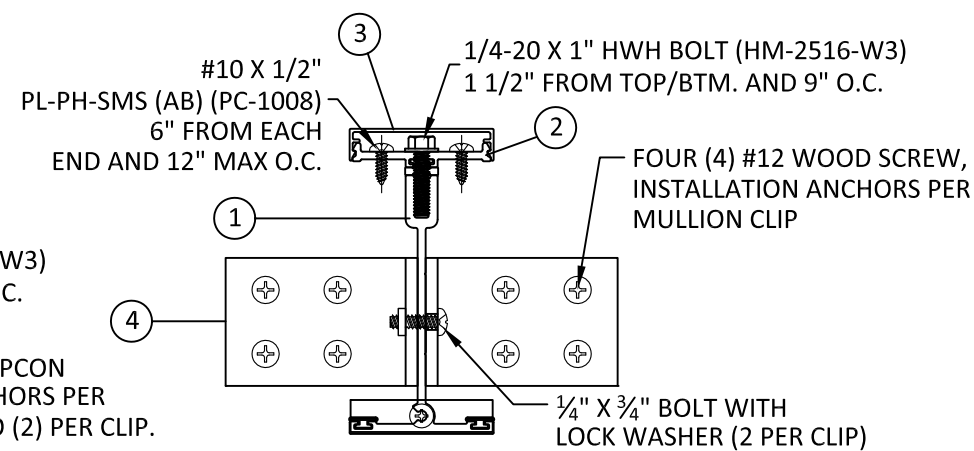


B HORIZONTAL SECTION



D2 HORIZONTAL SECTION

CONCRETE/MASONRY
MULLION CLIP



F **HORIZONTAL SECTION**
2 2X WOOD
MULLION CLIP

TITLE:
SERIES 4562 STACKING MULLIONS

UNCLIPPED MULL
INSTALLATION DETAILS

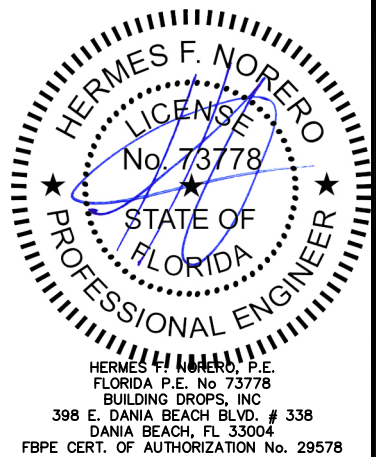
PREPARED BY:
BUILDING DROPS, INC.

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DANIA BEACH, FL 33004
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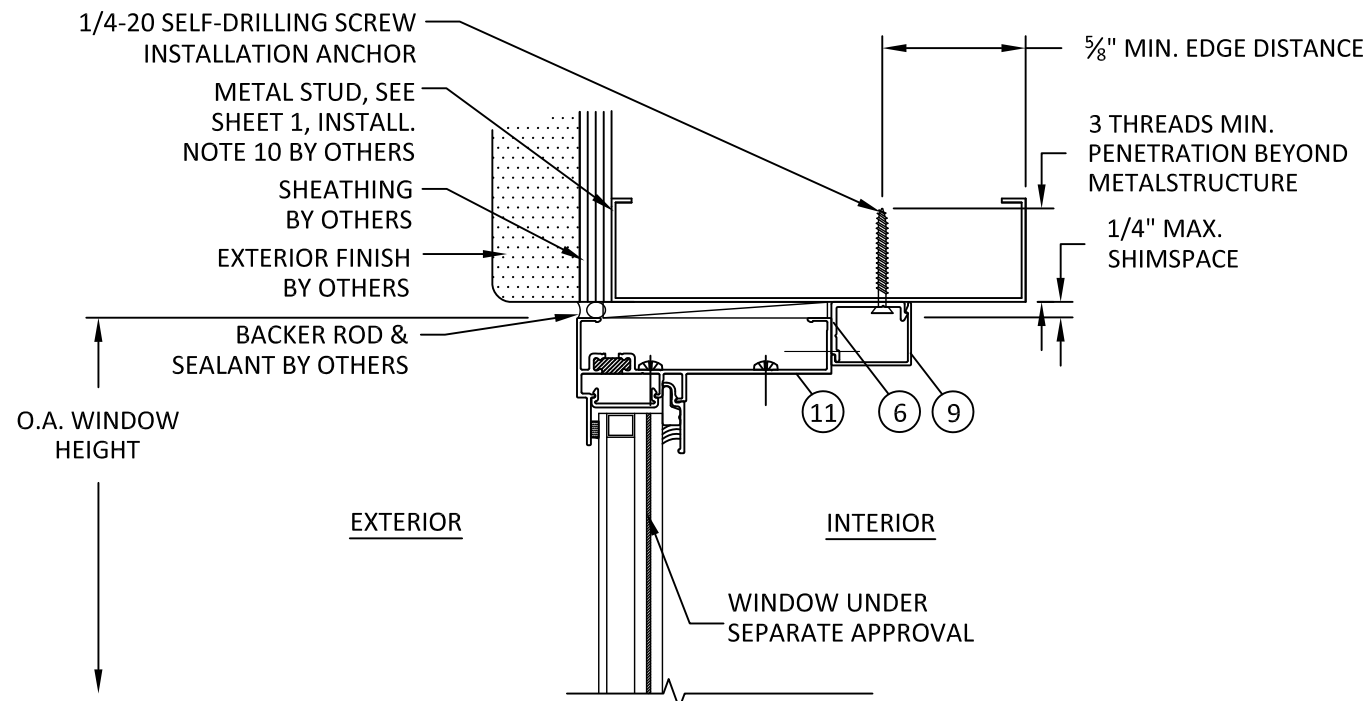


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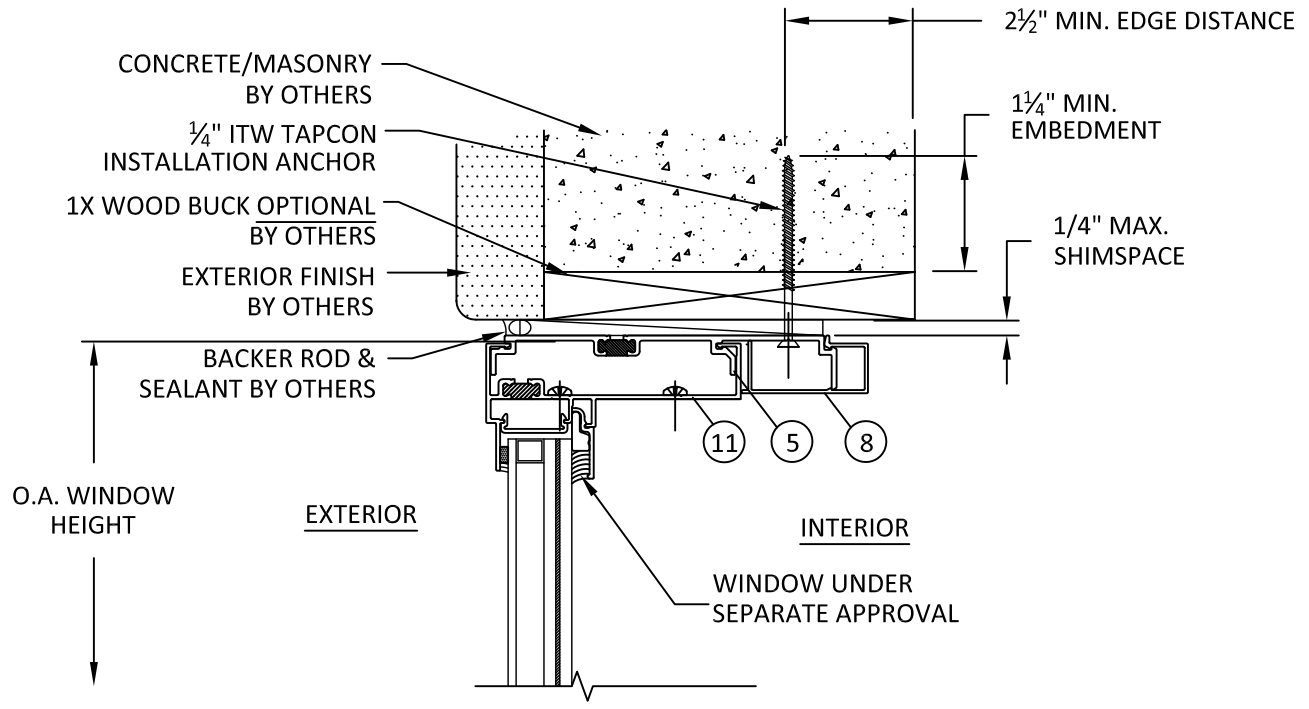
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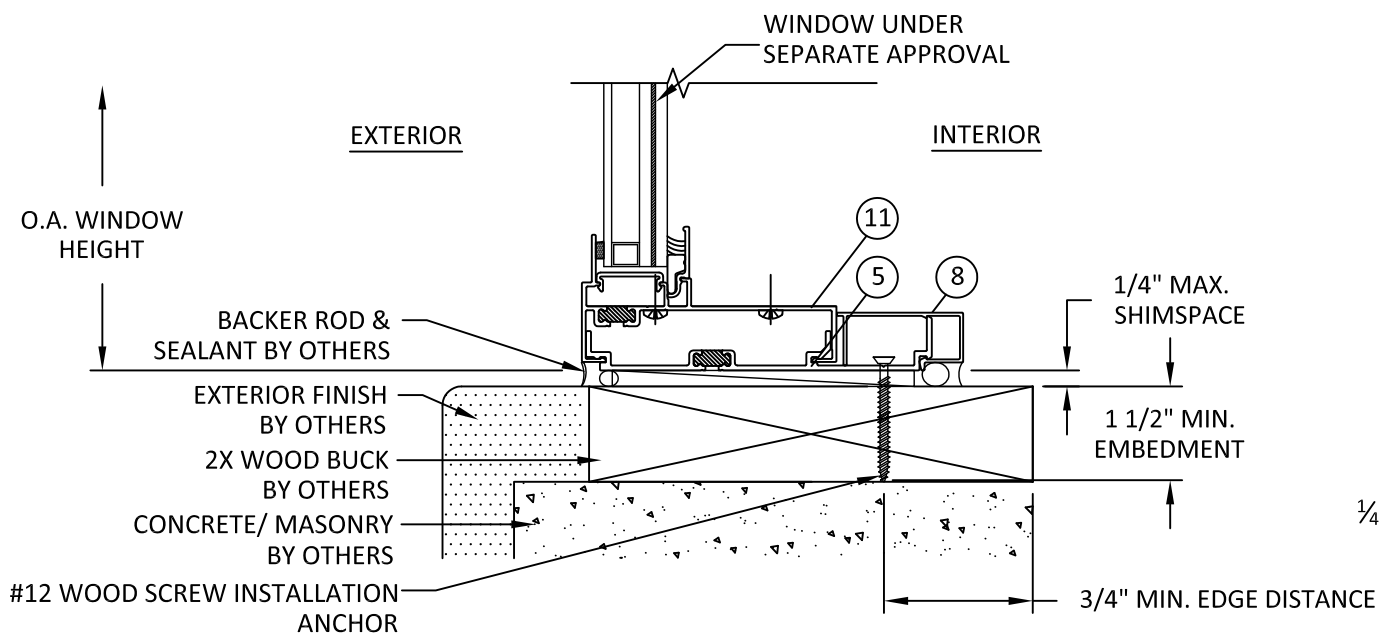
FL #:	FL15710
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SCALE:	NTS
DWG. #:	YKK231
SHEET:	3



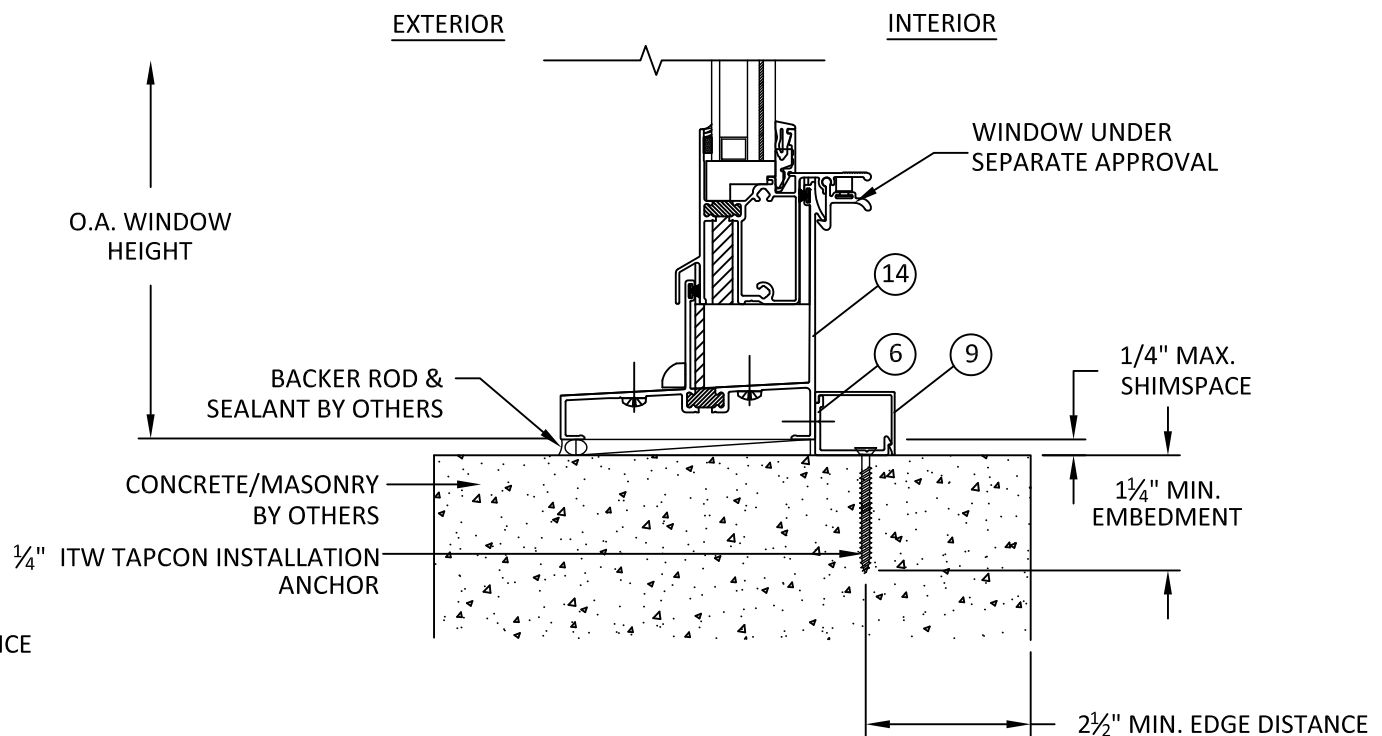
G
3 **VERTICAL SECTION**
HEAD - METAL STUD
UNCLIPPED MULLION (ALT. ANCHOR CLIP)



I
3 **VERTICAL SECTION**
HEAD - 1X WOOD BUCK
UNCLIPPED MULLION



H
3 **VERTICAL SECTION**
SILL - 2X WOOD BUCK
UNCLIPPED MULLION



J
3 **VERTICAL SECTION**
SILL - CONCRETE/MASONRY
UNCLIPPED MULLION (ALT. ANCHOR CLIP)

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s:\projects\ykk ap america, inc\cc-17-0710 fbc submittal - fbc 2017 (6th edition) code change\week 5 - (sep 1st) documents\dwgs\fl15710\ykk231 - 4652 hvhz.dwg

4652 UNCLIPPED MULL DP CHART

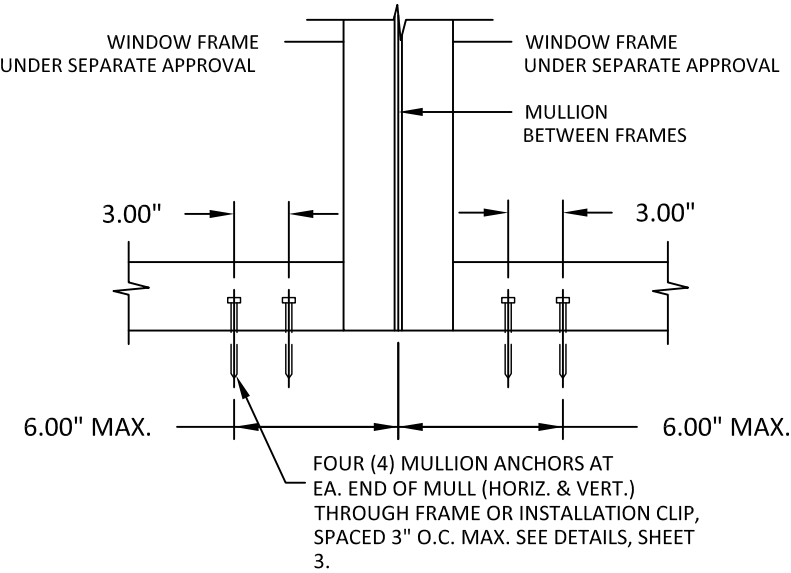
Maximum design pressure capacity (HVHZ-Impact)
YVS-410TUH Series Windows: Stacking Mullions - 4652
Design pressures are limited either by mullion or anchor screw capacity

Span (in)	Tributary Width (in)							
	28.0	32.0	36.0	40.0	44.0	46.0	40.0	48.4
56.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
60.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
72.0	150.0	150.0	150.0	140.7	133.0	129.8	140.7	126.5
80.0	150.0	142.9	131.1	121.9	114.7	111.0	121.9	106.9
88.0	138.8	122.7	110.5	100.8	93.1	89.8	100.8	86.3
88.0	138.8	122.7	110.5	100.8	93.1	89.8	100.8	86.3
82.0	150.0	138.5	127.0	117.4	108.7	105.0	117.4	101.1
96.0	116.0	102.4	91.9	83.7	77.1	74.3	83.7	71.2

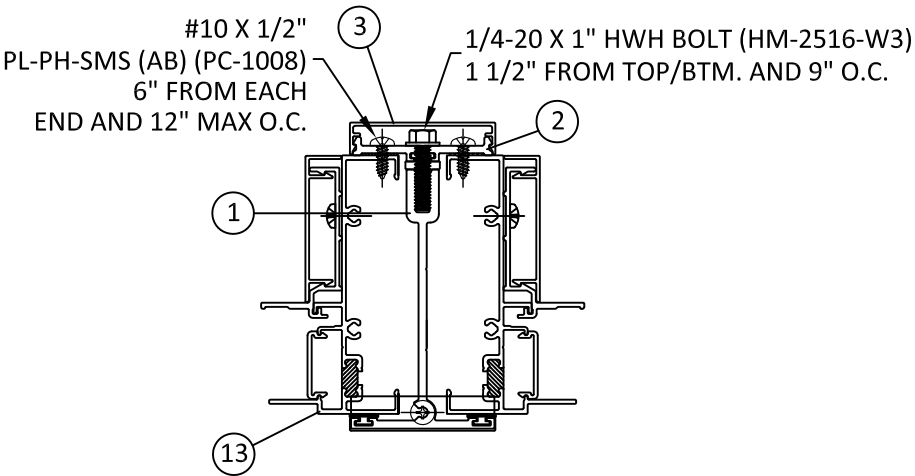
NOTES FOR UNCLIPPED MULLION INSTALLATIONS:

1. THE DESIGN PRESSURES IN THIS CHART ARE FOR THE MULLIONS LISTED ABOVE WHEN INSTALLED WITHOUT A MULLION CLIP.
2. DESIGN PRESSURES HAVE BEEN DETERMINED IN ACCORDANCE WITH FBC SECTION 1709.8
3. READ WINDOW WIDTH AND MULL SPAN IN INCHES. DESIGN PRESSURE VALUES ON THIS CHART ARE POSITIVE AND NEGATIVE POUNDS PER SQUARE FOOT (PSF).
4. TRIBUTARY WIDTH IS DETERMINED BY THE FOLLOWING (REFER TO ELEVATION, SHEET 1):

4.1. TRIBUTARY WIDTH = (A+B)/2
5. DESIGN PRESSURE VALUES APPLY TO MULLION WHERE TWO OR MORE WINDOWS ARE LISTED IN A SINGLE OPENING. LESSER DESIGN PRESSURE OF INDIVIDUAL WINDOW OR MULLION OF INSTALLATION SHALL GOVERN.



K
4
FRONT VIEW
MULLION ANCHOR DETAIL
UNCLIPPED MULLION



L
4
HORIZONTAL VIEW
YVS-410TUH MULL ASSEMBLY TYP.
UNCLIPPED MULLION



YKK AP AMERICA

1229 HWY 441 BYPASS
DUBLIN, GEORGIA 31021
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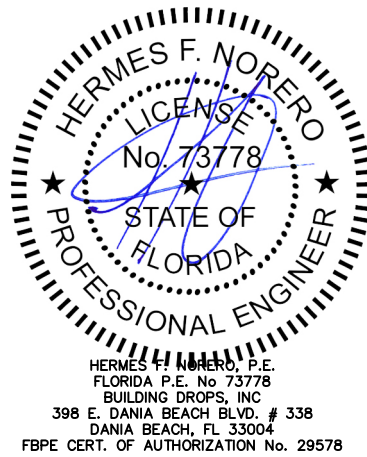
TITLE:
SERIES 4562 STACKING MULLIONS
4518 UNCLIPPED MULL DP CHART
& INSTALLATION DETAILS

PREPARED BY:
BUILDING DROPS, INC.
398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004
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CHK. BY:	HFN
SCALE:	NTS
DWG. #:	YKK231
SHEET:	4

4652 CLIPPED MULL DP CHART

Maximum design pressure capacity (HVHZ-Impact)
YVS-410TUH Series Windows: Stacking Mullions - 4652
Design pressures are limited either by mullion or anchor screws or anchor clip capacity

Span (in)	Tributary Width (in)							
	28.0	32.0	36.0	40.0	44.0	46.0	40.0	48.0
56.0	128.7	118.2	110.6	105.1	101.1	99.7	105.1	98.5
60.0	117.5	107.5	100.1	94.6	90.5	88.9	94.6	87.6
72.0	91.1	81.0	73.4	67.5	62.9	60.9	67.5	59.2
80.0	73.0	64.7	58.4	53.5	49.6	47.9	53.5	46.4
88.0	59.9	53.0	47.7	43.5	40.2	38.8	43.5	37.5
88.0	59.9	53.0	47.7	43.5	40.2	38.8	43.5	37.5
82.0	69.4	61.5	55.4	50.7	46.9	45.3	50.7	43.9
96.0	50.1	44.2	39.7	36.1	33.3	32.1	36.1	31.0

NOTES FOR CLIPPED MULLION INSTALLATIONS:

1. THE DESIGN PRESSURES IN THIS CHART ARE FOR THE MULLIONS LISTED ABOVE WHEN USED WITH THE APPLICABLE MULLION CLIP.
2. DESIGN PRESSURES HAVE BEEN DETERMINED IN ACCORDANCE WITH FBC SECTION 1709.8
3. READ WINDOW WIDTH AND MULL SPAN IN INCHES. DESIGN PRESSURE VALUES ON THIS CHART ARE POSITIVE AND NEGATIVE POUNDS PER SQUARE FOOT (PSF).
4. TRIBUTARY WIDTH IS DETERMINED BY THE FOLLOWING (REFER TO ELEVATION, SHEET 1):

4.1. $\text{TRIBUTARY WIDTH} = (A+B)/2$
5. DESIGN PRESSURE VALUES APPLY TO MULLION WHERE TWO OR MORE WINDOWS ARE LISTED IN A SINGLE OPENING. LESSER DESIGN PRESSURE OF INDIVIDUAL WINDOW OR MULLION OF INSTALLATION SHALL GOVERN.

BILL OF MATERIALS				
ITEM NO.	PART NO.	DESCRIPTION	MATERIAL	MANUFACTURER
1	E9-4652	MULLION	6063-T5	YKK AP
2	AS-4231	PRESSURE PLATE	6063-T5	YKK AP
3	E9-5111	PRESSURE PLATE COVER	6063-T5	YKK AP
4	E1-1587	MULLION CLIP	6063-T5	YKK AP
5	BE9-8567	FRAME ANCHOR STRAP	6063-T5	YKK AP
6	E9-4556	FRAME ANCHOR CLIP	6063-T5	YKK AP
7	E1-1922	FRAME ANCHOR CLIP	6063-T5	YKK AP
8	E9-8431	ANCHOR STRAP COVER	6063-T5	YKK AP
9	E9-4557	ANCHOR CLIP COVER	6063-T5	YKK AP
10	E9-4035	2" ANCHOR CLIP COVER	6063-T5	YKK AP
11	BE9-4701	FRAME HEAD/SILL	6063-T5	YKK AP
12	BE9-4704	FRAME JAMB	6063-T5	YKK AP
13	BE9-4714	FRAME JAMB	6063-T5	YKK AP
14	BE9-4717	FRAME SILL	6063-T5	YKK AP



YKK AP AMERICA

1229 HWY 441 BYPASS
DUBLIN, GEORGIA 31021
PH: (478)277-1955 FAX: (678)838-6001

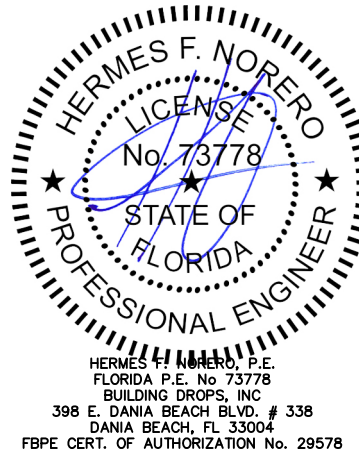
TITLE:
SERIES 4562 STACKING MULLIONS

4518 CLIPPED MULL DP CHART,
COMPONENTS, & B.O.M.

PREPARED BY:
BUILDING DROPS, INC.
398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004
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REMARKS	BY	DATE
B - 6TH EDITION FBC UPDATE	FM	08.22.17

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FM

CHK. BY:
HFN

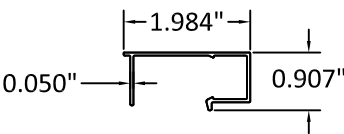
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NTS

DWG. #:
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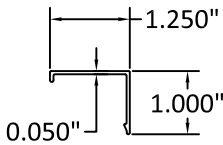
SHEET:
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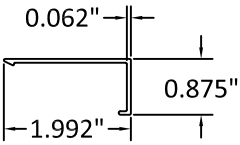
8 ANCHOR STRAP COVER
6063-T5



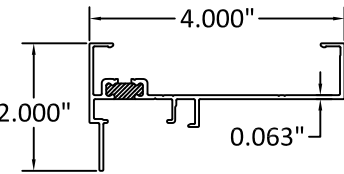
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6063-T5



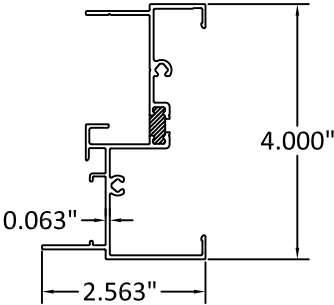
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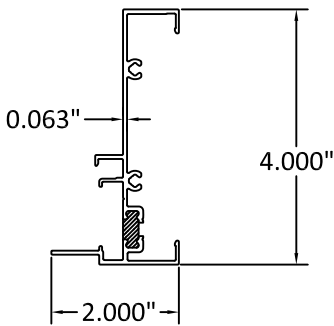
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6063-T5



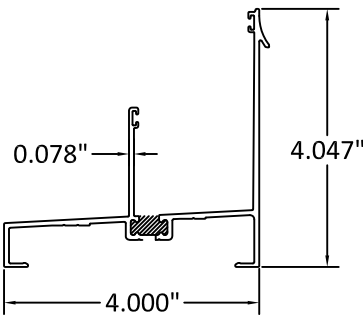
12 FRAME JAMB
6063-T5



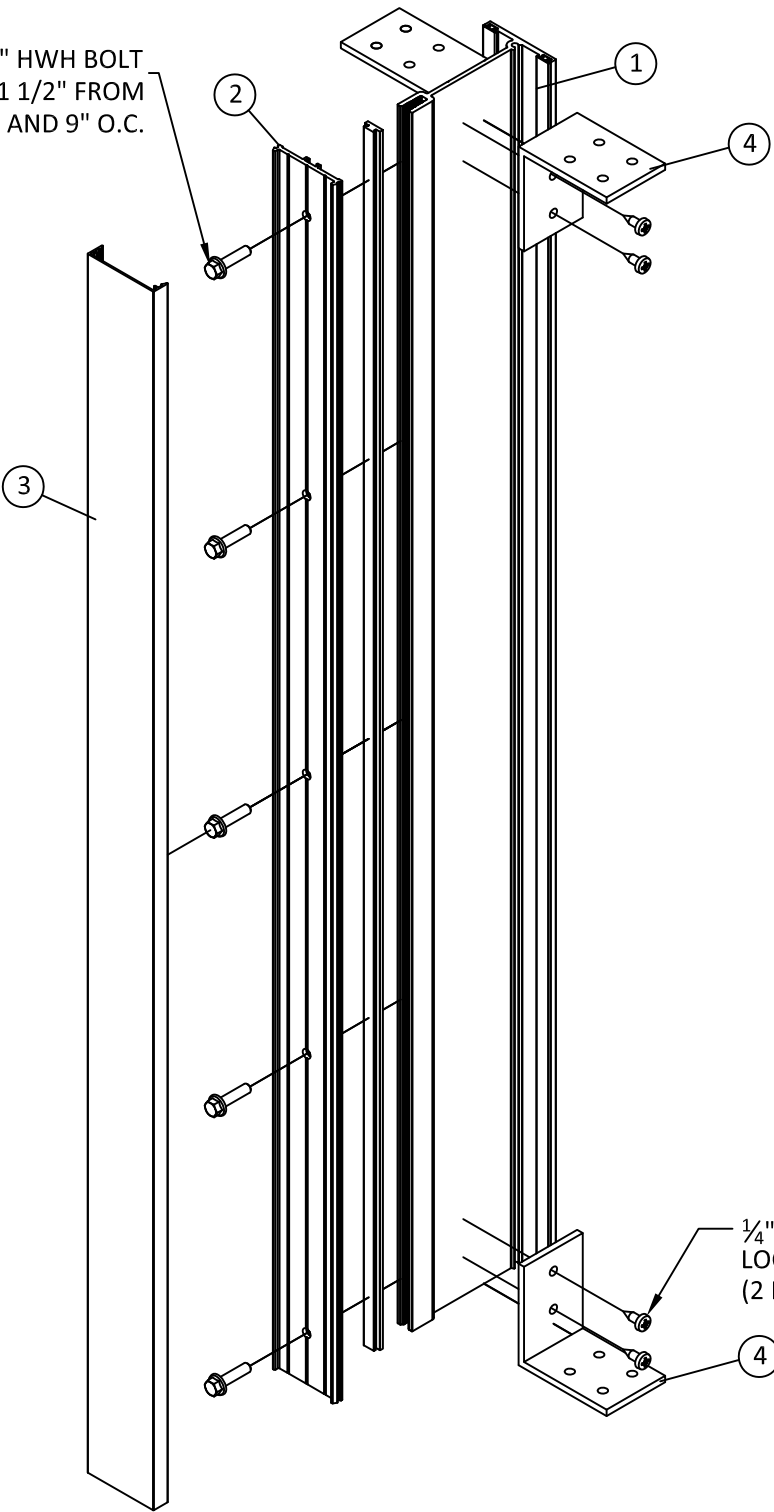
13 FRAME JAMB
6063-T5



14 FRAME SILL
6063-T5



1/4-20 X 1\"/>



NOTE: ITEM# 5 IS NOT REQUIRED FOR
"UNCLIPPED" INSTALLATIONS.

4652 STACKING MULLION ASSEMBLY
TYPICAL



YKK AP AMERICA

1229 HWY 441 BYPASS
DUBLIN, GEORGIA 31021
PH: (478)277-1955 FAX: (678)838-6001

TITLE: SERIES 4562 STACKING MULLIONS

COMPONENTS & 4652 MULL
ASSEMBLY ISO VIEW

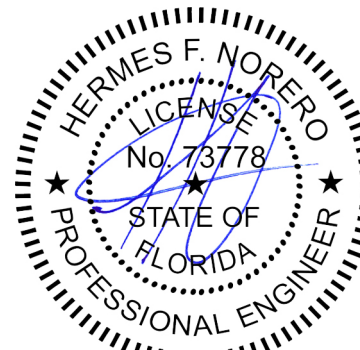
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