

YKK AP AMERICA

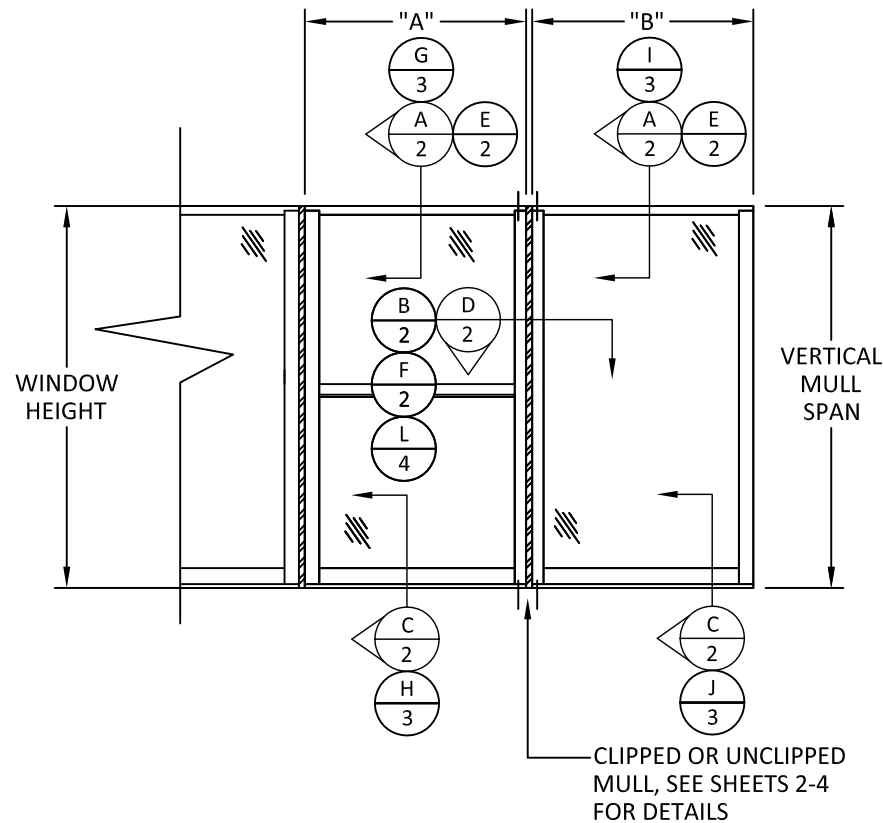
YVS-410TUH/YSW-400T/YVS-400TU/YVS-410TU/ YFW-400TU SERIES WINDOWS STACKING MULLIONS - 4753

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 $\pm 1/2$ 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 FLORIDA BUILDING CODE, EXCLUDING HVHZ.
- APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED ON THESE PRODUCTS IN WIND BORNE DEBRIS REGIONS ZONE 3 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.
- 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, DOUBLE HUNG, HORIZONTAL SLIDING, 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.
- ALL STRUCTURAL MATERIAL & DISSIMILAR METALS SHALL BE PROTECTED, TREATED, PAINTED, COATED, AND/OR ISOLATED AS REQUIRED IN THE APPLICABLE SECTIONS OF THE CURRENT FLORIDA BUILDING CODE AND REFERENCED DESIGN SPECIFICATIONS.



VERTICAL MULLION

SEE GEN. NOTE 5 FOR QUALIFIED CONFIGURATIONS

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SHEET	REVISION	SHEET DESCRIPTION
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3	-	UNCLIPPED MULL INSTALLATION DETAILS
4	-	4753 UNCLIPPED MULL DP CHARTS & INSTALLATION DETAILS
5	-	4753 CLIPPED MULL DP CHARTS, COMPONENTS & B.O.M
6	-	COMPONENTS & 4753 MULL ASSEMBLY ISO VIEW



YKK AP AMERICA

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

TITLE:
SERIES 4753 STACKING MULLIONS

GENERAL NOTES AND ELEVATION

PREPARED BY:

BUILDING DROPS, INC.

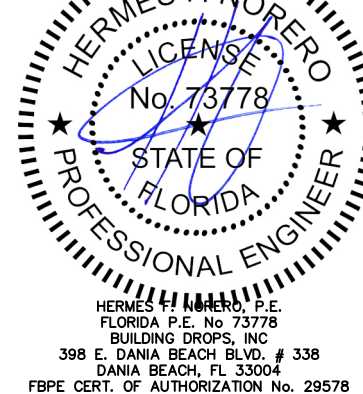
398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004
PH: (954)399-8478
FAX: (954)744-4738
WEB: www.buildingdrops.com



REMARKS	BY	DATE
6TH EDITION FBC CODE CC	EG	8.22.17

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Digitally signed by Hermes F. Norero, P.E.
Reason: I am approving this document
Date: 2017.10.21 15:20:48 -0400



FL #:

FL15729

DATE: 8.22.17

DWG. BY:
EG

CHK. BY:
HFN

SCALE: NTS

DWG. #: YKK227

SECTION:

1

OF 6

TITLE:
SERIES 4753 STACKING MULLIONS

CLIPPED MULL
INSTALLATION DETAILS

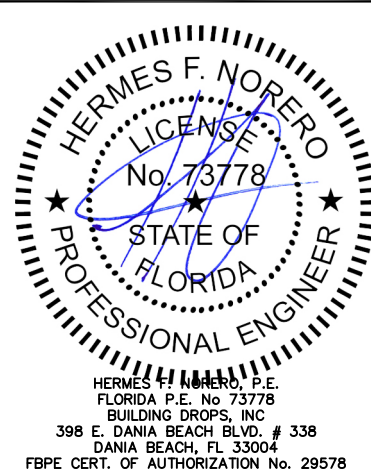
PREPARED BY:
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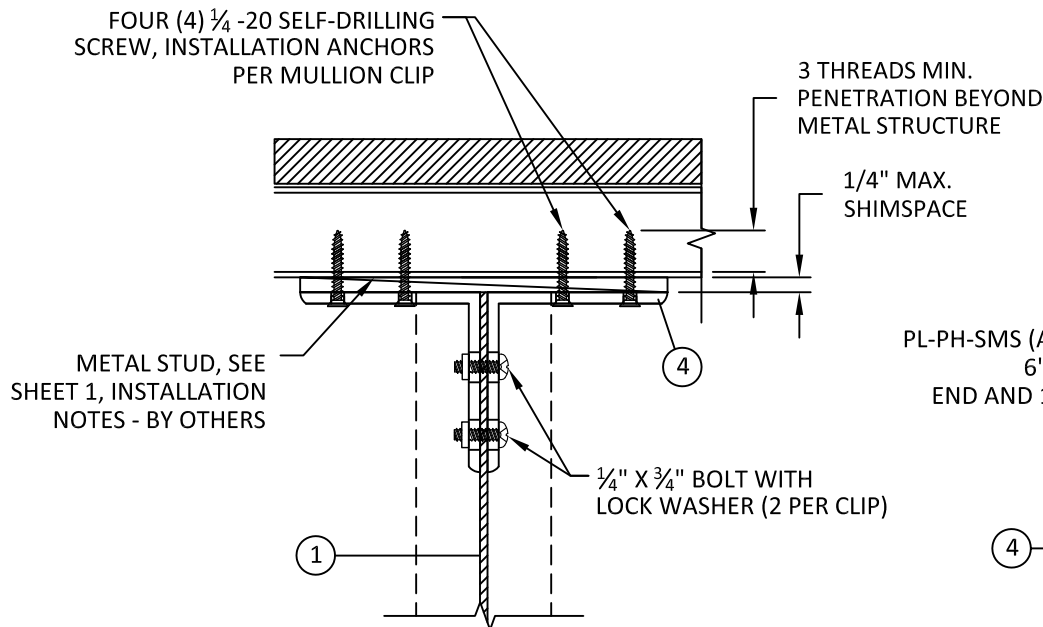


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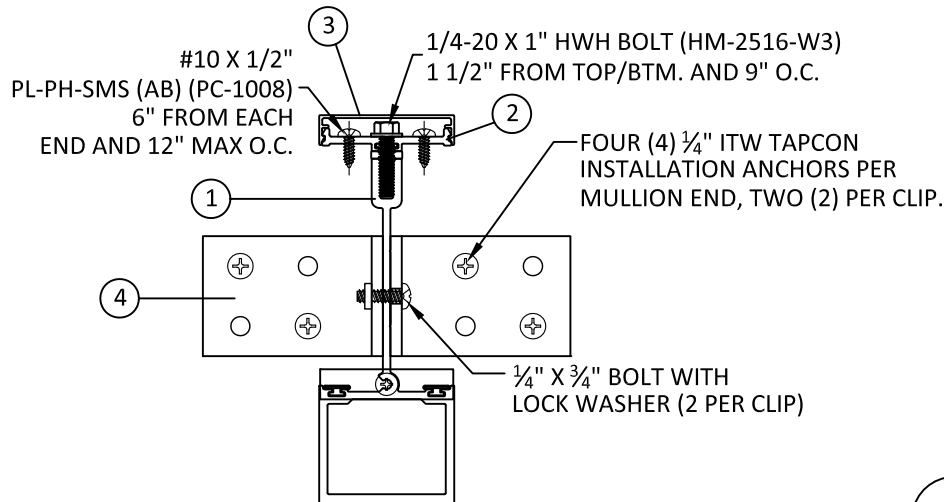


FL #:	FL15729
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CHK. BY:	HFN
SCALE:	NTS
DWG. #:	YKK227
SECTION:	2



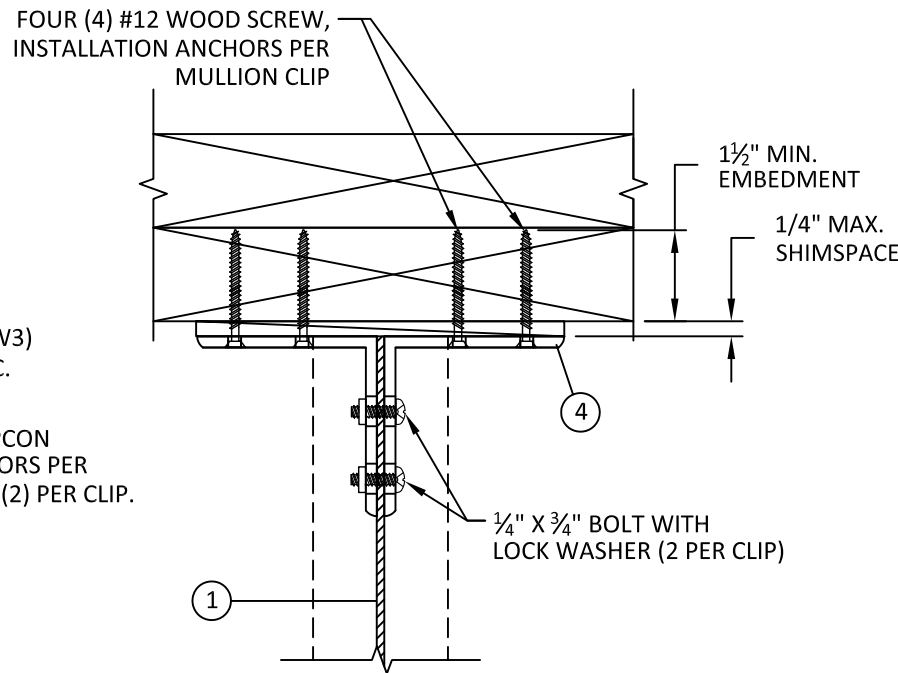
FRONT VIEW

HEAD - METAL STUD
MULLION CLIP



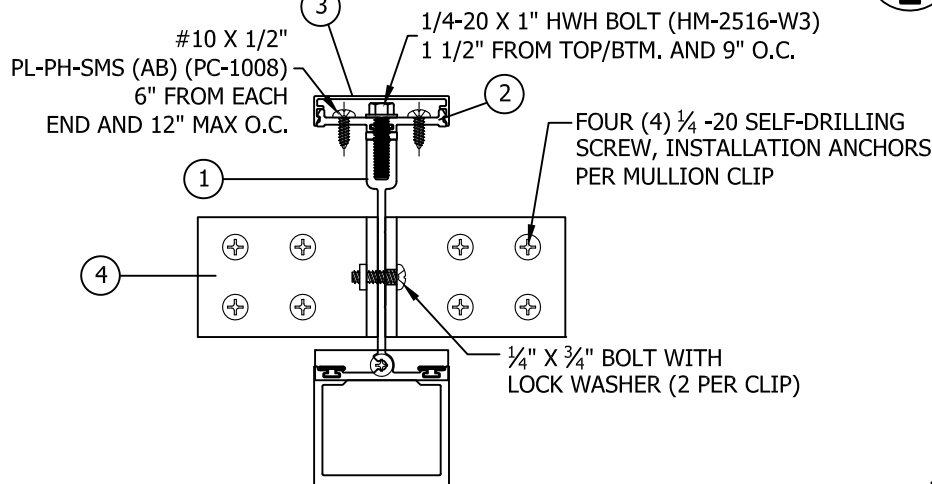
HORIZONTAL SECTION

CONCRETE/MASONRY
MULLION CLIP



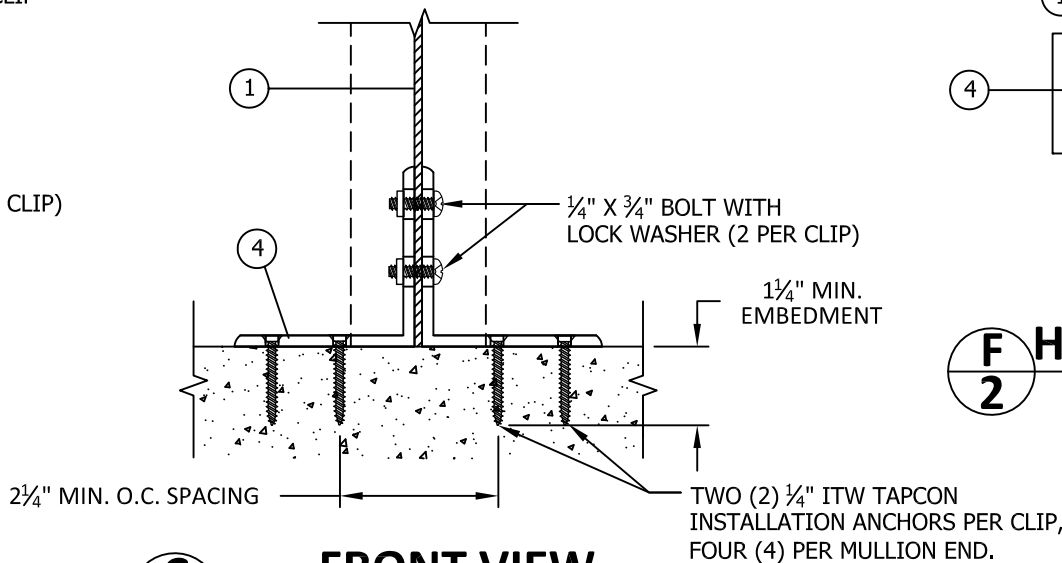
FRONT VIEW

HEAD - 2X WOOD
MULLION CLIP



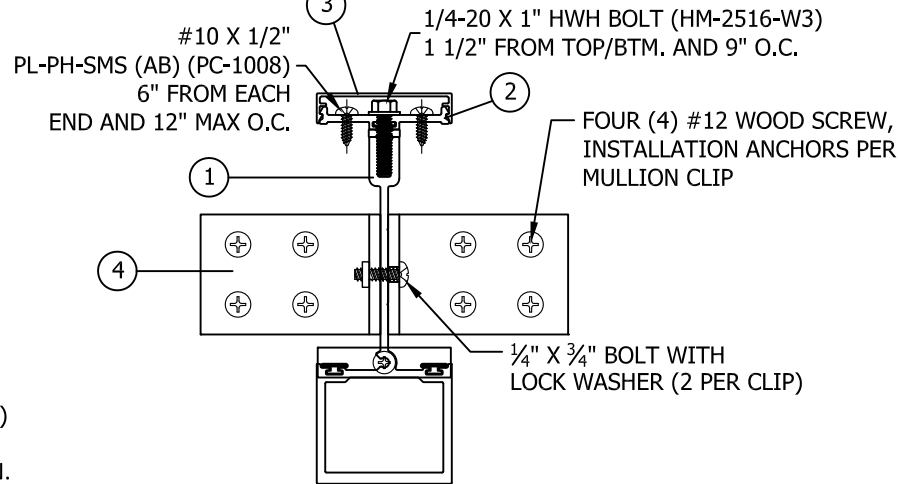
HORIZONTAL SECTION

METAL STUD
MULLION CLIP



FRONT VIEW

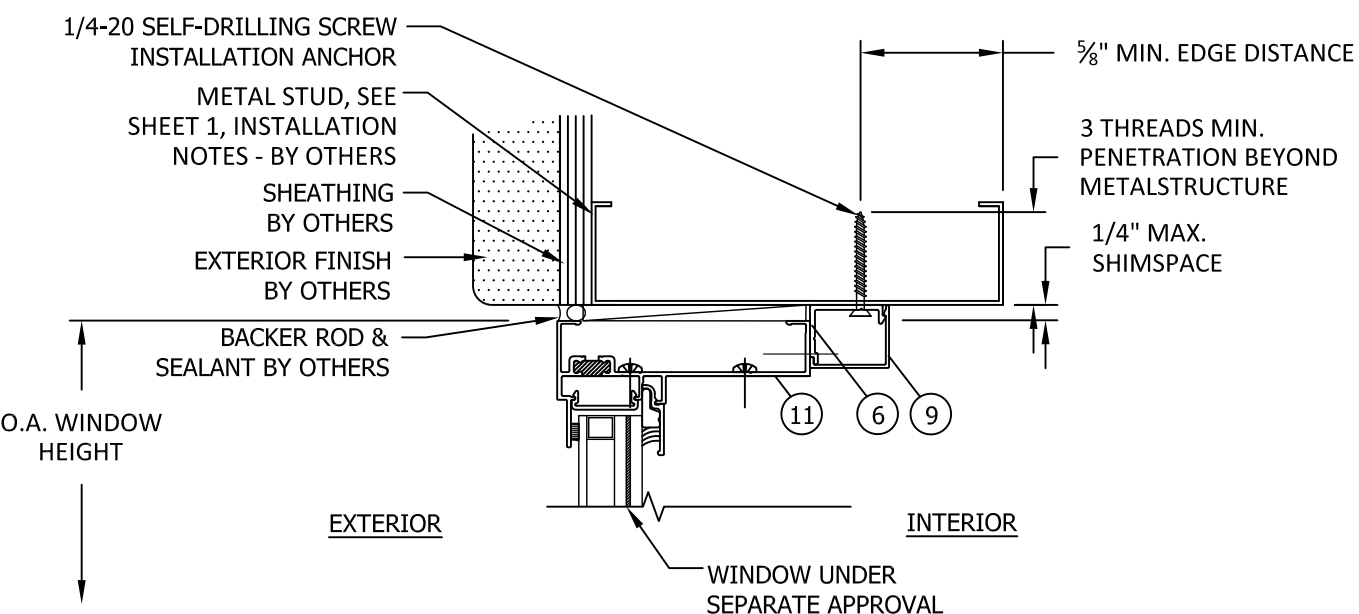
SILL - CONCRETE/MASONRY
MULLION CLIP



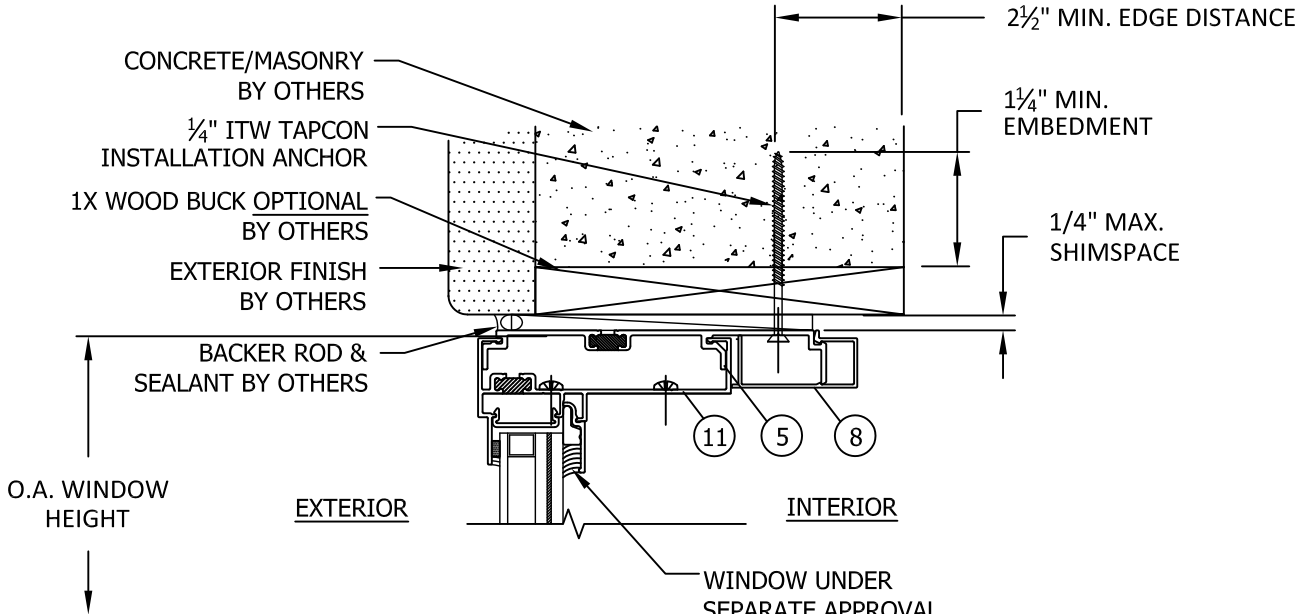
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2X WOOD
MULLION CLIP

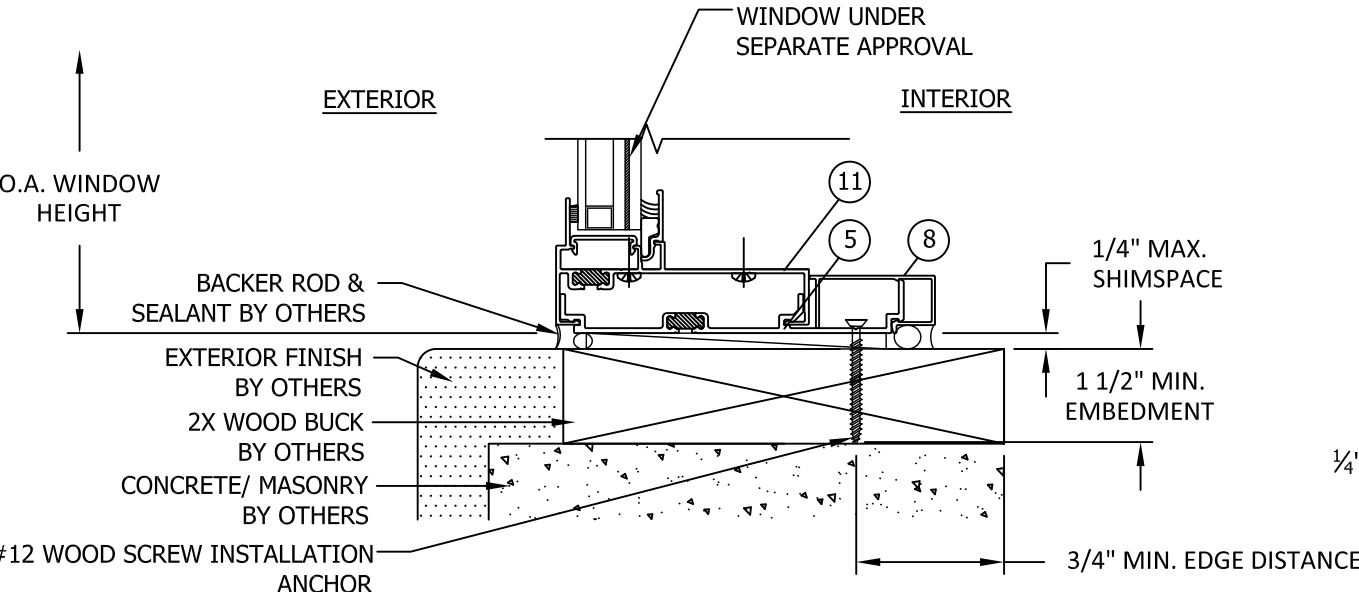
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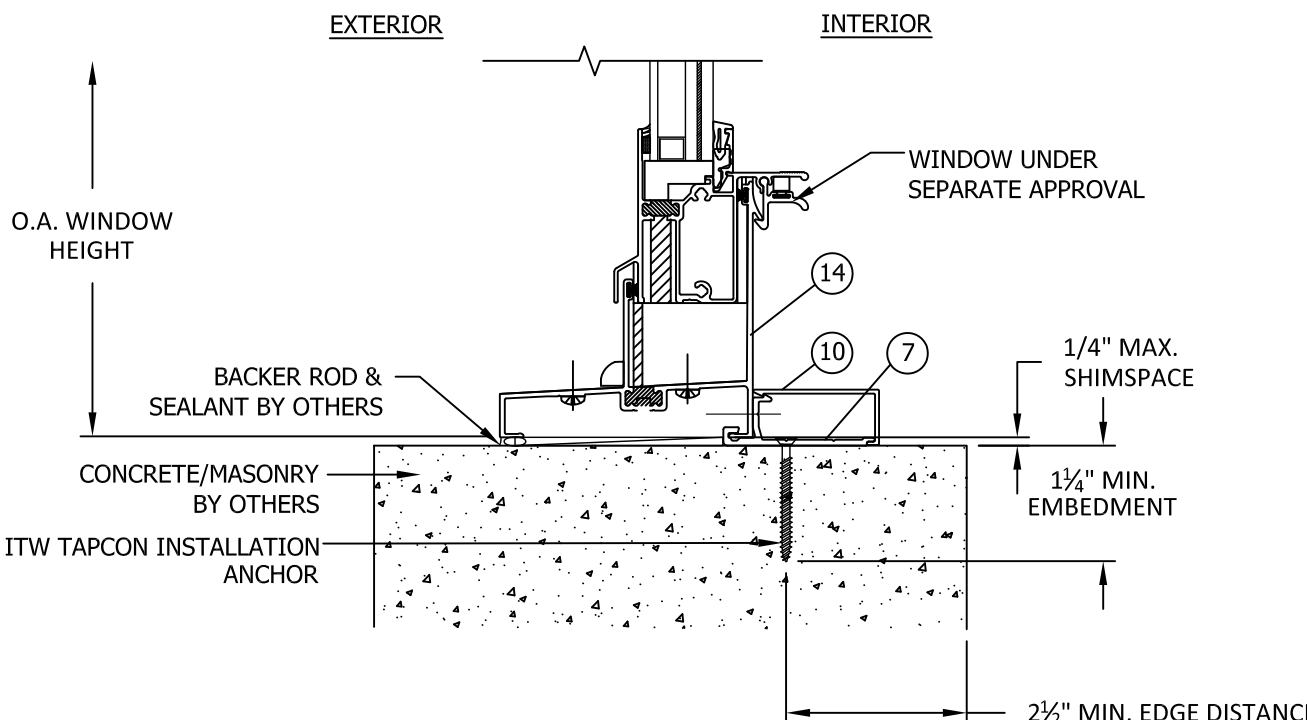
G
3 **VERTICAL SECTION**
HEAD - METAL STUD
UNCLIPPED MULLION (FRAME ANCHOR CLIP)



I
3 **VERTICAL SECTION**
HEAD - 1X WOOD BUCK
UNCLIPPED MULLION (STRAP ANCHOR)



H
3 **VERTICAL SECTION**
SILL - 2X WOOD BUCK
UNCLIPPED MULLION (STRAP ANCHOR)



J
3 **VERTICAL SECTION**
SILL - CONCRETE/MASONRY
UNCLIPPED MULLION (2" EDGE CLIP)



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

TITLE: SERIES 4753 STACKING MULLIONS
UNCLIPPED MULL
INSTALLATION DETAILS

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

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HERMES F. NORERO
LICENSE
No. 73778
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

HERMES F. NORERO, P.E.
FLORIDA P.E. No. 73778
BUILDING DROPS, INC.
398 E. DANIA BEACH BLVD. # 338
DANIA BEACH, FL 33004
FBPE CERT. OF AUTHORIZATION No. 29578

FL #:	FL15729
DATE:	8.22.17
DWG. BY:	EG
CHK. BY:	HFN
SCALE:	NTS
DWG. #:	YKK227
SECTION:	3

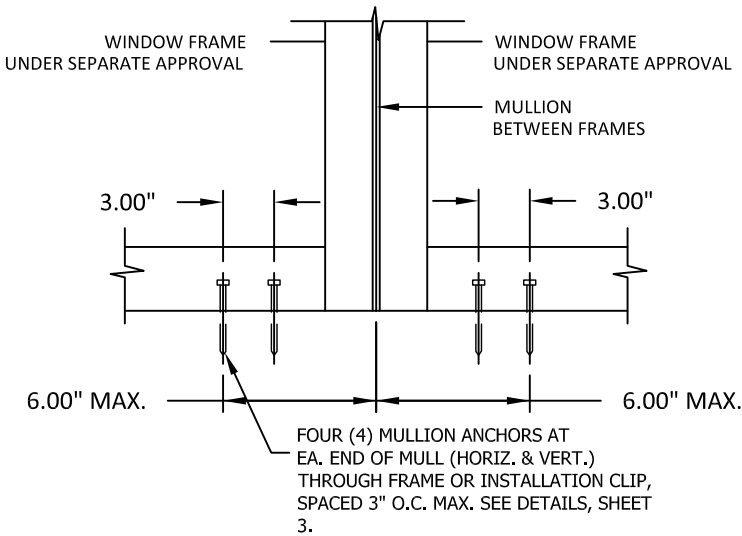
4753 UNCLIPPED MULL DP CHART

Maximum design pressure capacity (NON HVHZ)
YVS-410TUH/YSW400T/YVS-400TU/YVS-410TU/YFW400TU Series
Windows: Stacking Mullions - 4753
Design Pressures are limited by mullion or anchor screws or anchor clip capacity.

Span (in)	Tributary Width (in)								
	28.0	30.0	36.0	40.0	43.8	46.0	48.4	50.0	54.0
56.0	150.0	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	150.0
72.0	150.0	150.0	150.0	140.7	133.4	129.8	126.5	124.5	120.4
80.0	150.0	150.0	131.1	121.9	115.1	111.6	108.4	106.4	102.2
87.5	142.2	134.5	116.9	108.4	101.9	98.6	95.5	93.6	89.6
92.0	134.0	126.7	109.8	101.6	95.4	92.2	89.2	87.3	83.4
96.0	127.4	120.4	104.2	96.3	90.2	87.1	84.2	82.4	78.5
100.0	121.5	114.7	99.1	91.4	85.6	82.6	79.8	78.0	74.2

NOTES FOR UNCLIPPED MULLION INSTALLATIONS:

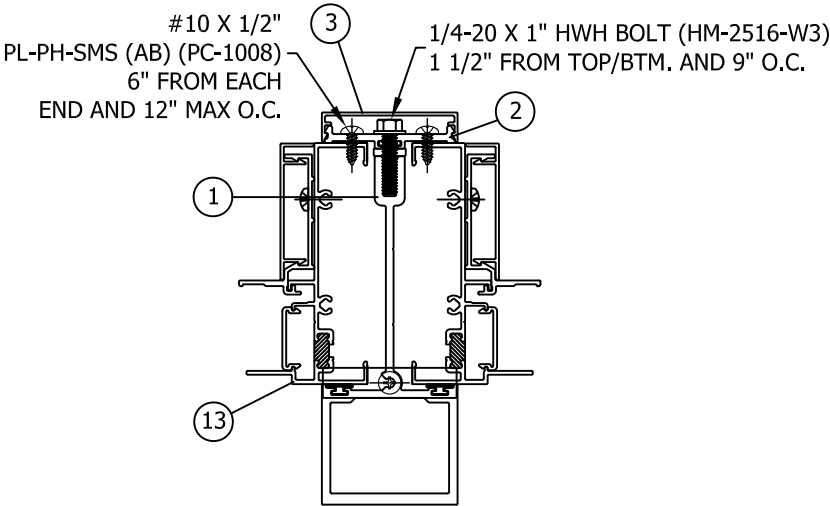
1. THE DESIGN PRESSURES IN THIS CHART ARE FOR THE MULLIONS LISTED ABOVE WHEN INSTALLED WITHOUT A MULLION CLIP.
2. DESIGN PRESSURES HAVE BEEN DETERMINED IN ACCORDANCE WITH FBC SECTION 1709.8.
3. READ WINDOW WIDTH AND MULL SPAN IN INCHES. DESIGN PRESSURE VALUES ON THIS CHART ARE POSITIVE AND NEGATIVE POUNDS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



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
PH: (478)277-1955 FAX: (678)838-6001

TITLE:
SERIES 4753 STACKING MULLIONS
4518 UNCLIPPED MULL DP CHART
& INSTALLATION DETAILS

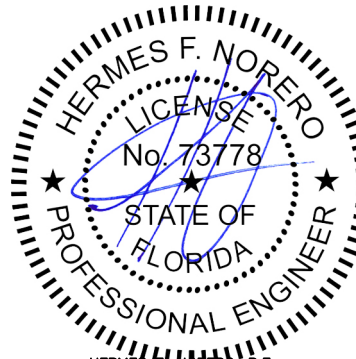
PREPARED BY:
BUILDING DROPS, INC.

398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004
PH: (954)399-8478
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HERMES F. NORERO, P.E.
FLORIDA P.E. No. 73778
BUILDING DROPS, INC
398 E. DANIA BEACH BLVD. # 338
DANIA BEACH, FL 33004
FBPE CERT. OF AUTHORIZATION No. 29578

FL #:
FL15729

DATE: 8.22.17

DWG. BY: EG
CHK. BY: HFN

SCALE: NTS

DWG. #: YKK227

SECTION:

4

OF 6

s:\projects\ykk ap america, inc\cc-17-0710 fbc submittal - fbc 2017 (6th edition)\documents\dwgs\115729-12\ykk227 - 4753 nonvhz.dwg 9/5/2017 2:23 PM

4753 CLIPPED MULL DP CHART

Maximum design pressure capacity (NON HVHZ)
YVS-410TUH/YSW400T/YVS-400TU/YVS-410TU/YFW400TU Series
Windows: Stacking Mullions - 4753
Design Pressures are limited by mullion or anchor screws or anchor clip capacity.

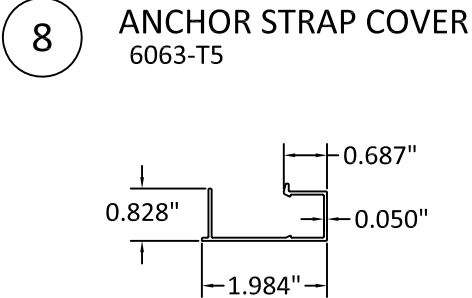
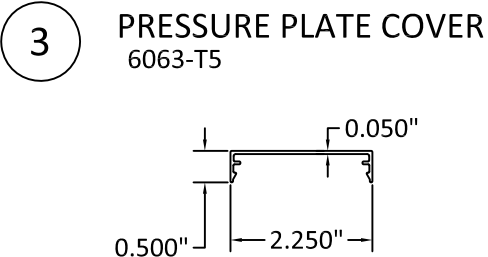
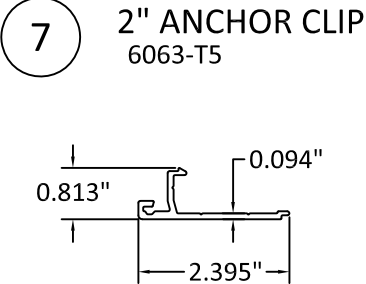
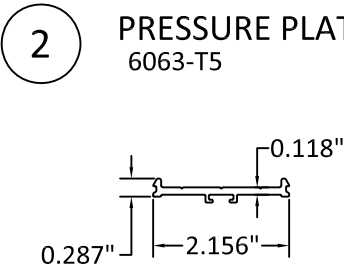
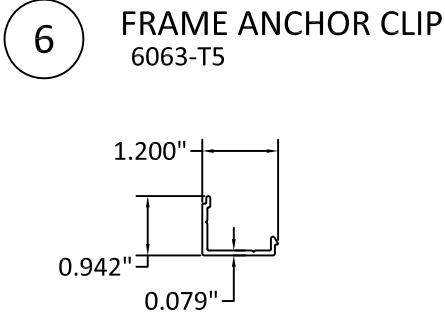
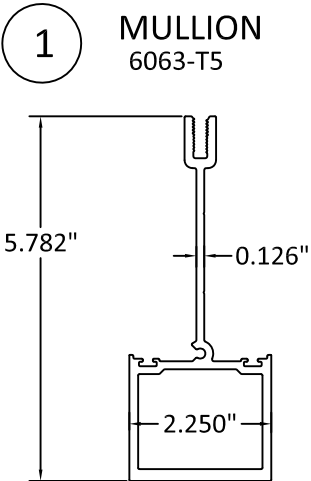
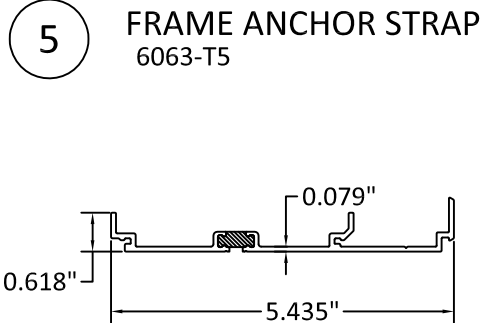
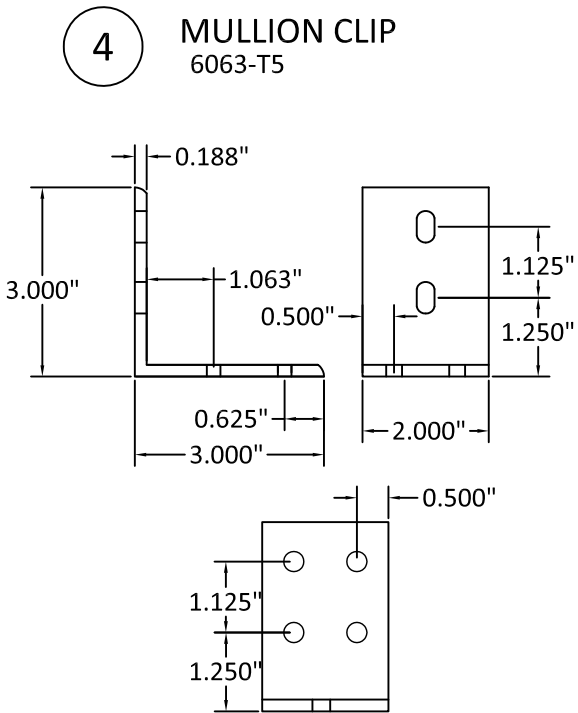
Span (in)	Tributary Width (in)								
	28.0	30.0	36.0	40.0	43.8	46.0	48.4	50.0	54.0
56.0	129.3	123.6	111.2	105.6	101.9	100.2	98.8	98.1	97.1
60.0	118.1	112.6	100.6	95.0	91.2	89.3	87.8	86.9	85.3
72.0	93.6	88.9	78.2	73.1	69.3	67.5	65.7	64.7	62.6
80.0	82.3	78.0	68.1	63.4	59.8	58.0	56.3	55.3	53.1
87.5	73.9	69.9	60.8	56.3	53.0	51.3	49.6	48.7	46.5
92.0	69.6	65.8	57.1	52.8	49.6	47.9	46.4	45.4	43.3
96.0	66.2	62.6	54.2	50.0	46.9	45.3	43.8	42.8	40.8
100.0	63.1	59.6	51.5	47.5	44.5	42.9	41.5	40.6	38.6

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).
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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	PART No.	DESCRIPTION	MATERIAL
1	E9-4753	MULLION	6063-T5
2	AS-4231	PRESSURE PLATE	6063-T5
3	E9-5111	PRESSURE PLATE COVER	6063-T5
4	E1-1587	MULLION CLIP	6063-T5
5	BE9-8567	FRAME ANCHOR STRAP	6063-T5
6	E9-4556	FRAME ANCHOR CLIP	6063-T5
7	E1-1922	2" ANCHOR CLIP	6063-T5
8	E9-8431	ANCHOR STRAP COVER	6063-T5
9	E9-4557	ANCHOR CLIP COVER	6063-T5
10	E9-4035	2" ANCHOR CLIP COVER	6063-T5
11	BE9-4701	FRAME HEAD/SILL	6063-T5
12	BE9-4704	FRAME JAMB	6063-T5
13	BE9-4714	FRAME JAMB	6063-T5
14	BE94717	FRAME SILL	6063-T5
15	BE9-5701	FRAME HEAD/SILL	6063-T5
16	BE9-5702	FRAME JAMB	6063-T5



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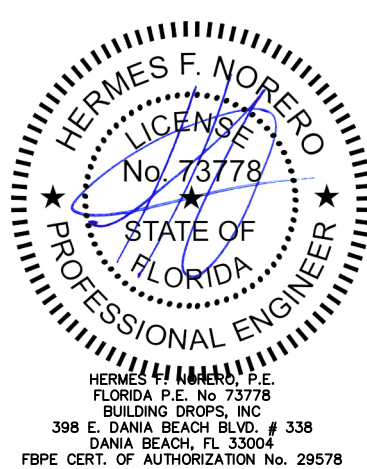
TITLE:
SERIES 4753 STACKING MULLIONS
4518 CLIPPED MULL DP CHART,
COMPONENTS, & B.O.M.

PREPARED BY:
BUILDING DROPS, INC.
398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004
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SCALE:	NTS
DWG. #:	YKK227
SECTION:	5

TITLE:
SERIES 4753 STACKING MULLIONS

COMPONENTS & 4652 MULL
ASSEMBLY ISO VIEW

PREPARED BY:

BUILDING DROPS, INC.

398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004

PH: (954)399-8478

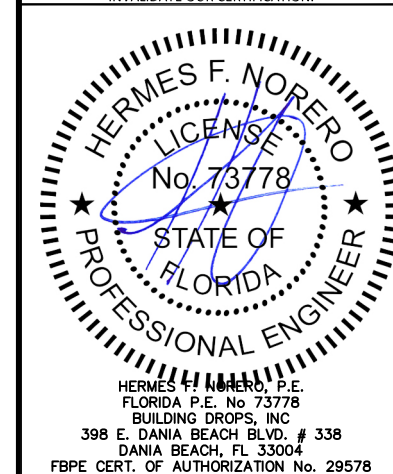
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WEB: www.buildingdrops.com



REMARKS	BY	DATE
6TH EDITION FBC CODE CC	EG	8.22.17

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FL #:

FL15729

DATE: 8.22.17

DWG. BY:
EG

CHK. BY:
HFN

SCALE: NTS

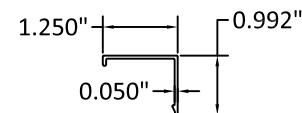
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SECTION:

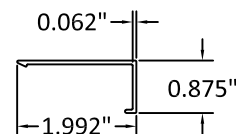
6

OF 6

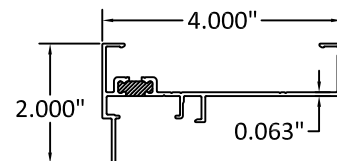
9 ANCHOR CLIP COVER
6063-T5



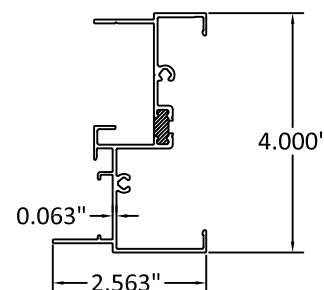
10 2" ANCHOR CLIP COVER
6063-T5



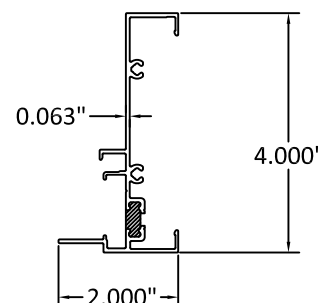
11 FRAME HEAD
6063-T5



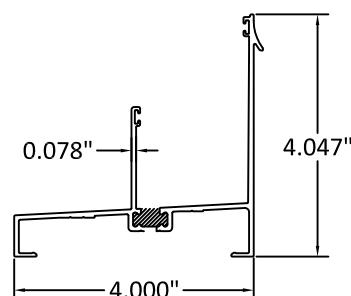
12 FRAME JAMB
6063-T5



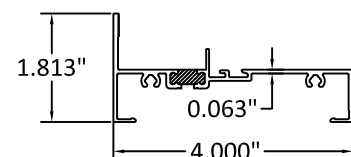
13 FRAME JAMB
6063-T5



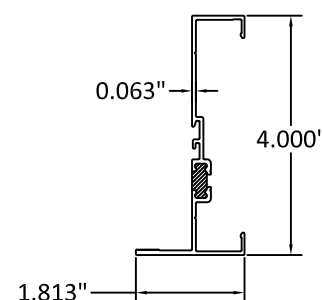
14 FRAME SILL
6063-T5



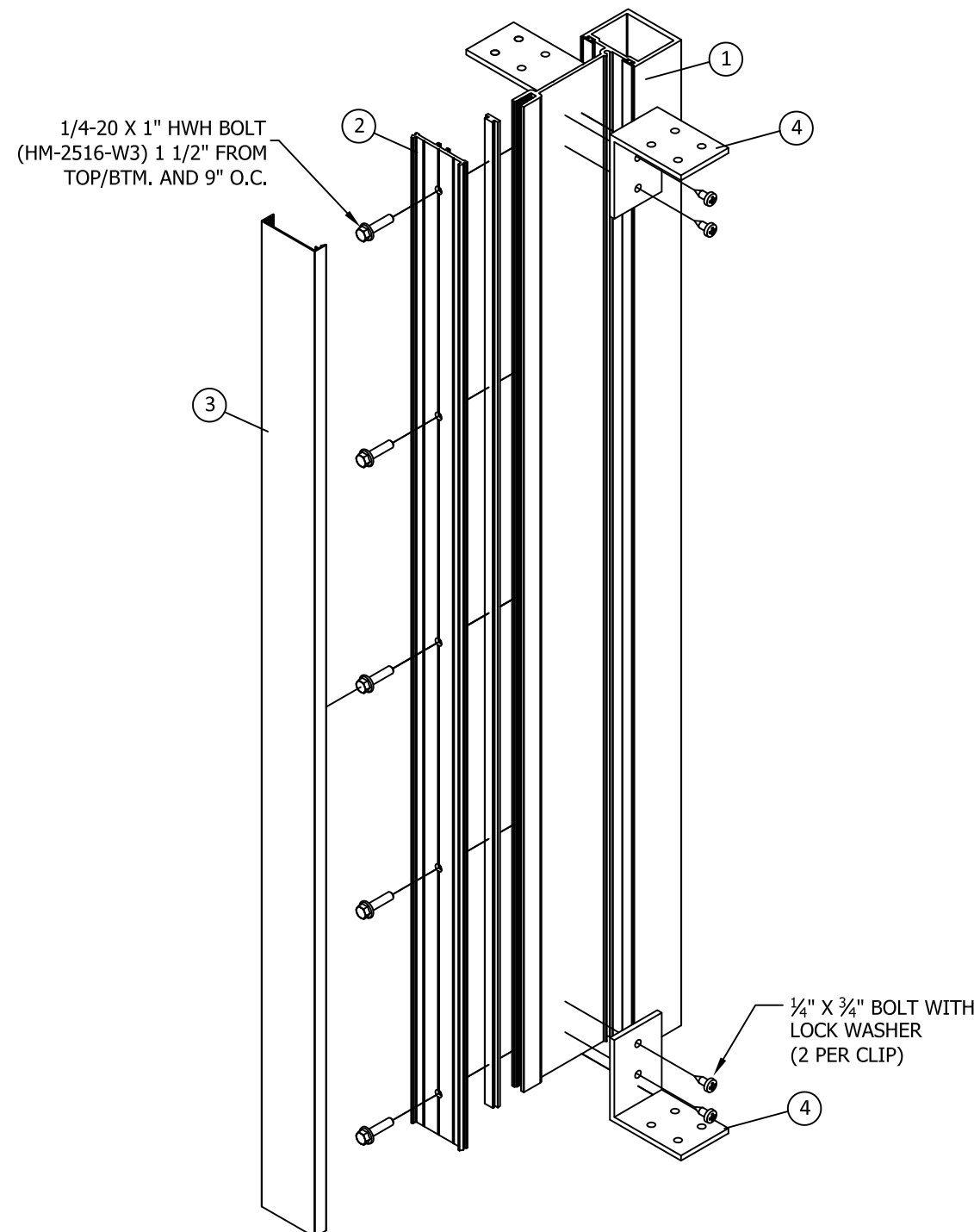
15 FRAME HEAD/SILL
6063-T5



16 FRAME JAMB
6063-T5



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



4753 STACKING MULLION ASSEMBLY