

YKK AP AMERICA

YOW-200/YOW-225H/YOW-225TU

SERIES WINDOWS STACKING MULLIONS - 4427

INSTALLATION NOTES:

1. THE NUMBER OF INSTALLATION ANCHORS DEPICTED IS THE MINIMUM NUMBER OF ANCHORS TO BE USED FOR PRODUCT INSTALLATION.
2. INSTALL INDIVIDUAL ANCHORS WITHIN A TOLERANCE OF +/-½ INCH OF THE DEPICTED LOCATION AS SPECIFIED. TOLERANCES ARE NOT CONSIDERED CUMULATIVE FROM ONE LOCATION TO THE NEXT.
3. FOR MULLION CLIP: USE TWO (2) #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).
4. FOR MULLION CLIP: USE TWO (2) ¼ " ITW TAPCONS PER MULLION END, ONE (1) PER CLIP, OF SUFFICIENT LENGTH TO ACHIEVE MINIMUM EMBEDMENT OF 1¼" INTO CONCRETE OR MASONRY. (SEE INSTALLATION DETAILS ON SHEET 2).
5. FOR MULLION CLIP: USE TWO (2) ¼-20 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).
4. 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).
5. FOR UNCLIPPED MULLIONS: USE FOUR (4) ¼ " ITW TAPCONS, PER MULLION END, OF SUFFICIENT LENGTH TO ACHIEVE MINIMUM EMBEDMENT OF 1¼" INTO CONCRETE OR MASONRY. (SEE INSTALLATION DETAILS ON SHEET 3).
6. FOR UNCLIPPED MULLIONS: USE FOUR (4) ¼-20 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).
7. MINIMUM EDGE DISTANCES ARE BASED ON ¾" FOR #12 WOOD SCREWS, 2-½" FOR ¼" TAPCONS, & ⅝" FOR ¼-20 GR. 5 SELF-TAPPING OR SELF-DRILLING SCREWS.
8. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISHES INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK, VENEER, AND SIDING.
9. INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:

A. WOOD - MINIMUM SPECIFIC GRAVITY OF 0.55.

B. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.

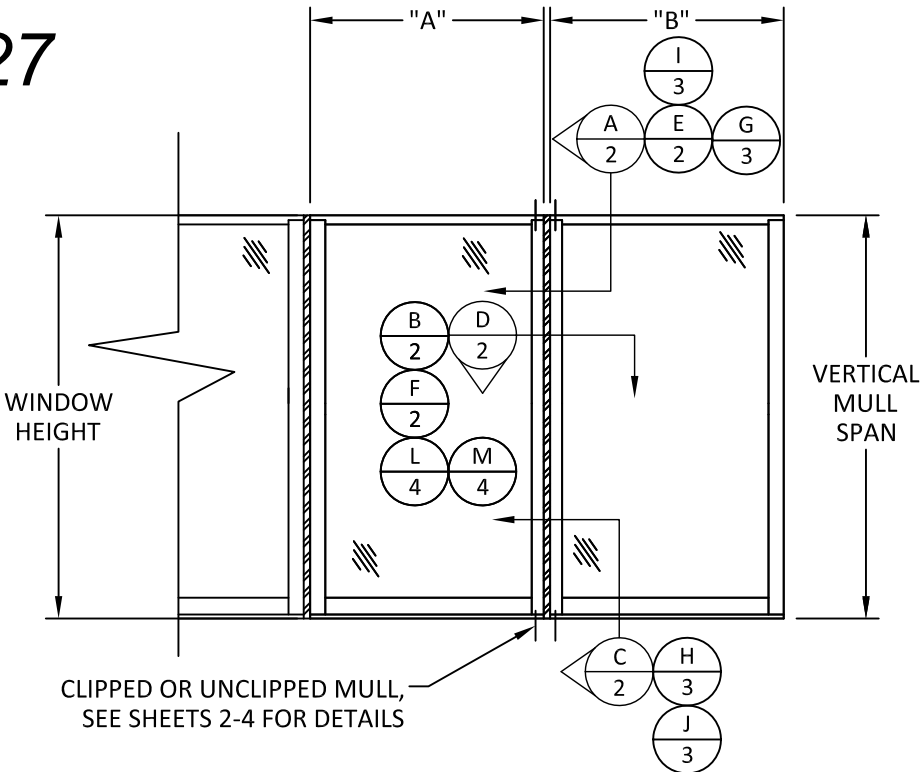
C. CMU - SHALL CONFORM TO MIN. REQUIREMENTS OF ASTM C90

D. STEEL - MINIMUM YIELD STRENGTH OF 33 KSI. MINIMUM 20 GA. (0.0359") WALL THICKNESS.

E. ALUMINUM - ALLOY SHALL BE 6063-T5 OR EQUIVALENT. MINIMUM (0.090") WALL THICKNESS.

GENERAL NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE CURRENT FLORIDA BUILDING CODE, EXCLUDING HVHZ.
2. 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.
3. 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.
4. 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.
5. 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 CASEMENT, PROJECT OUT, AND FIXED WINDOW PRODUCTS.
6. 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.
7. MULLION MATERIAL: 6063-T5 ALUMINUM.
8. CLIP MATERIAL: 6063-T5 ALUMINUM.
9. 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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2	-	CLIPPED MULL INSTALLATION DETAILS
3	-	UNCLIPPED MULL INSTALLATION DETAILS
4	-	4427 UNCLIPPED MULL DP CHARTS & INSTALLATION DETAILS
5	-	4427 CLIPPED MULL DP CHARTS & INSTALLATION DETAILS
6	-	4427 MULL ASSEMBLY ISO VIEW



YKK AP AMERICA

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

TITLE: YOW-200/225H/225TU
WINDOWS STACKING MULLIONS
4427

GENERAL NOTES AND ELEVATION

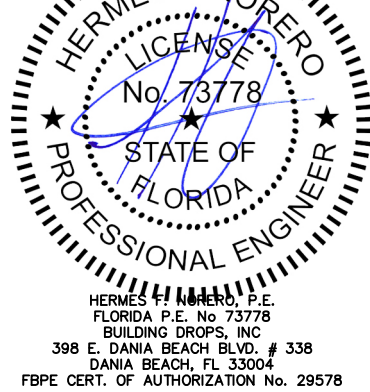
PREPARED BY:

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 CC	EG	8.22.17

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Digitally signed by Hermes F. Norero, P.E.
Reason: I am approving this document
Date: 2017.10.17 17:49:00 -0400



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FL15729

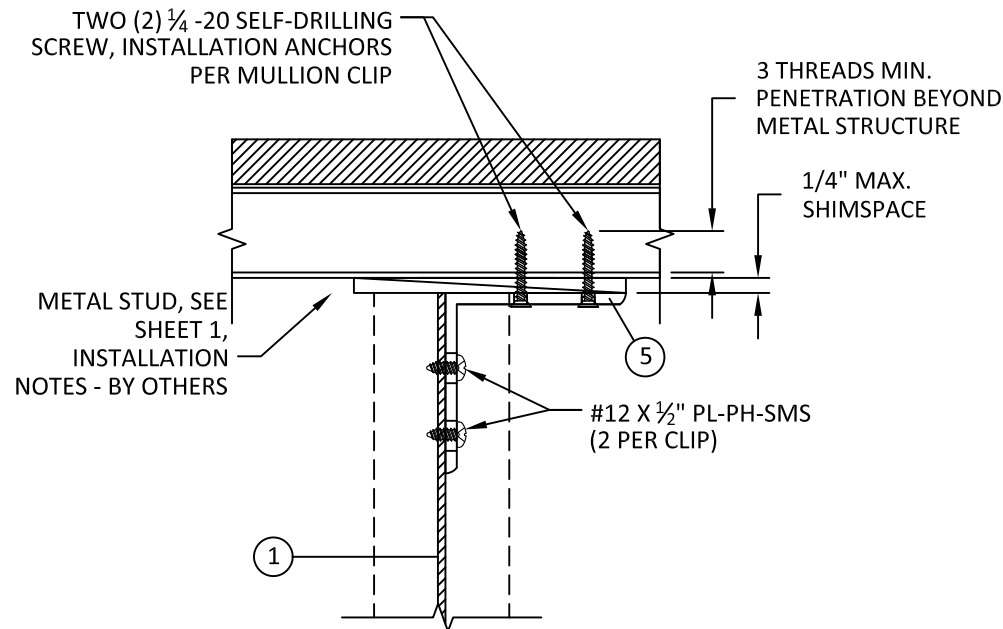
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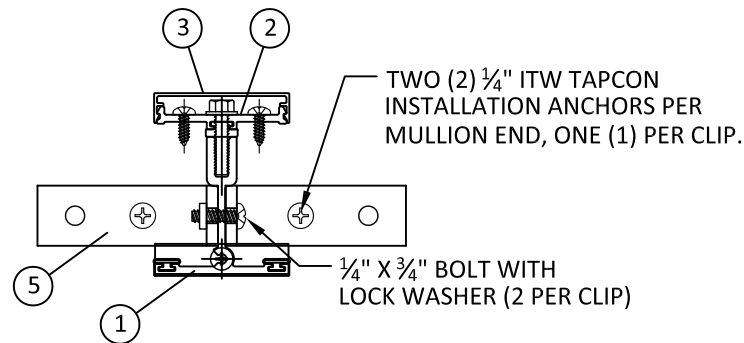
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DWG. #: **YKK223**

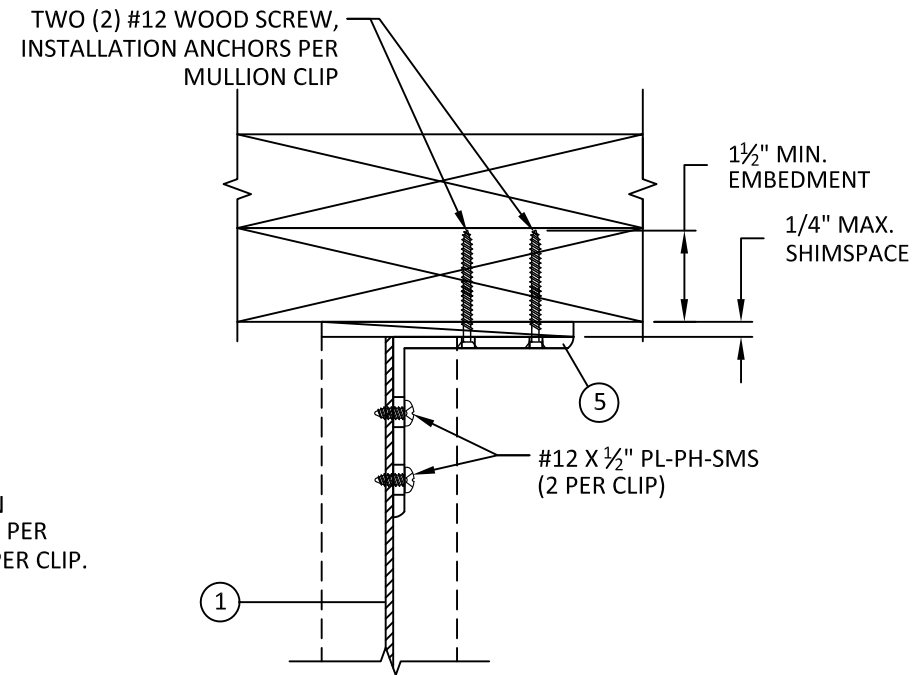
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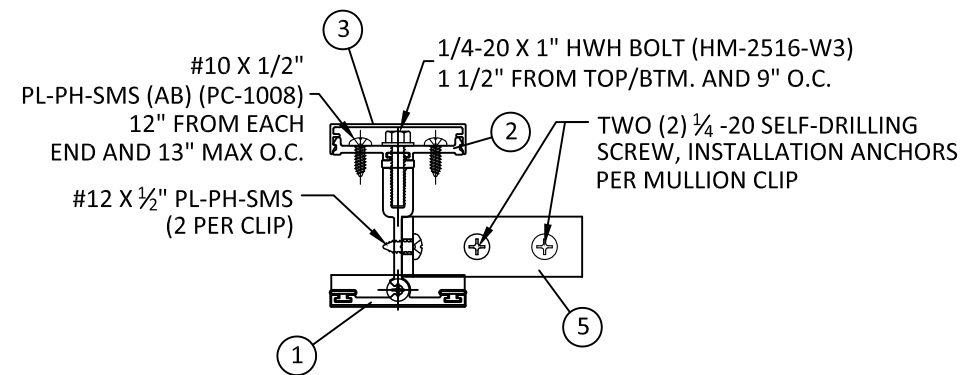
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2 FRONT VIEW
HEAD - METAL STUD
MULLION CLIP



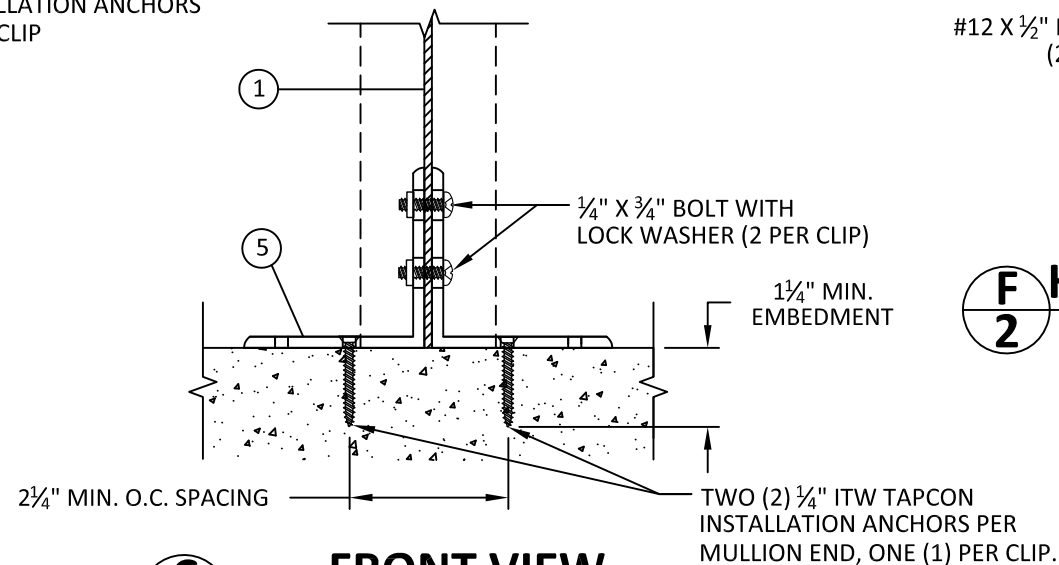
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2 HORIZONTAL SECTION
CONCRETE/MASONRY
MULLION CLIP



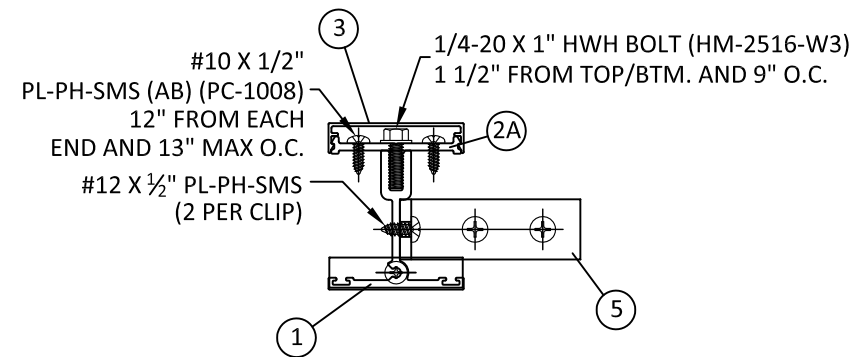
E
2 FRONT VIEW
HEAD - 2X WOOD
MULLION CLIP



B
2 HORIZONTAL SECTION
METAL STUD
MULLION CLIP



C
2 FRONT VIEW
SILL - CONCRETE/MASONRY
MULLION CLIP



F
2 HORIZONTAL SECTION
2X WOOD
MULLION CLIP

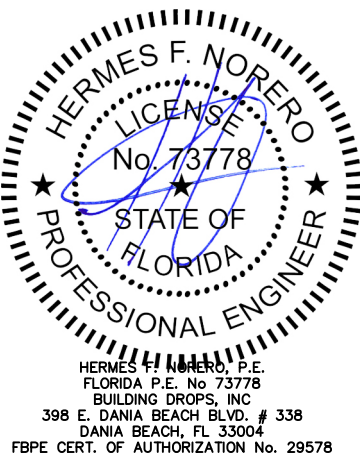
TITLE: YOW-200/225H/225TU
WINDOWS STACKING MULLIONS
4427

CLIPPED MULL
INSTALLATION DETAILS

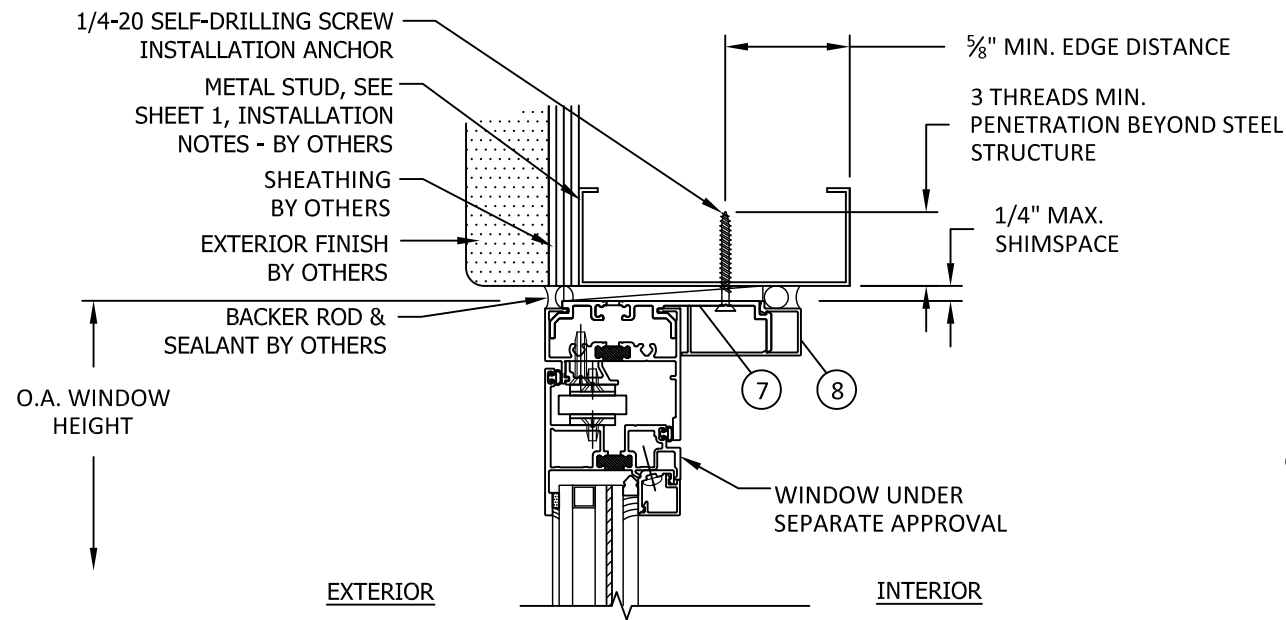
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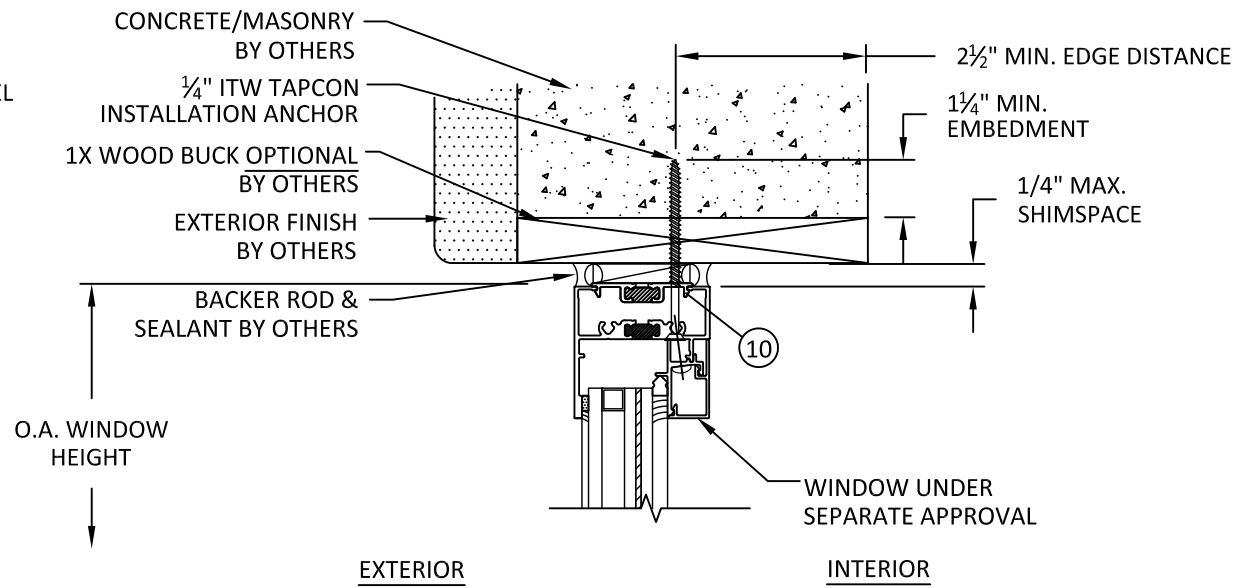
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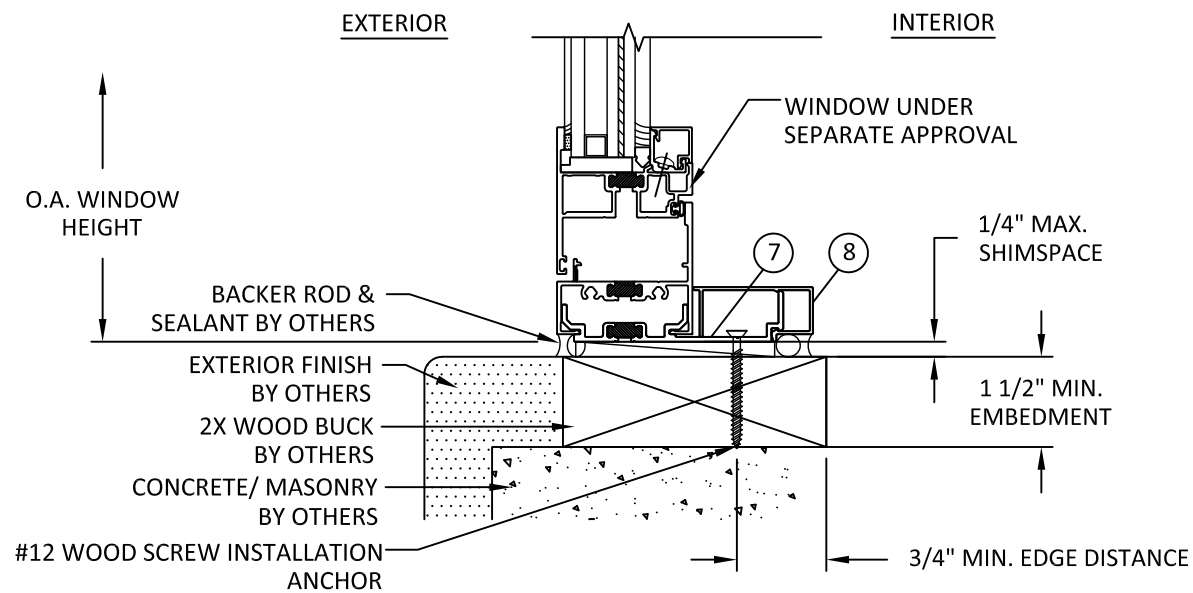
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CHK. BY:	HFN
SCALE:	NTS
DWG. #:	YKK223
SECTION:	2 OF 6



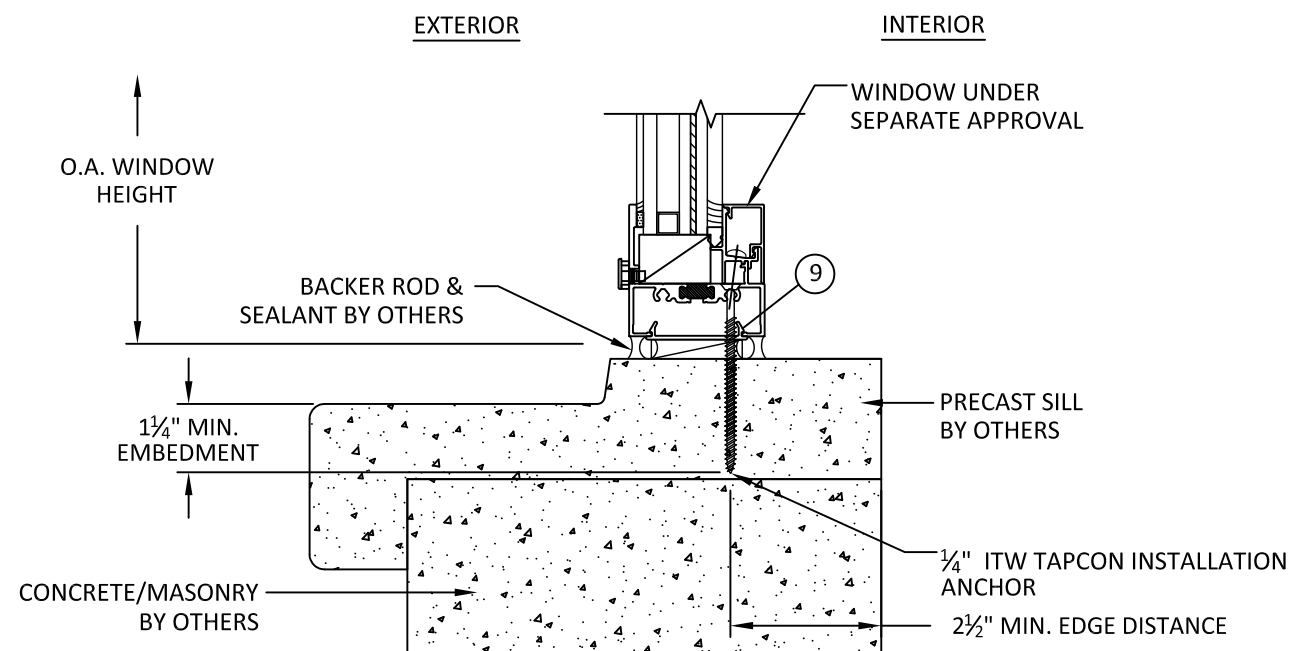
G
3 **VERTICAL SECTION**
HEAD - METAL STUD
UNCLIPPED MULLION (ALT. ANCHOR STRAP)



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



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



J
3 **VERTICAL SECTION**
SILL - PRECAST SILL
UNCLIPPED MULLION

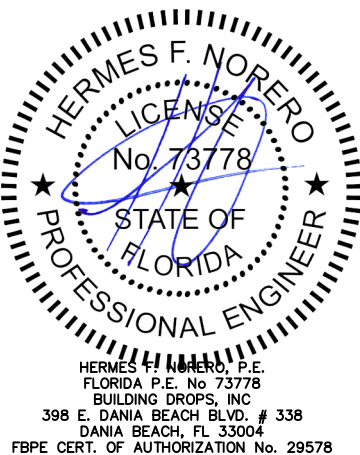
TITLE: YOW-200/225H/225TU
WINDOWS STACKING MULLIONS
4427

UNCLIPPED MULL
INSTALLATION DETAILS

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EG		HFN	
SCALE:		NTS	
DWG. #:		YKK223	
SECTION:			

4427 UNCLIPPED MULL DP CHARTS

Maximum design pressure capacity (NONHVHZ)
YOW-225H/YOW-225TU Series Windows: Stacking Mullions - 4427
Design pressures are limited either by mullion or anchor screws

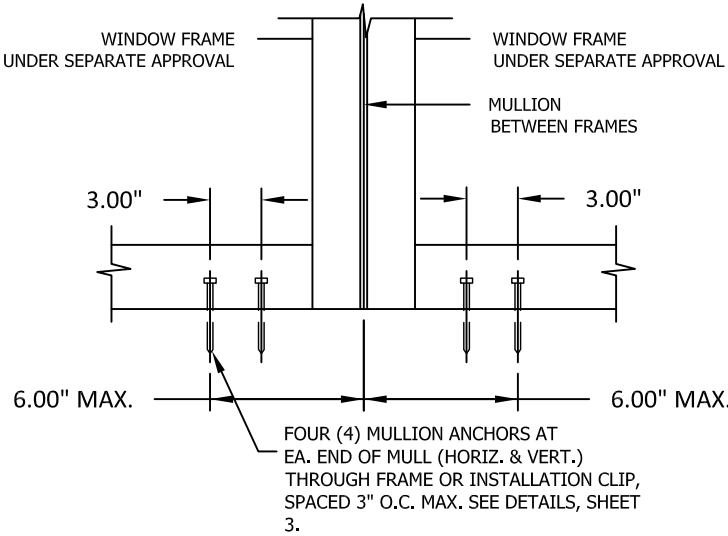
Span (in)	Tributary Width (in)							
	12.0	18.0	24.0	36.0	42.0	48.0	56.0	60.0
35.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
48.0	150.0	150.0	150.0	128.1	119.8	117.1	117.1	117.1
54.0	150.0	150.0	132.0	96.5	88.3	83.7	82.2	82.2
62.0	150.0	128.3	98.5	70.3	63.1	58.5	55.1	54.4
66.0	150.0	112.9	86.4	61.1	54.5	50.1	46.6	45.6
72.0	140.0	94.5	72.0	50.5	44.7	40.7	37.2	36.1
80.0	113.2	76.2	57.9	40.2	35.4	31.9	28.8	27.7
84.0	102.6	69.0	52.4	36.2	31.8	28.6	25.6	24.6
90.0	89.3	60.0	45.5	31.3	27.4	24.5	21.8	20.8
96.0	78.5	52.6	39.9	27.3	23.8	21.3	18.9	17.9
100.0	72.3	48.5	36.7	25.1	21.8	19.5	17.2	16.3

Maximum design pressure capacity (NONHVHZ)
YOW-200 Series Windows: Stacking Mullions - 4427
Design pressures are limited either by mullion or anchor screws

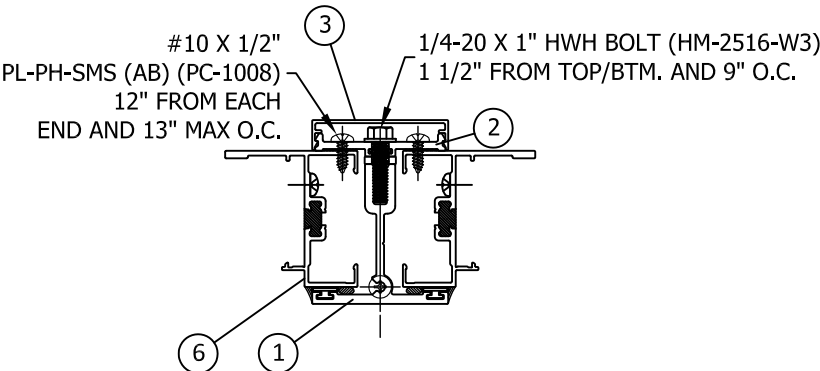
Span (in)	Tributary Width (in)							
	12.0	18.0	24.0	36.0	42.0	48.0	56.0	60.0
35.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
48.0	150.0	150.0	136.3	102.5	95.8	93.7	93.7	93.7
54.0	150.0	136.7	105.7	77.2	70.6	67.0	65.8	65.8
62.0	150.0	102.7	78.8	56.2	50.5	46.8	44.1	43.5
66.0	133.6	90.3	69.1	48.9	43.6	40.1	37.3	36.5
72.0	112.1	75.6	57.7	40.4	35.8	32.6	29.8	28.9
80.0	90.6	61.0	46.4	32.2	28.3	25.6	23.0	22.1
84.0	82.1	55.2	41.9	29.0	25.4	22.9	20.5	19.7
90.0	71.5	48.0	36.4	25.0	21.9	19.6	17.5	16.7
96.0	62.8	42.1	31.9	21.8	19.1	17.0	15.1	14.4
100.0	57.8	38.8	29.3	20.1	17.5	15.6	13.8	13.1

NOTES FOR UNCLIPPED MULLION INSTALLATIONS:

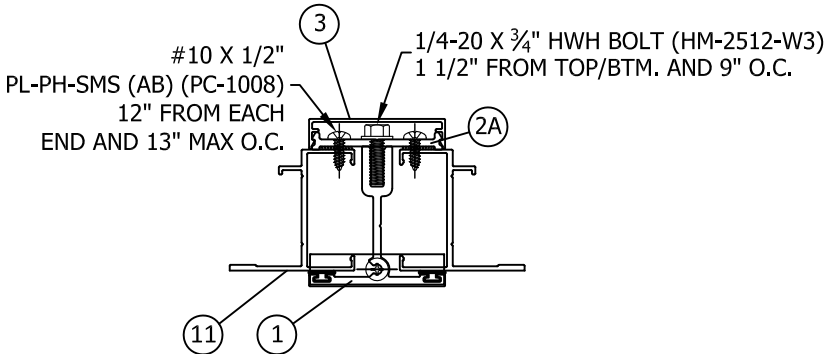
- THE DESIGN PRESSURES IN THIS CHART ARE FOR THE MULLIONS LISTED ABOVE WHEN INSTALLED WITHOUT A MULLION CLIP.
- DESIGN PRESSURES HAVE BEEN DETERMINED IN ACCORDANCE WITH FBC SECTION 1709.8.
- READ WINDOW WIDTH AND MULL SPAN IN INCHES. DESIGN PRESSURE VALUES ON THIS CHART ARE POSITIVE AND NEGATIVE POUNDS PER SQUARE FOOT (PSF).
- TRIBUTARY WIDTH IS DETERMINED BY THE FOLLOWING (REFER TO ELEVATION, SHEET 1):
4.1. $\text{TRIBUTARY WIDTH} = (A+B)/2$
- 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
YOW-225H/TU MULL ASSEMBLY TYP.
UNCLIPPED MULLION



M
4
HORIZONTAL VIEW
YOW-200 MULL ASSEMBLY TYP.
UNCLIPPED MULLION



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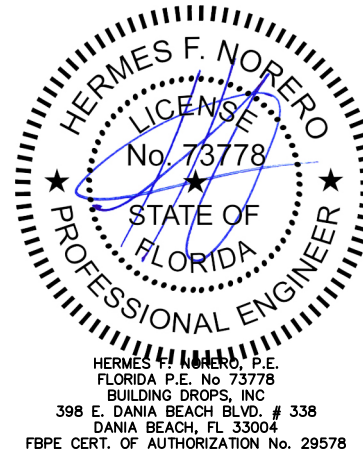
TITLE: YOW-200/225H/225TU
WINDOWS STACKING MULLIONS
4427

4427 UNCLIPPED MULL DP CHARTS
& INSTALLATION DETAIL

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DWG. BY: EG		CHK. BY: HFN	
SCALE:		NTS	
DWG. #:		YKK223	
SECTION:		4 OF 6	

4427 CLIPPED MULL DP CHART

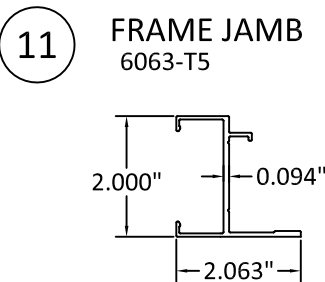
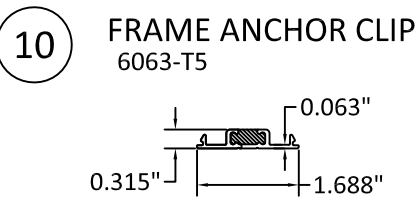
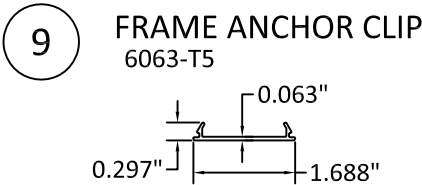
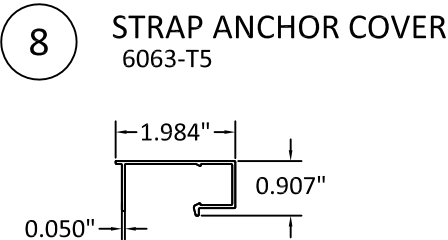
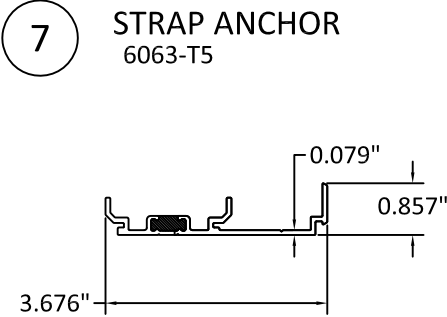
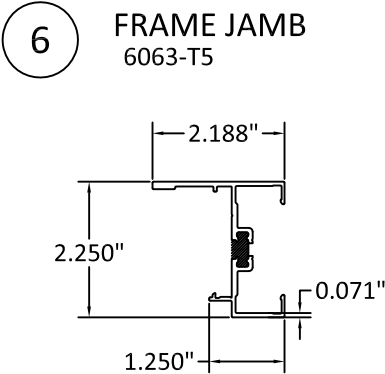
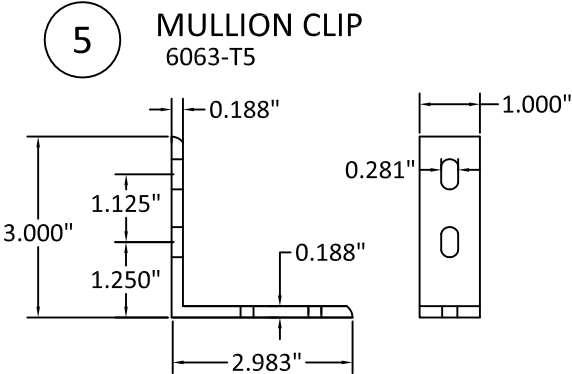
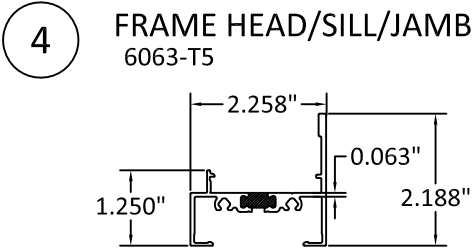
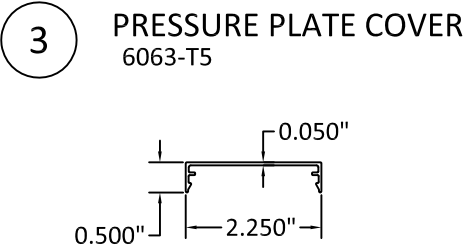
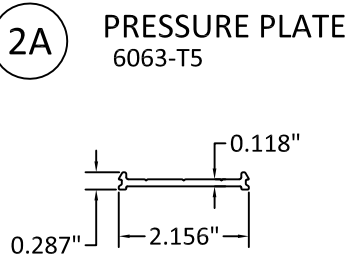
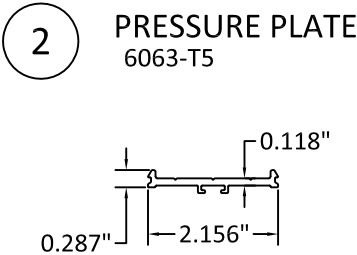
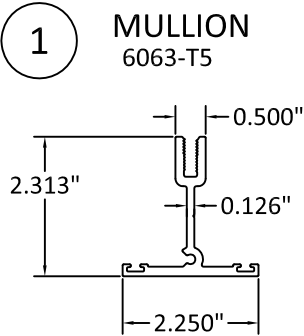
Maximum design pressure capacity (NONHVHZ)
YOW-200/YOW-225H/YOW-225TU Series Windows: Stacking Mullions - 4427
Design pressures are limited either by mullion or anchor screws or anchor clip capacity

Span (in)	Tributary Width (in)							
	12.0	18.0	24.0	36.0	42.0	48.0	56.0	60.0
35.0	150.0	148.9	126.3	113.8	113.8	113.8	113.8	113.8
48.0	138.3	99.3	80.7	64.5	61.5	60.5	60.5	60.5
54.0	121.0	86.1	69.2	53.8	50.3	48.4	47.8	47.8
62.0	103.7	73.1	58.1	44.0	40.5	38.2	36.6	36.3
66.0	96.8	67.9	53.8	40.3	36.9	34.6	32.8	32.3
72.0	88.0	61.5	48.4	35.9	32.5	30.3	28.3	27.7
80.0	78.5	54.5	42.7	31.2	28.1	25.9	23.9	23.2
84.0	74.5	51.6	40.3	29.3	26.3	24.2	22.2	21.5
90.0	69.2	47.8	37.2	26.0	22.8	20.5	18.4	17.6
96.0	60.5	40.6	30.8	21.2	18.6	16.7	14.8	14.1
100.0	53.5	35.9	27.2	18.7	16.3	14.6	13.0	12.4

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. $TRIBUTARY\ WIDTH = (A+B)/2$
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	E9-4427	MULLION	6063-T5
2	E9-4231	PRESSURE PLATE	6063-T5
2A	E9-4428	PRESSURE PLATE	6063-T5
3	E9-5111	PRESSURE PLATE COVER	6063-T5
4	BE9-4501	FRAME HEAD / SILL/ JAMB	6063-T5
5	E1-1537	MULLION CLIP	6063-T5
6	BE9-4502	FRAME JAMB	6063-T5
7	BE9-4529	STRAP ANCHOR	6063-T5
8	E9-8431	STRAP ANCHOR COVER	6063-T5
9	E3-0038	FRAME ANCHOR CLIP	6063-T5
10	BE9-4566	FRAME ANCHOR CLIP	6063-T5
11	E9-4402	FRAME JAMB	6063-T5

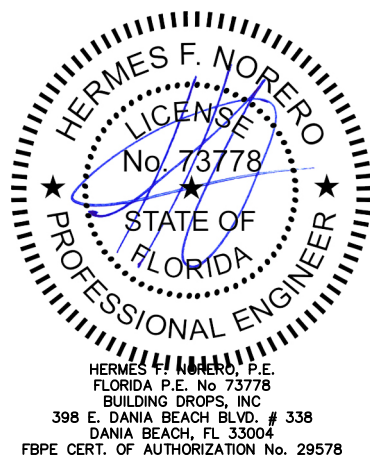


YKK AP AMERICA
1229 HWY 441 BYPASS
DUBLIN, GEORGIA 31021
PH: (478)277-1955 FAX: (678)838-6001

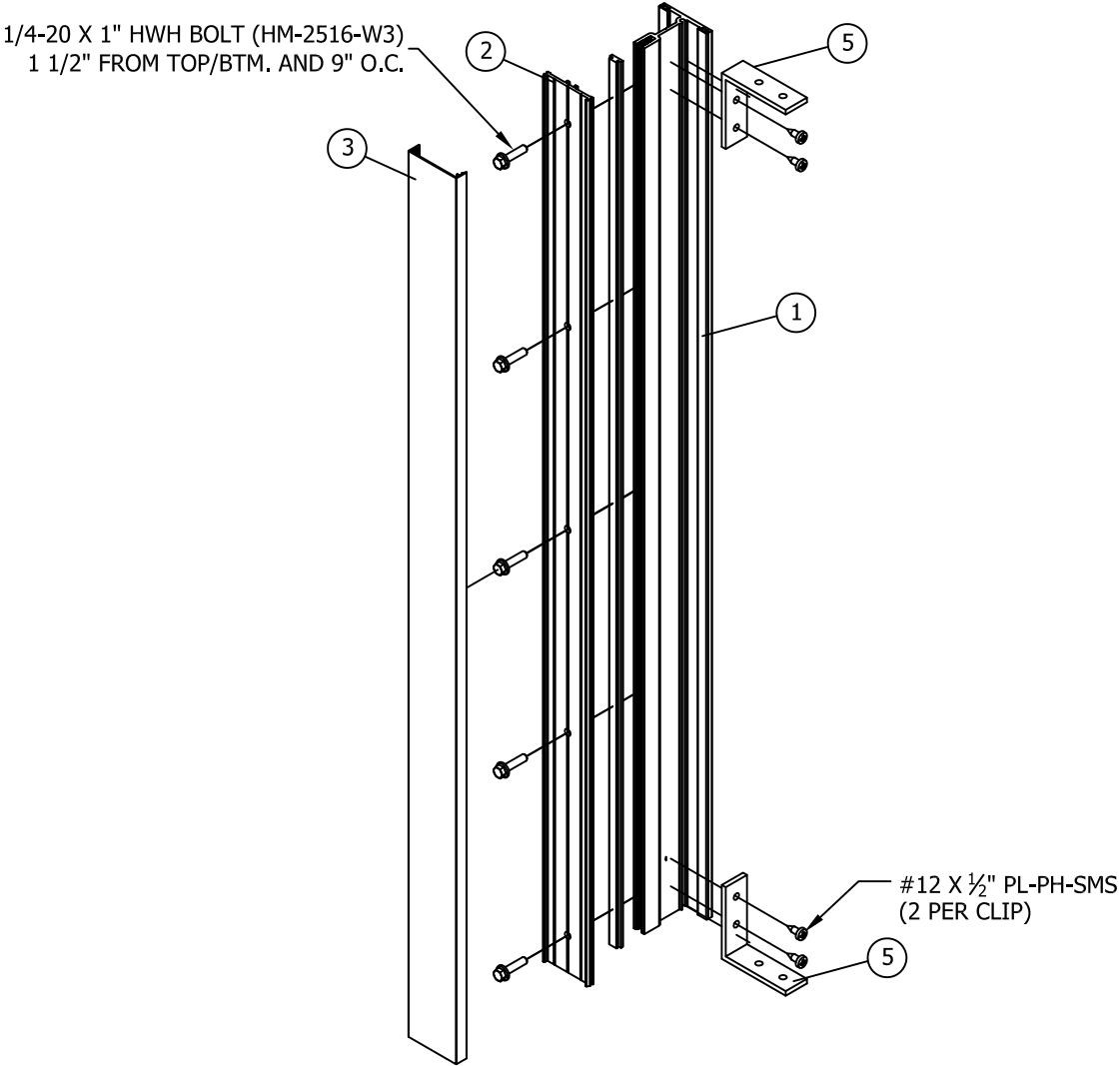
TITLE: YOW-200/225H/225TU
WINDOWS STACKING MULLIONS
4427
4427 CLIPPED MULL DP CHART,
COMPONENTS, & B.O.M.
PREPARED BY: BUILDING DROPS, INC.
398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004
PH: (954)399-8478
FAX: (954)744-4738
WEB: www.buildingdrops.com

REMARKS	BY	DATE
6TH EDITION FBC CC	EG	8.22.17

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CHK. BY:	HFN
SCALE:	NTS
DWG. #:	YKK223
SECTION:	5 OF 6



4427 STACKING MULL ASSEMBLY
TYPICAL

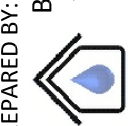
NOTE: ITEM# 5 IS NOT REQUIRED FOR
"UNCLIPPED" INSTALLATIONS.



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TITLE: YOW-200/225H/225TU
WINDOWS STACKING MULLIONS
4427

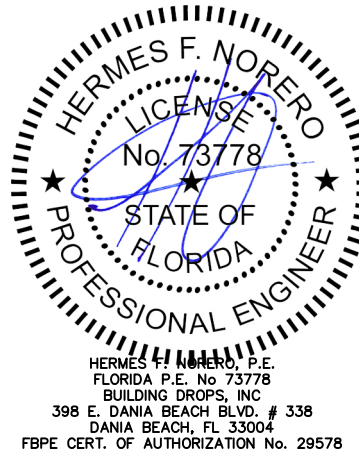
4427 MULL ASSEMBLY ISO VIEW



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SCALE: **NTS**

DWG. #: **YKK223**

SECTION:
6 OF 6