

WINDSOR WINDOWS & DOORS

STEEL MULLION STIFFENERS

(WZ3)(IMPACT)

GENERAL NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE CURRENT FLORIDA BUILDING CODE (FBC) EXCLUDING HVHZ. ALL PRODUCTS UNDER THE SCOPE OF THIS DOCUMENT HAVE BEEN EVALUATED ACCORDING TO SECTION 1709.8 OF THE FBC.
2. ADEQUACY OF THE EXISTING STRUCTURAL CONCRETE, 2X AND METAL STUD FRAMING AS A MAIN WIND FORCE RESISTING SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
3. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO THE STRUCTURE. BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
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. APPROVED IMPACT PROTECTIVE SYSTEM **IS NOT REQUIRED** TO PROTECT THIS PRODUCT IN AREAS REQUIRING IMPACT RESISTANCE IN WIND ZONES 3 OR LESS.
6. APPROVED IMPACT SYSTEM **IS REQUIRED** IN WIND ZONE 4.
7. WHERE IMPACT RATED SYSTEM ARE REQUIRED MULLION MUST BE ASSEMBLE WITH IMPACT RATED WINDOWS AND/OR DOORS.
8. MULLION MATERIAL:

8.1. CARBON STEEL (A36, Min. Fy = 36 KSI, Fu = 58 KSI)

8.2. STAINLESS STEEL (AISI304/316, Min. Fy = 30 KSI, Fu = 65 KSI)
9. IN ACCORDANCE WITH THE CURRENT FBC, DISSIMILAR METALS INCLUDING FASTENERS SHALL BE PROTECTED FROM GALVANIC CORROSION.
- 10.CUSTOM SIZES AVAILABLE UPON REQUEST. CUSTOM DESIGN PRESSURE WILL BE ASSIGNED EQUAL TO NEXT LARGER STANDARD SIZE.
- 11.MULL ASSEMBLIES ARE QUALIFIED FOR TWO OR MORE UNITS PER OPENING IN THE FOLLOWING CONFIGURATION:

"ONE WAY" - RIBBON OR STACKED MULLIONS

"TWO WAY" - 'X' OR 'T' MULLIONS.

INSTALLATION NOTES:

1. *ONE (1)* INSTALLATION ANCHOR IS REQUIRED AT EACH ANCHOR LOCATION SHOWN, UNLESS OTHERWISE STATED.
2. THE NUMBER OF INSTALLATION ANCHORS DEPICTED IS THE MINIMUM NUMBER OF ANCHORS TO BE USED FOR PRODUCT INSTALLATION.
3. INSTALL INDIVIDUAL INSTALLATION ANCHORS WITHIN A TOLERANCE OF ±1/2 INCH OF THE DEPICTED LOCATION IN THE ANCHOR LAYOUT DETAIL (I.E., WITHOUT CONSIDERATION OF TOLERANCES). TOLERANCES ARE NOT CUMULATIVE FROM ONE INSTALLATION ANCHOR TO THE NEXT.
4. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDE 1X BUCKING, SHEATHING, & WALL FINISHES, INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK VENEER, AND SIDING.
5. INSTALLATION ANCHORS AND ASSOCIATED HARDWARE MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING.
6. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BY THE ANCHOR MANUFACTURER.
7. 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. STEEL - MINIMUM WALL THICKNESS OF 54 MILS (1/8" MIN. Fy=36 KSI) WHEN THROUGH GUSSET INSTALLATION.

D. ALUMINUM - 1/4" MINIMUM THICKNESS (6063-T5)
8. REFER TO MANUFACTURER INSTRUCTION FOR WEATHER PROOFING INSTALLATION.

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3	HORIZONTAL MULL ASSEMBLY SECTIONS & INTERSECTION DETAILS
4	ANGLE TO MULLIONS CONNECTION DETAILS
5	STANDARD INSTALLATION - CONCRETE & GROUT FILLED CMU SUBSTRATES
6	STANDARD INSTALLATION - WOOD & METAL STUD SUBSTRATES
7	MULL CONNECTIONS DETAILS
8	JAMBS TO MULL CONNECTION
9	BILL OF MATERIALS
10	1/4" X 4" ONE WAY DESIGN PRESSURE TABLE
11	1/4" X 4" TWO WAY DESIGN PRESSURE TABLE
12	1/2" X 4" ONE WAY DESIGN PRESSURE TABLE
13	1/2" X 4" TWO WAY DESIGN PRESSURE TABLE
14	3/4" X 4" ONE WAY DESIGN PRESSURE TABLE
15	3/4" X 4" TWO WAY DESIGN PRESSURE TABLE
16	1/4" X 5" ONE WAY DESIGN PRESSURE TABLE
17	1/4" X 5" TWO WAY DESIGN PRESSURE TABLE
18	1/2" X 5" ONE WAY DESIGN PRESSURE TABLE
19	1/2" X 5" TWO WAY DESIGN PRESSURE TABLE

MULLING INSTRUCTIONS:

- STEP 1: ESTABLISH MULL STIFFENER THICKNESS AND DEPTH.
- STEP 2: VERIFY MULL ASSEMBLY CONSTRUCTION FROM SHEET 2
- STEP 3: DETERMINE ALLOWABLE LOAD OF MULL ASSEMBLY FROM APPLICABLE LOAD TABLE, REFER TO SHEETS 10-19
- STEP 4: INSTALL MULLION BASED ON APPLICABLE SPECIFICATIONS & DETAILS SHOWN ON SHEETS 4-6.



WINDSOR WINDOWS & DOORS

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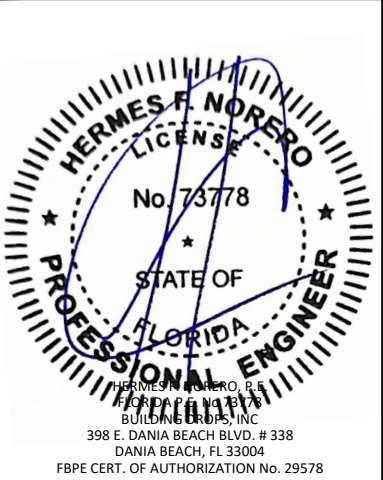
TITLE: STEEL MULLION STIFFENERS (WZ3) (IMPACT)
GENERAL & INSTALLATION NOTES

PREPARED BY: BUILDING DROPS, INC.
398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004
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REMARKS	BY	DATE
8TH FBC CODE CHANGE	MG	02/23

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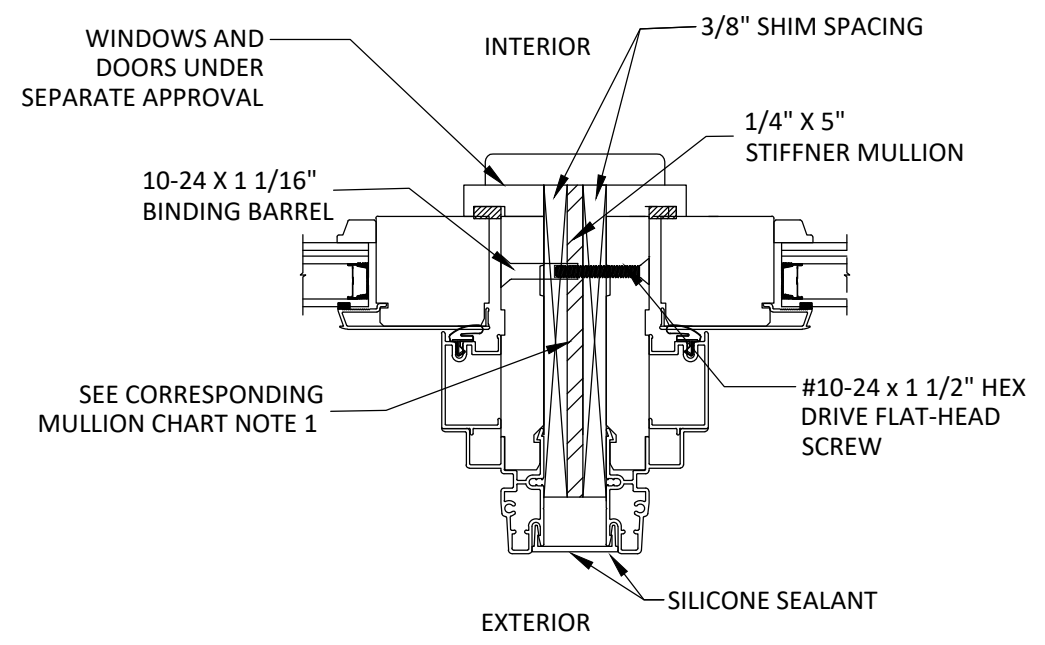
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DWG. BY: YC
CHK. BY: HFN

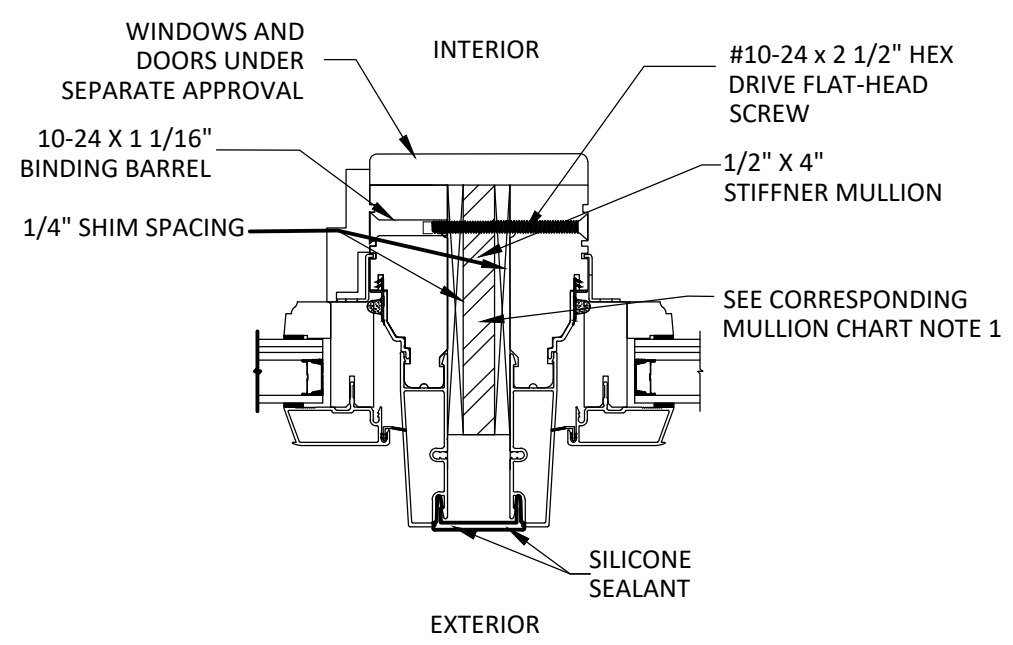
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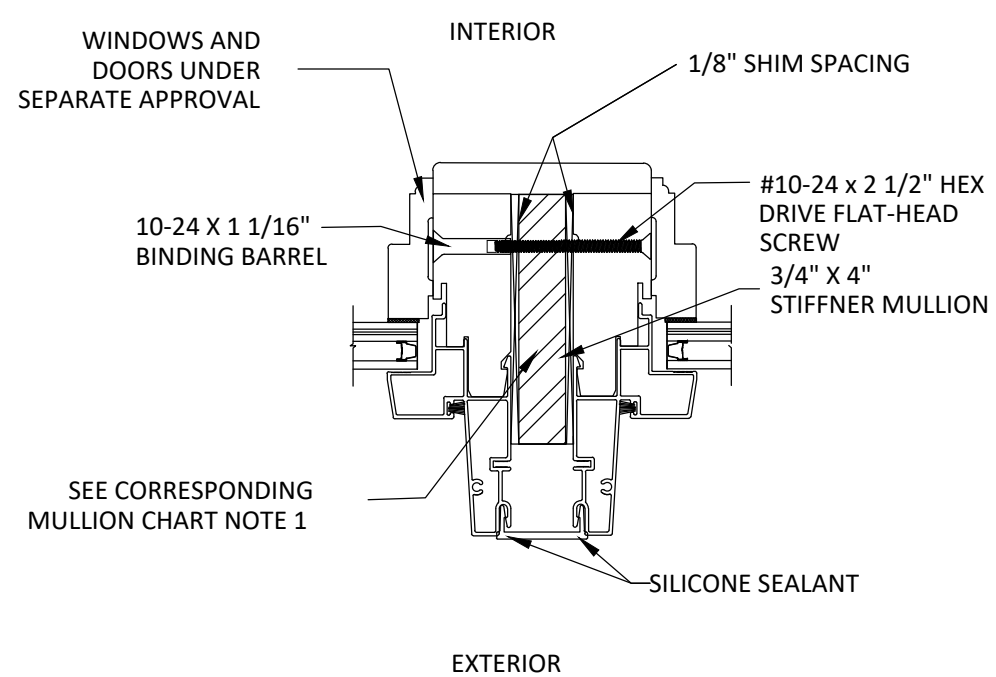
SHEET: 1 OF 19



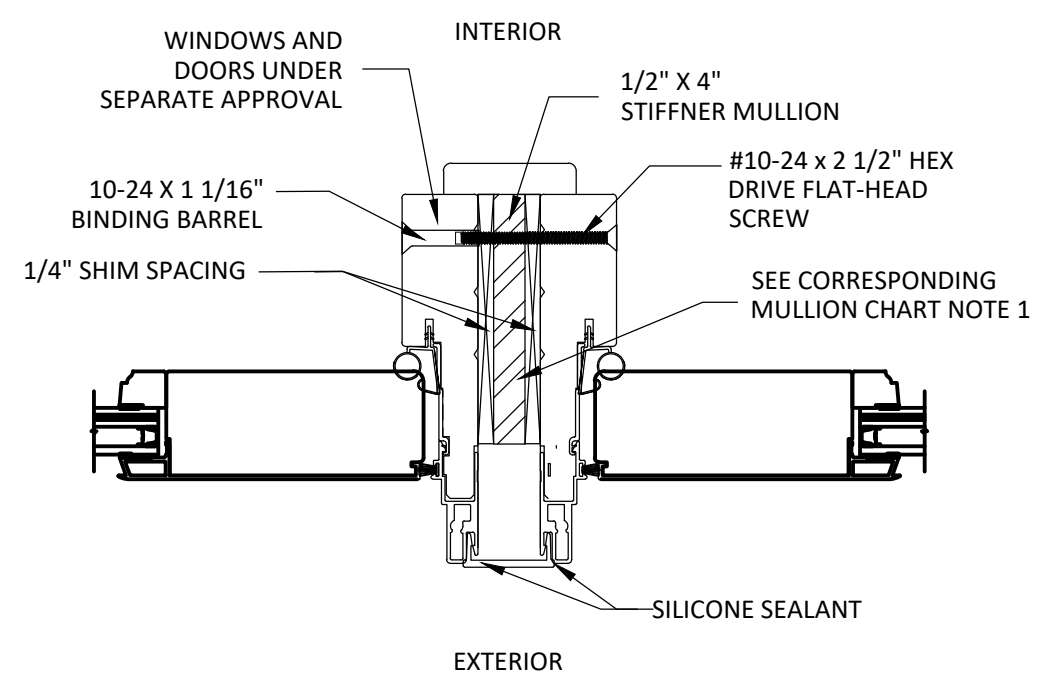
A
2 **DUAL DOUBLE HUNG PIC.**
VERTICAL MULLION



B
2 **DUAL CASEMENT PICTURE**
VERTICAL MULLION



C
2 **DUAL DIRECT SET**
VERTICAL MULLION



D
2 **DUAL OUTSWING PATIO**
VERTICAL MULLION

*NOTE: REFER TO MANUFACTURER INSTRUCTION
FOR WEATHER PROOFING INSTALLATION

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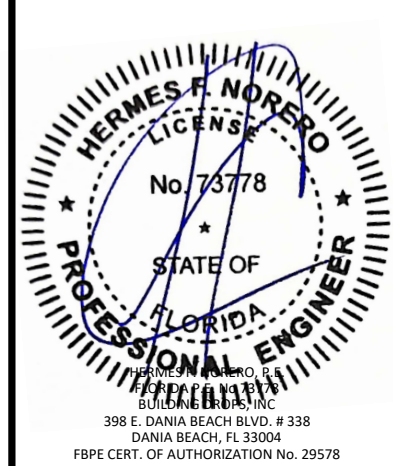
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(WZ3) (IMPACT)
VERTICAL MULL ASSEMBLY SECTIONS
& INTERSECTION DETAILS**

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398 E. DANIA BEACH BLVD., STE. 338
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SCALE:	NTS
DWG. #:	WWD049
SHEET:	2

TITLE: STEEL MULLION STIFFENERS
(WZ3) (IMPACT)
HORIZONTAL MULL ASSEMBLY SECTIONS
& INTERSECTION DETAILS

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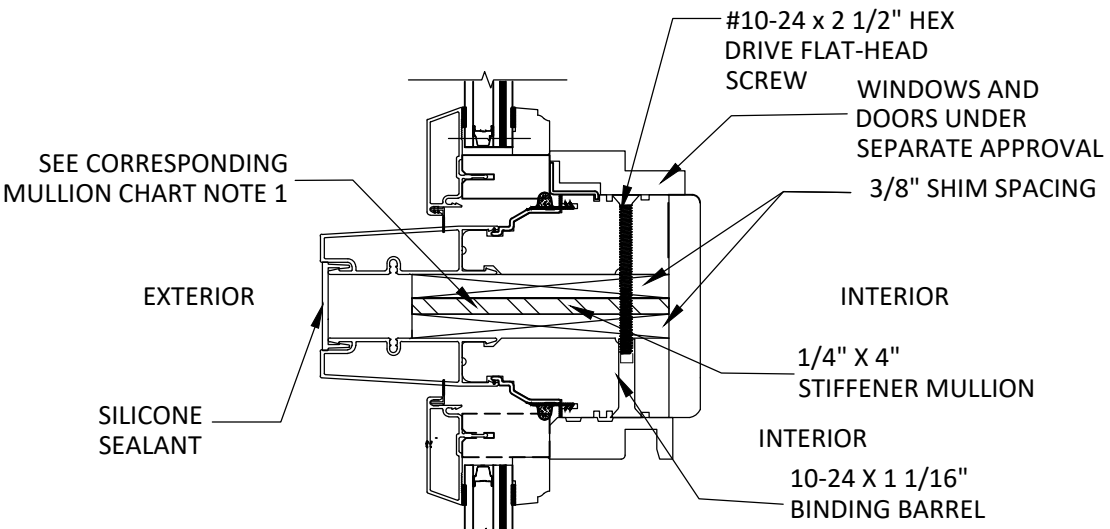


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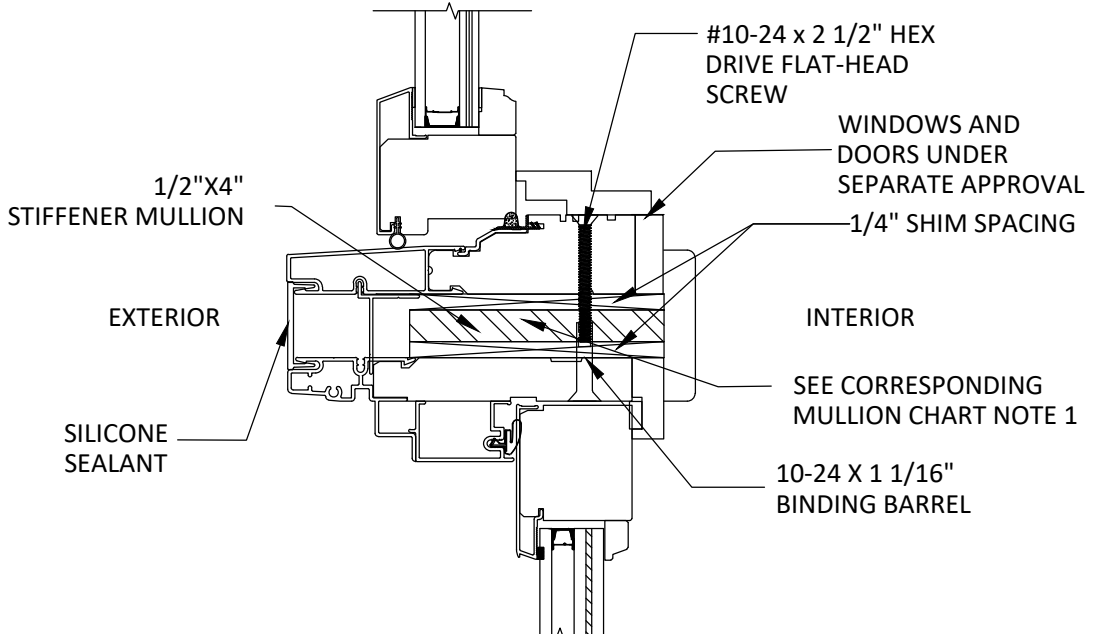
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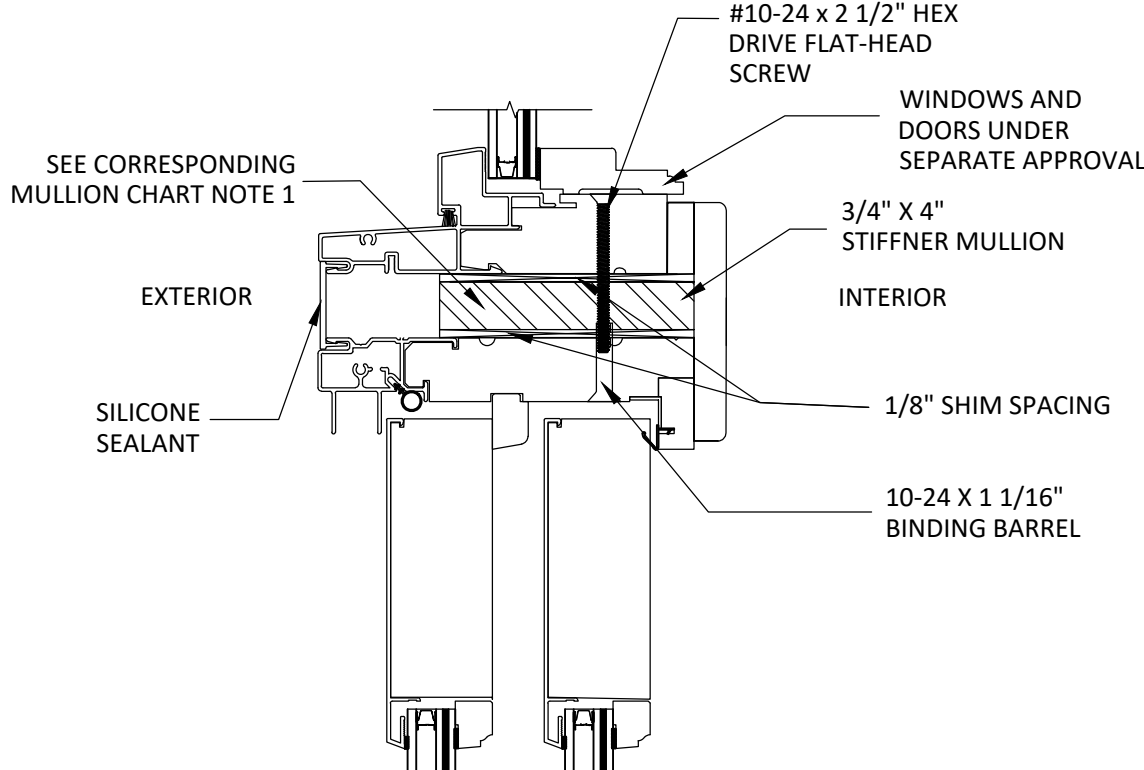
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DWG. #:	WWD049
SHEET:	3



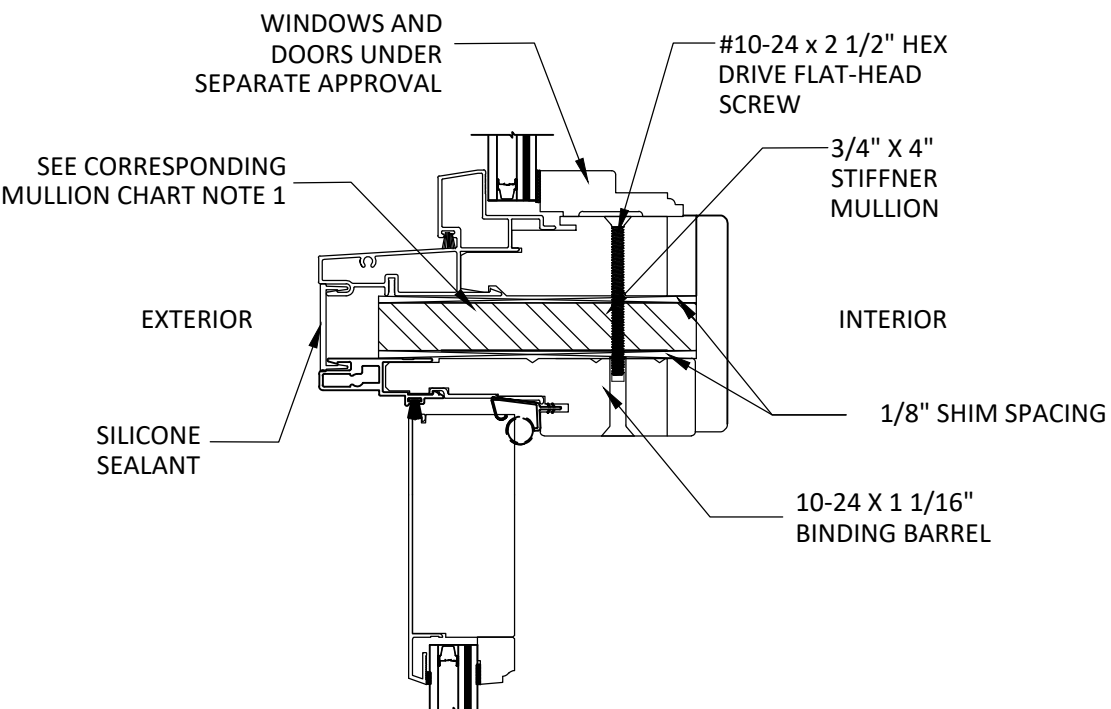
E
3 **FX CASEMENT-CASEMENT**
HORIZONTAL MULLION



F
3 **CASEMENT- DOUBLE HUNG**
HORIZONTAL MULLION

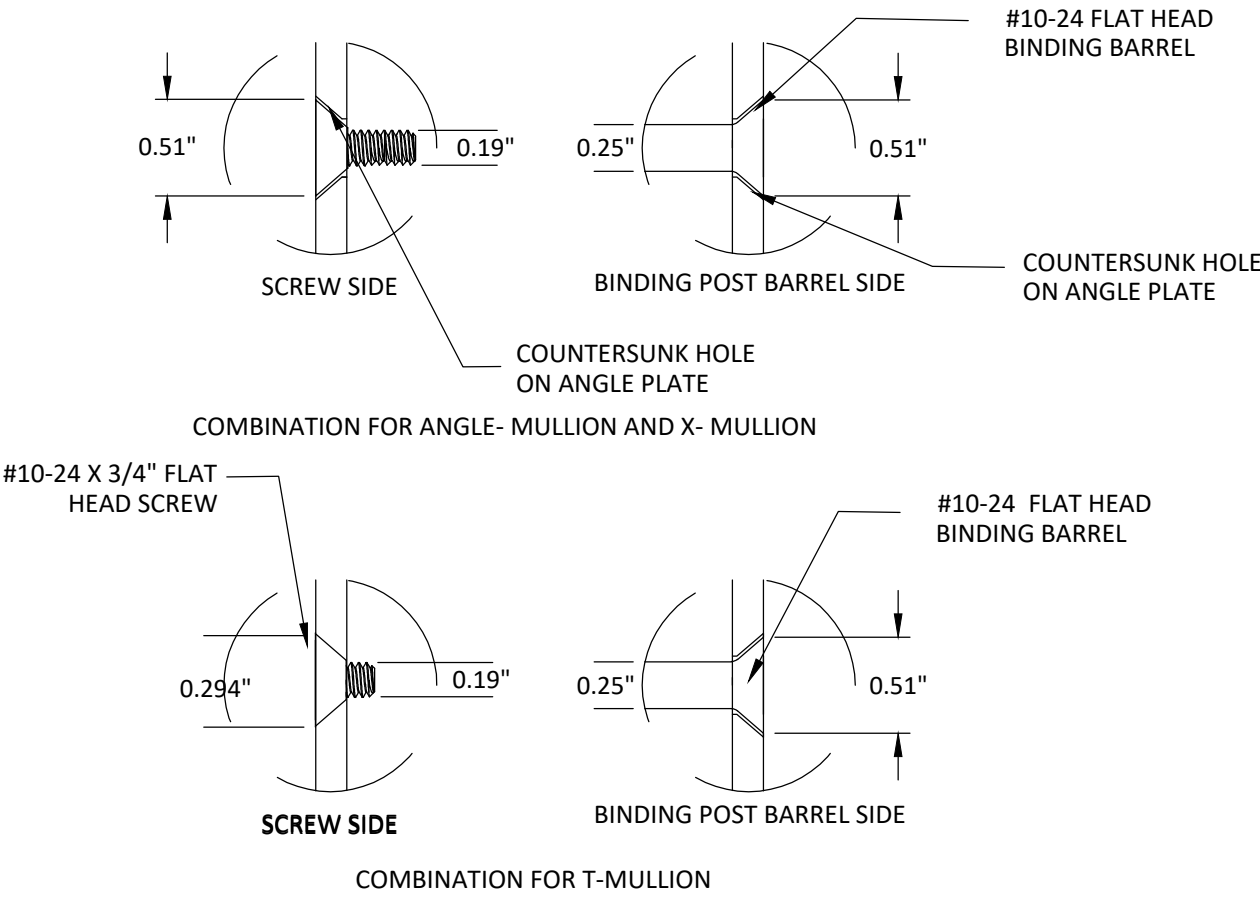
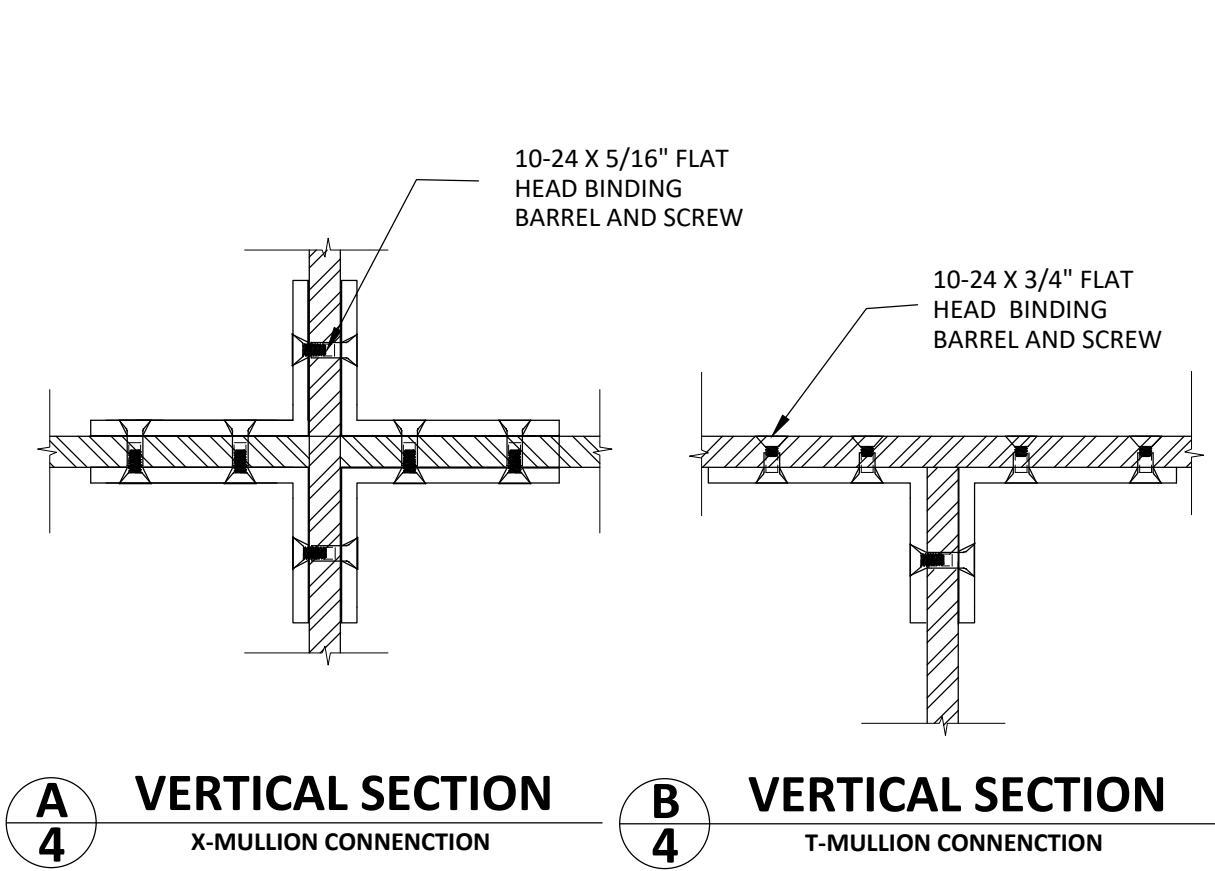
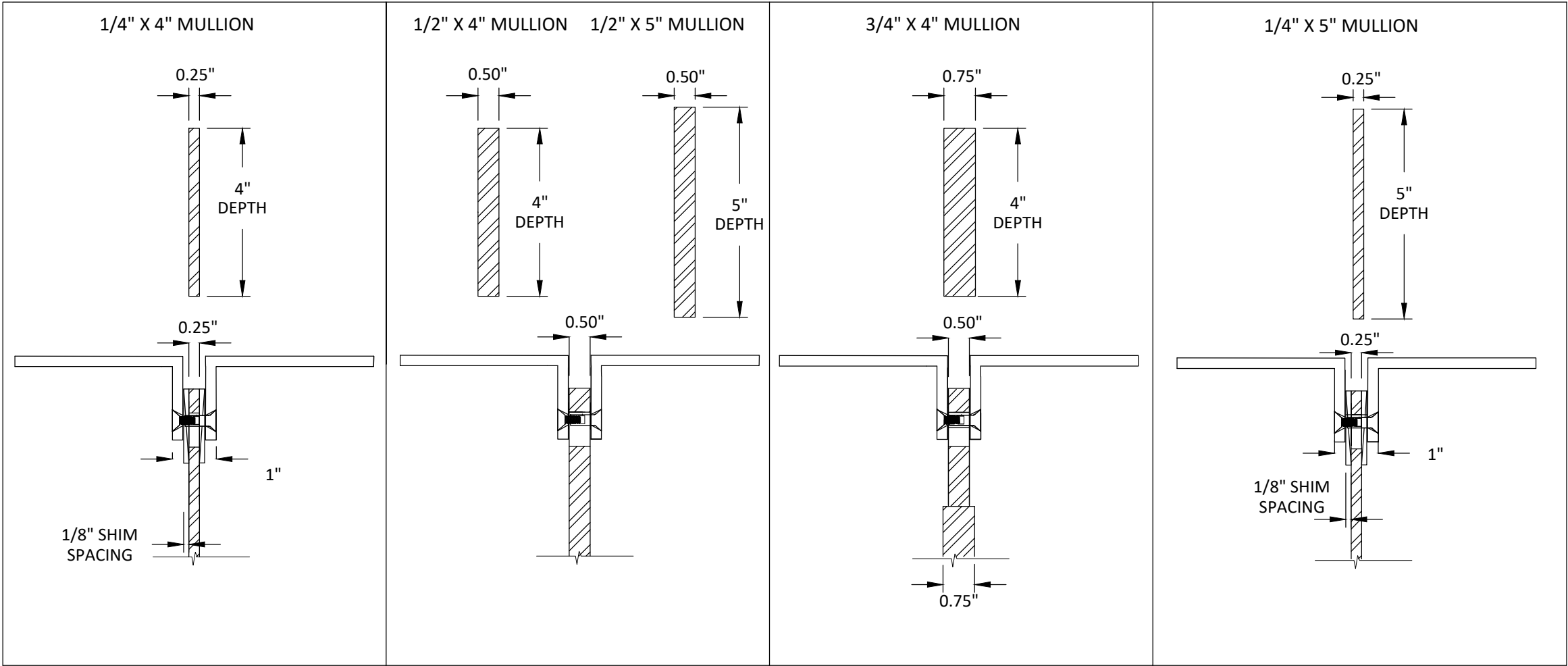


G
3 **SLIDING - DIRECT SET**
HORIZONTAL MULLION



H
3 **DIRECT SET- OUTSWING**
HORIZONTAL MULLION

*NOTE: REFER TO MANUFACTURER INSTRUCTION FOR WEATHER PROOFING INSTALLATION



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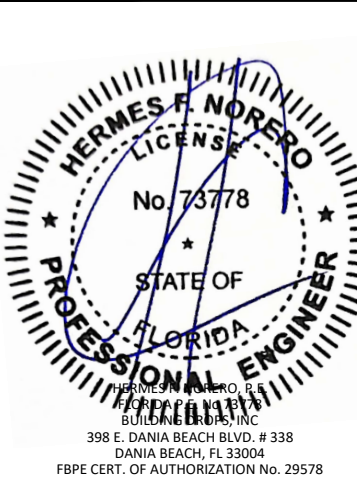
TITLE: STEEL MULLION STIFFENERS
(WZ3) (IMPACT)
ANGLE AND MULLION DETAILS

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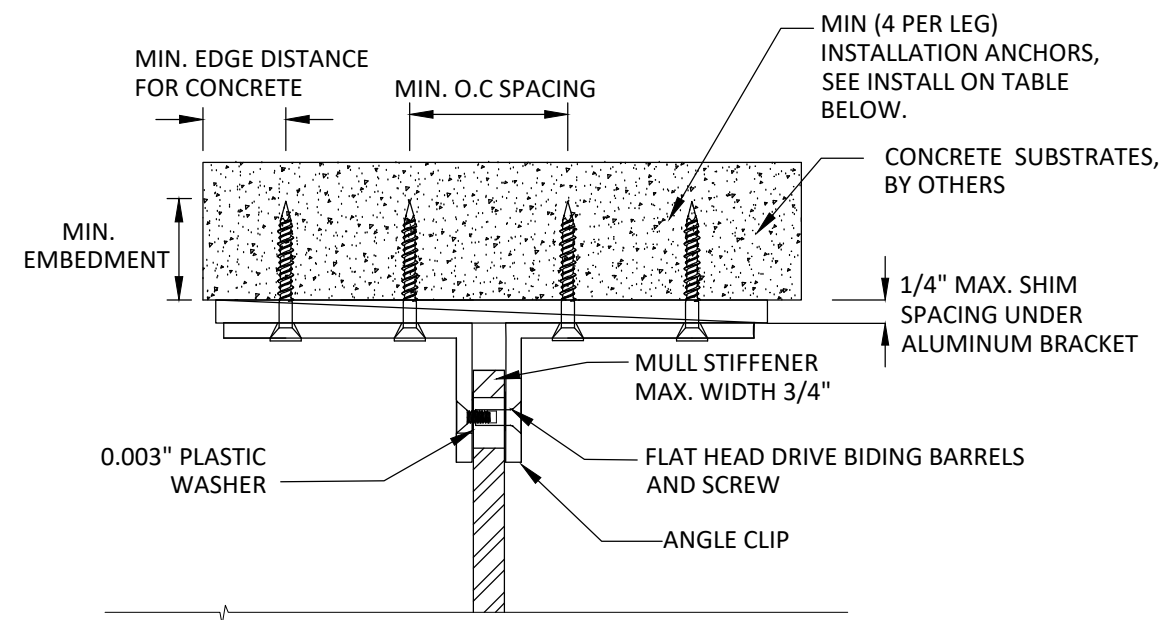


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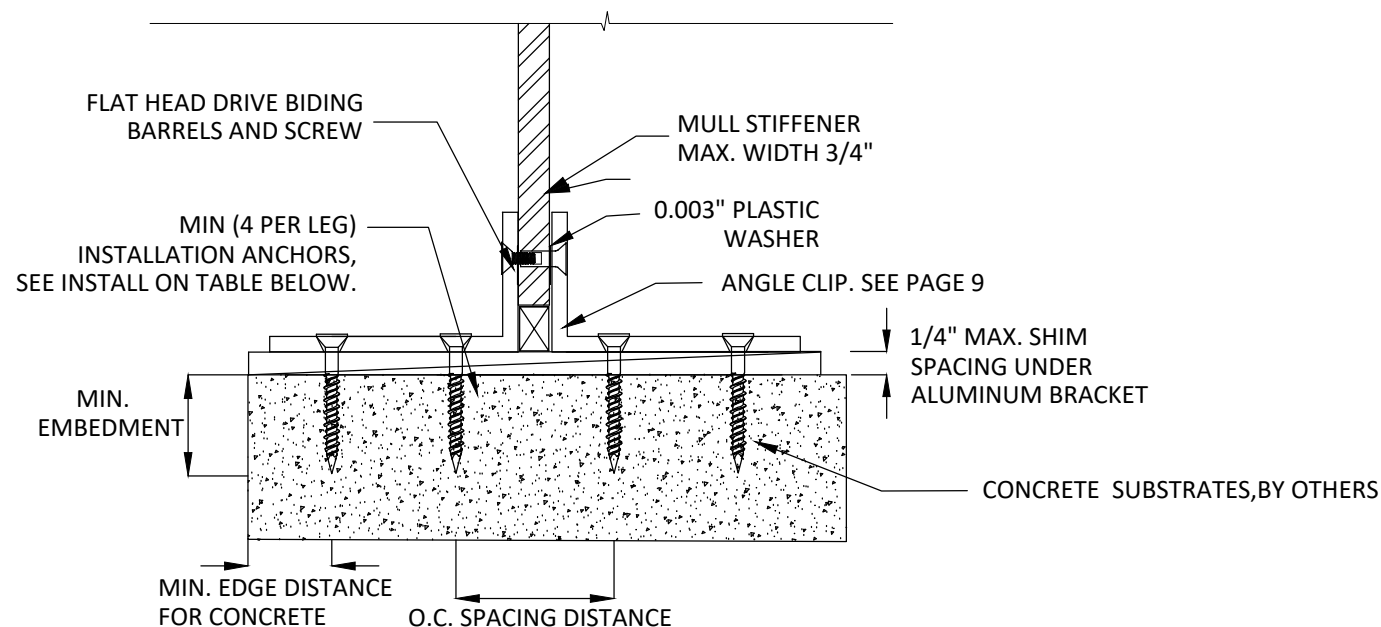
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DWG. #:	WWD049
SHEET:	4



A
5 **VERTICAL SECTION**
TYP. ANCHOR DETAIL FRONT VIEW
CONCRETE SUBSTRATES

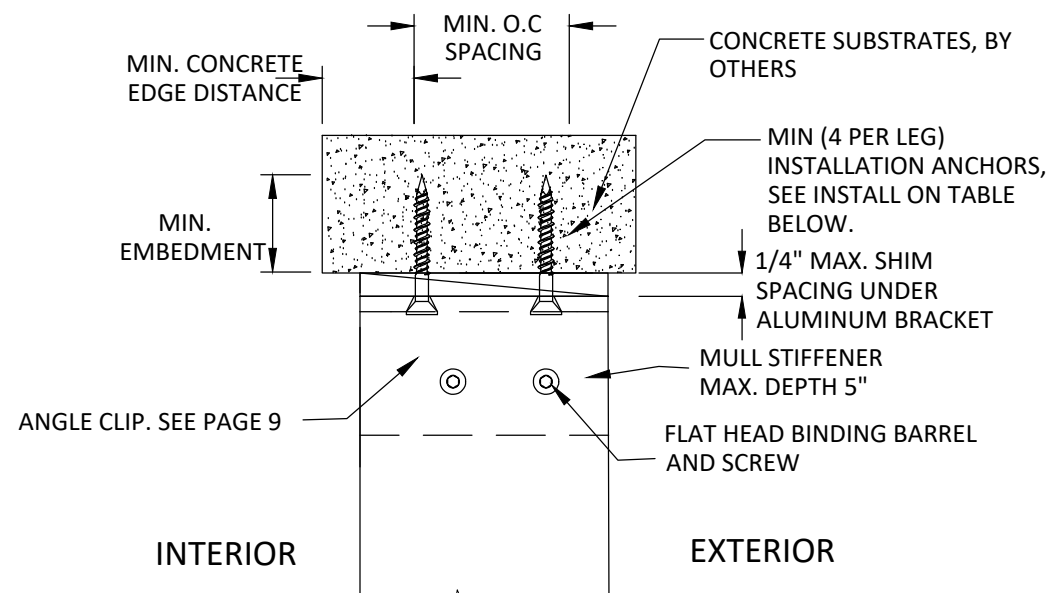


C
5 **VERTICAL SECTION**
TYP. ANCHOR DETAIL FRONT VIEW
CONCRETE SUBSTRATES

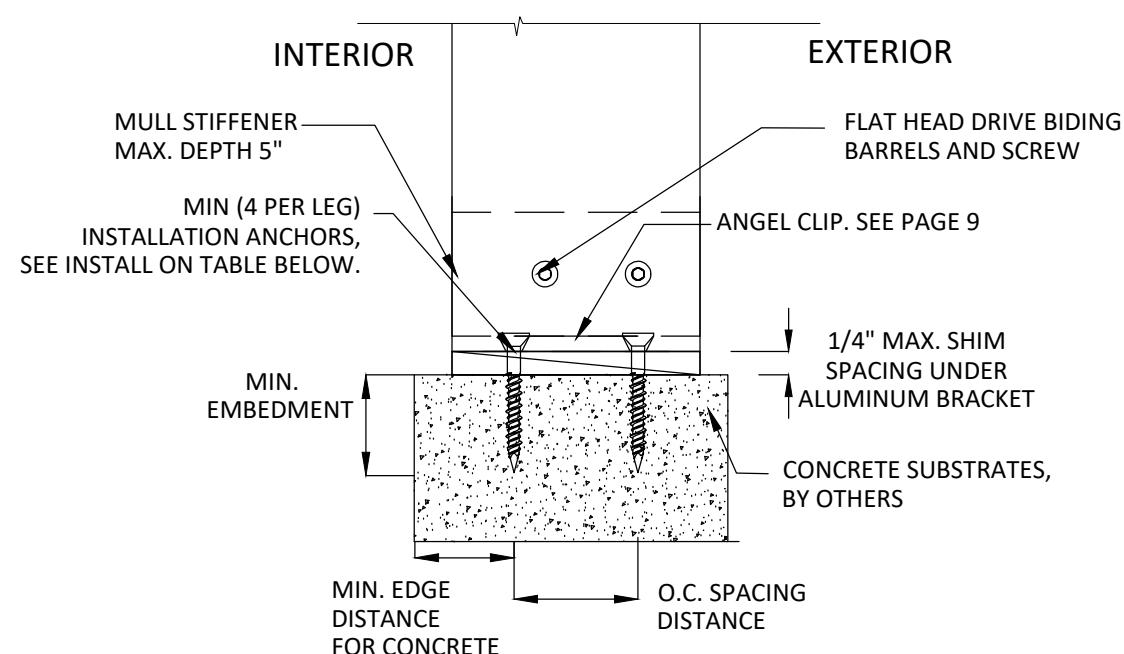
INSTALLATION NOTES:

1. FOR INSTALLATION TO CONCRETE USE (4 PER LEG) 1/4" FLAT HEAD HILTI KWIK-CON II ANCHORS. INSTALLATION SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - 1.1. MINIMUM EMBEDMENT OF 1.75" INTO CONCRETE
 - 1.2. MINIMUM EDGE DISTANCE OF 0.75" ON CONCRETE AND 0.75" FROM THE EDGE OF THE STEEL PLATE
 - 1.3. MINIMUM O.C. SPACING OF 1.50"
2. SEE SHEET 1, INSTALLATION NOTE 7 FOR SUBSTRATE MINIMUM PROPERTIES.

*NOTE: REFER TO MANUFACTURER INSTRUCTION FOR WEATHER PROOFING INSTALLATION



B
5 **VERTICAL SECTION**
TYP. ANCHOR DETAIL SIDE VIEW
CONCRETE SUBSTRATES



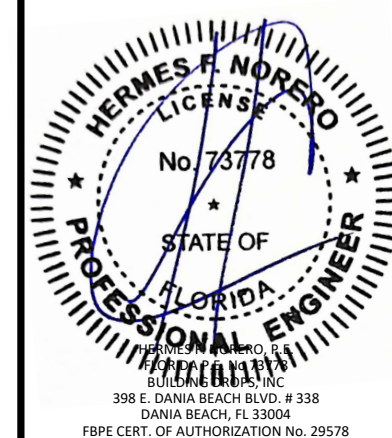
D
5 **VERTICAL SECTION**
TYP. ANCHOR DETAIL SIDE VIEW
CONCRETE SUBSTRATES

TITLE: STEEL MULLION STIFFENERS
(WZ3) (IMPACT)
STANDARD INSTALLATION
CONCRETE

PREPARED BY: **BUILDING DROPS, INC.**
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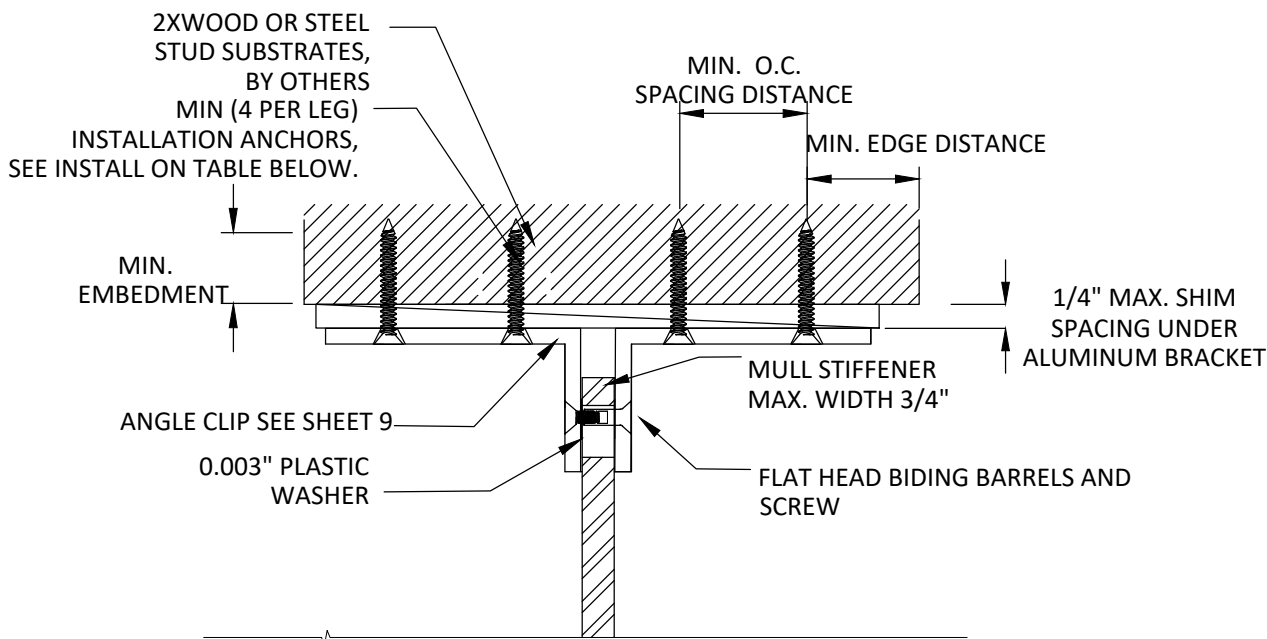
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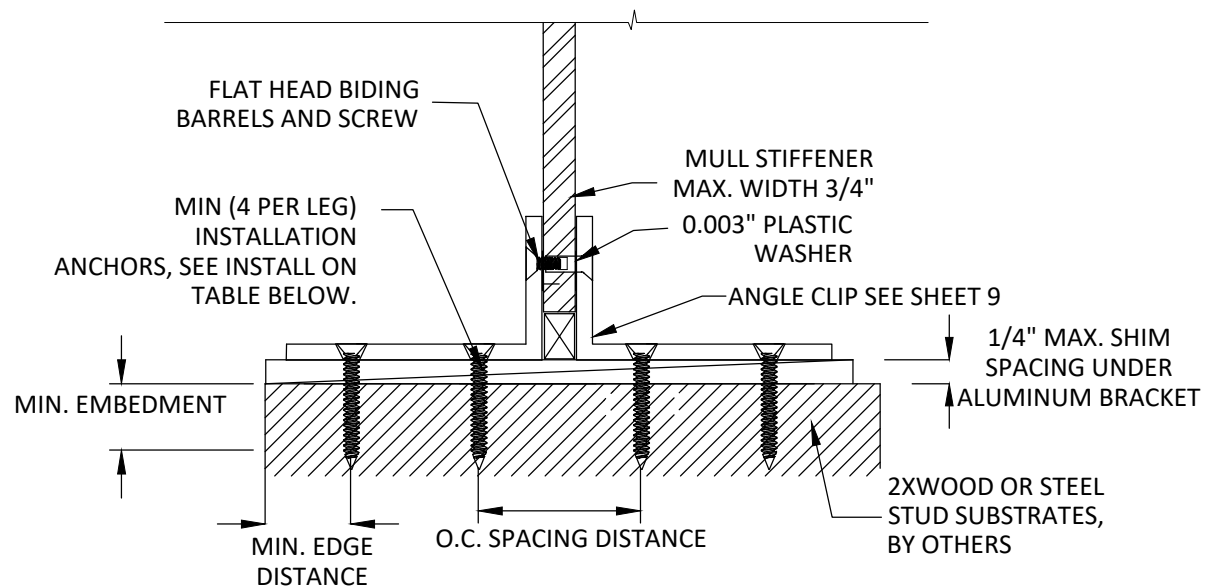
DWG. #: **WWD049**

SHEET:

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OF 19



A
6 **VERTICAL SECTION**
TYP. ANCHOR DETAIL FRONT VIEW
WOOD OR STEEL STUD SUBSTRATES

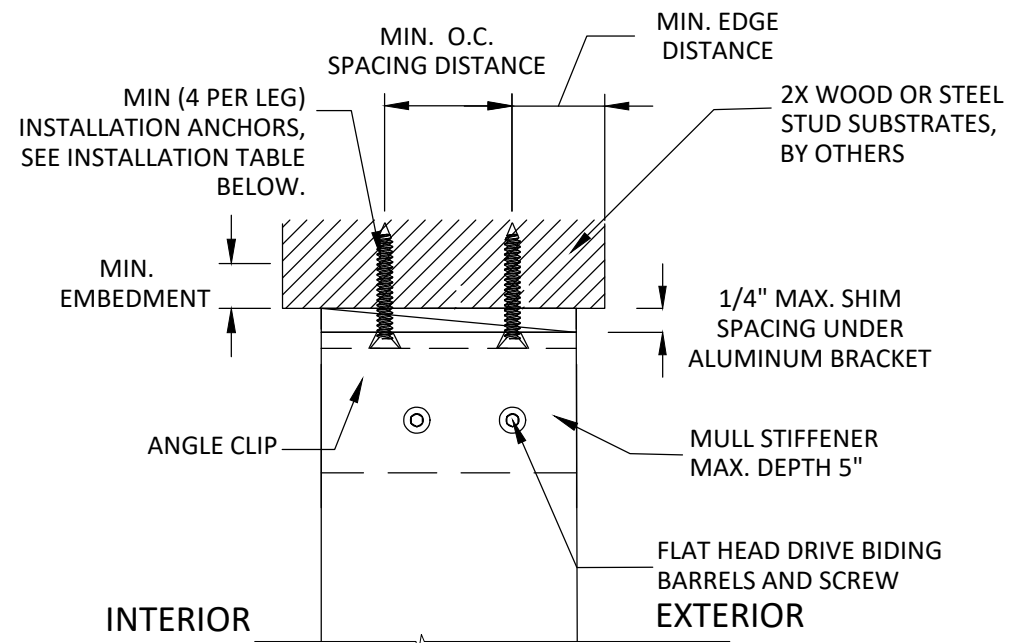


C
6 **VERTICAL SECTION**
TYP. ANCHOR DETAIL FRONT VIEW
WOOD OR STEEL STUD SUBSTRATES

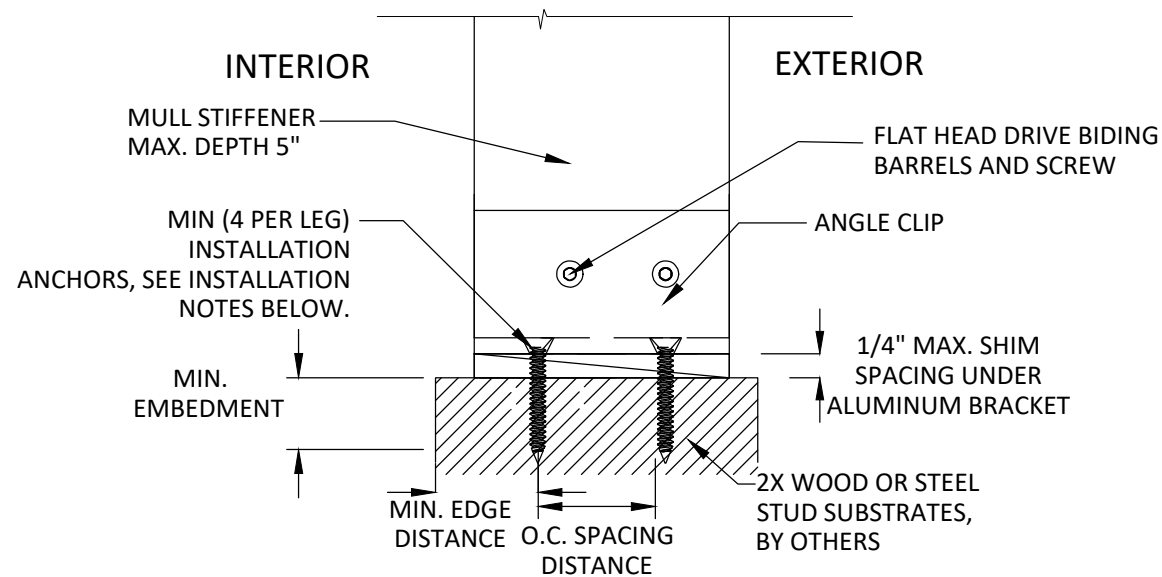
INSTALLATION NOTES:

- FOR INSTALLATION INTO 2X BUCK USE (4 PER LEG) #14 FH WOOD SCREWS. INSTALLATION SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - 1.1. MINIMUM EMBEDMENT OF 1-1/2" INTO WOOD
 - 1.2. MINIMUM EDGE DISTANCE OF 3/4".
- FOR INSTALLATION THROUGH METAL FRAME USE (4 PER LEG) #14 FH SELF-DRILLING OR SELF-TAPPING, SAE GR. 5, TYPE SCREWS. INSTALLATION SHALL CONFORM TO THE FOLLOWING REQUIREMENTS.
 - 2.1. THREE (3) THREADS MINIMUM PENETRATION BEYOND METAL FRAME WALL.
 - MINIMUM EDGE DISTANCE OF 3/4".
- SEE SHEET 1, INSTALLATION NOTE 7 FOR SUBSTRATE MINIMUM PROPERTIES.

*NOTE: REFER TO MANUFACTURER INSTRUCTION FOR WEATHER PROOFING INSTALLATION



B
6 **VERTICAL SECTION**
TYP. ANCHOR DETAIL SIDE VIEW
WOOD OR STEEL SUBSTRATES



D
6 **VERTICAL SECTION**
TYP. ANCHOR DETAIL SIDE VIEW
WOOD OR STEEL STUD SUBSTRATES



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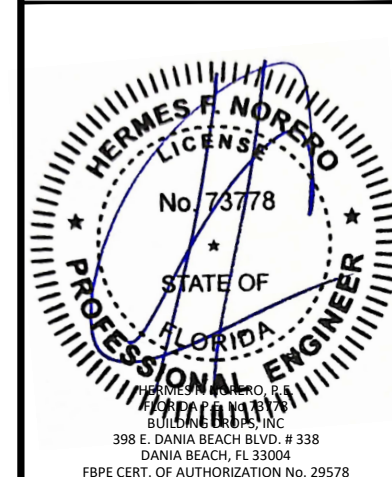
TITLE: STEEL MULLION STIFFENERS
(WZ3) (IMPACT)
STANDARD INSTALLATION
WOOD OR STEEL STUD

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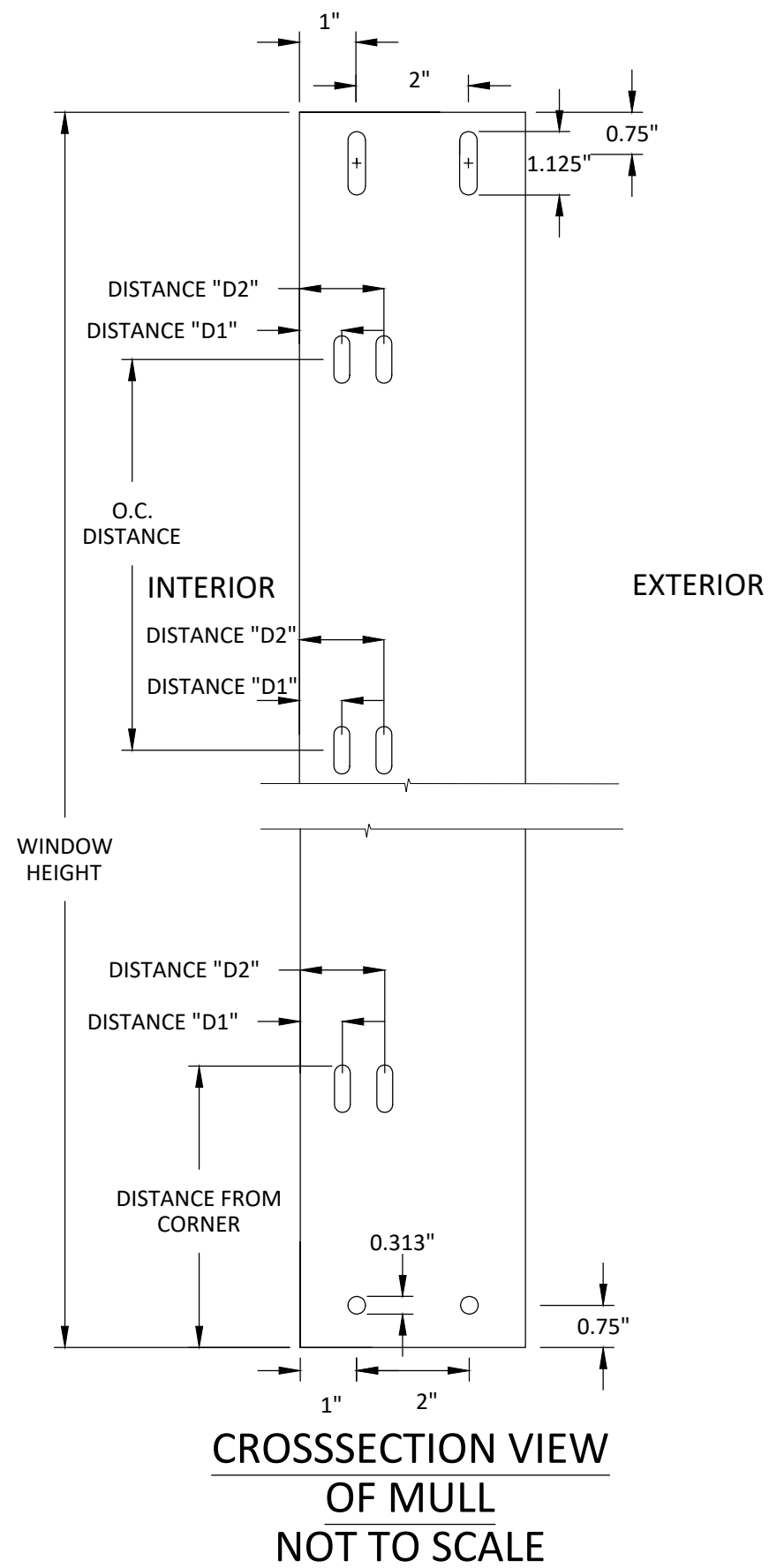
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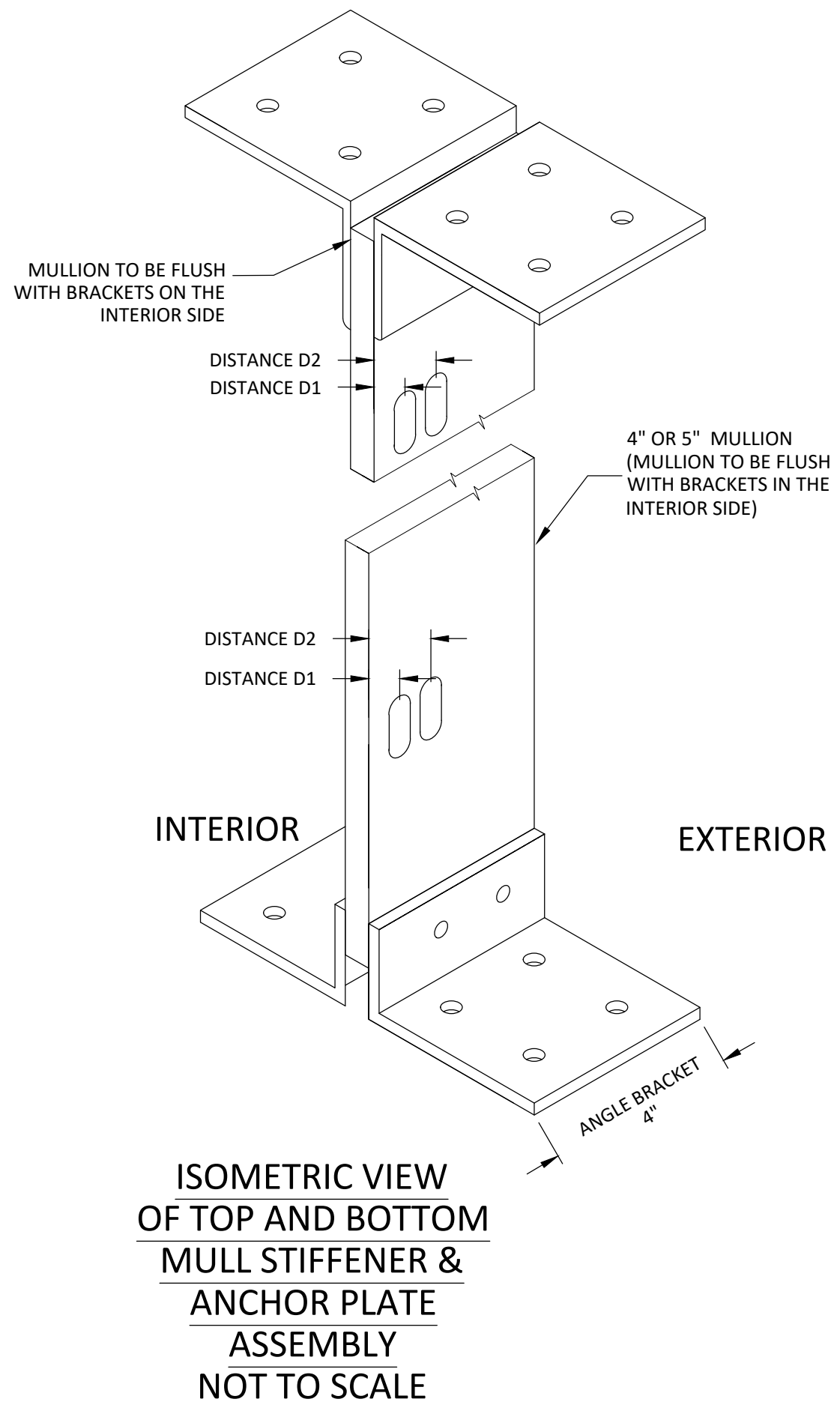
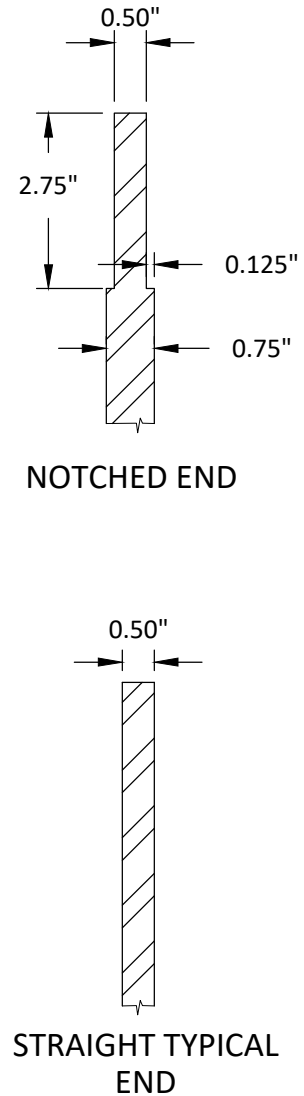
SHEET:

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*NOTE:SEE SHEET 8 FOR APPLICABLE DIMESIONS



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TITLE: **STEEL MULLION STIFFENERS (WZ3) (IMPACT) MULLION CONNECTION DETAILS**

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





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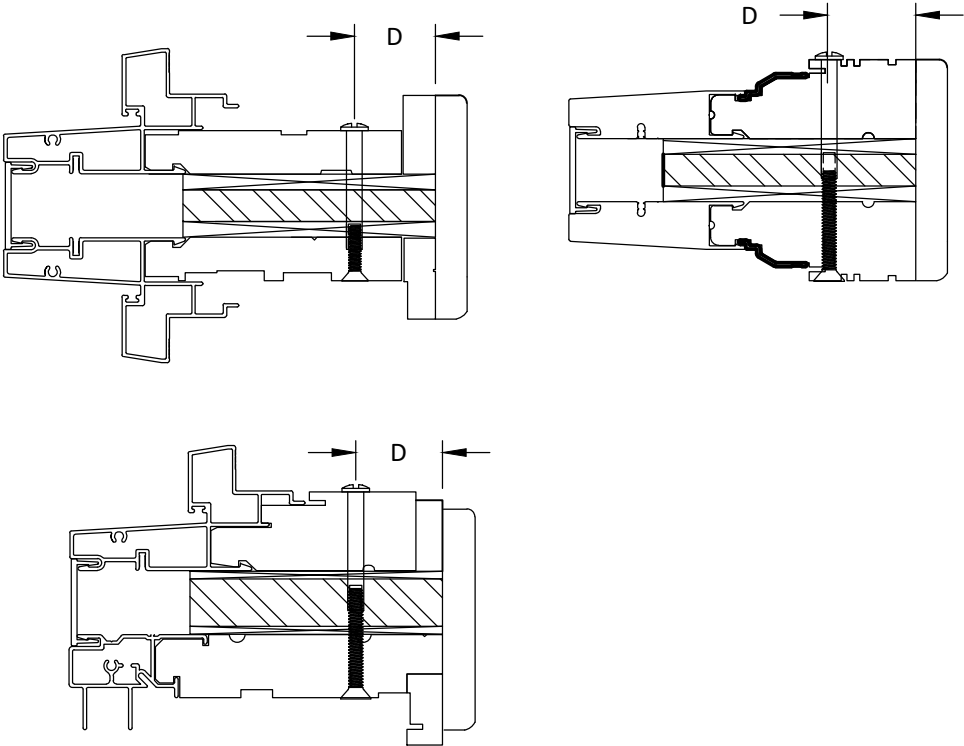
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PRODUCT	O.C. SPACING (JAMBS)	DISTANCE FROM CORNER (JAMBS)	NOMINAL DISTANCE FROM INTERIOR EDGE	D	PRODUCT ABBREVIATION
DOUBLE HUNG WINDOW	12"	6"	1.50	D2	DH1
TRANSOM IN SASH	12"	6"	1.50	D2	TS
OUT-SWING DOOR	12"	6"	0.75	D1	OT
DIRECT SET	12"	6"	0.75	D2	DS
SLIDING GLASS DOOR	12"	6"	0.75	D1	SGD
IINSWING DOOR	12"	6"	1.50	D2	ID
CASEMENT WINDOW	12"	6"	0.75	D1	CW
AWNING	12"	6"	0.75	D1	AW
PICTURE WINDOW	12"	6"	0.75	D1	PW

CONNECTION TYPE BASE ON ASSEMBLY THICKNESS								
	DH2	DH1	TS	OSD	DS	SGD	ID	CW-AW-PW
DH2	1A							
DH1	2A	2A						
TS	2A	2A	2A					
OSD	3A	3A	3A	5A				
DS	3A	2A	4A	5A	5A			
SGD	2A	2A	3A	4A	4A	3A		
ID	2A	2A	2A	3A	3A	3A	2A	
CW-AW-PW	3A	3A	4A	5A	5A	4A	3A	5A

*VALUE ON CELL REPRESENTS SIZE OF THE SCREW.
*LETTER ON CELL REPRESENTS SIZE OF BINDING BARREL.

HARDWARE OPTION	HARDWARE OPTION	HARDWARE OPTION	MULL ASSEMBLY THICKNESS UP TO:
A	10-24X 2" BINDING BARREL		N/A
1	10-24 X 1.25"FLAT HEAD SCREW		2.125"
2	10-24 X 1.50"FLAT HEAD SCREW		2.25"
3	10-24 X 1.75"FLAT HEAD SCREW		2.875"
4	10-24 X 2"FLAT HEAD SCREW		3.125"
5	10-24 X 2.50"FLAT HEAD SCREW		3.375"



"D" DISTANCE FROM THE INTERIOR END OF THE FRAME PROFILE. REFER TO TABLE ABOVE FOR EXACT DISTANCE.



WINDSOR WINDOWS & DOORS
900 S. 19TH STREET.
WEST DES MOINES, IA 50265
PH: (515)223-6660 FAX: (515)224-1938

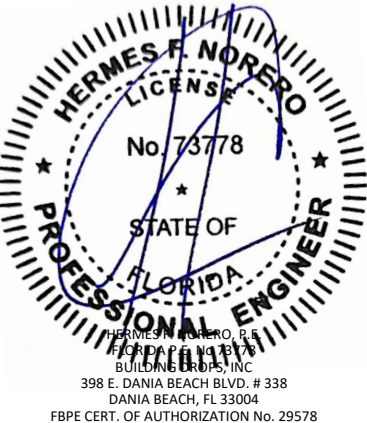
TITLE: STEEL MULLION STIFFENERS (WZ3) (IMPACT)
JAMBS TO MULL CONNECTION

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
8TH FBC CODE CHANGE	MG	02/23

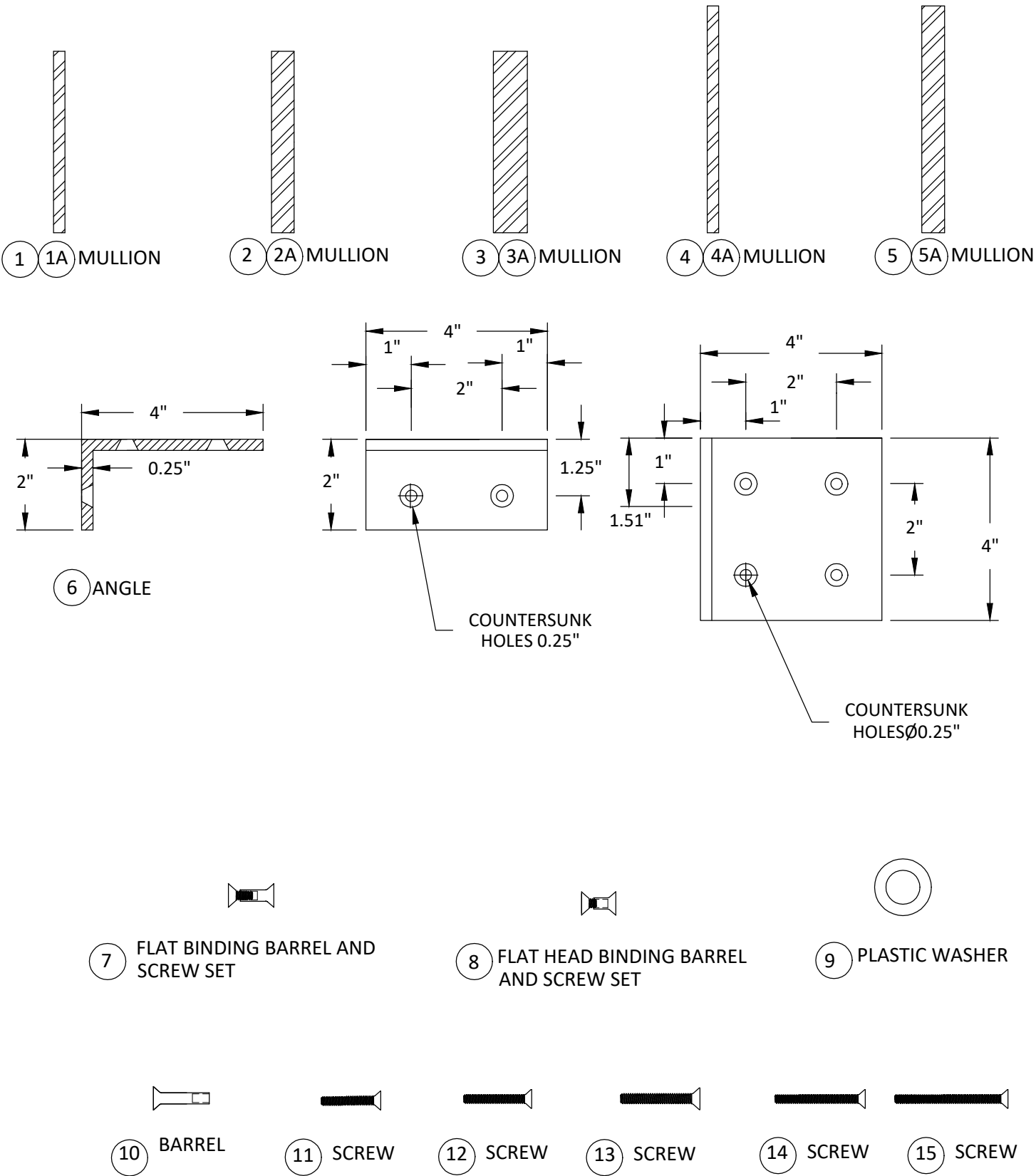
THE INSTALLATION DETAILS DESCRIBED HERE IN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



FL #:	FL21905
DATE:	09.10.19
DWG. BY:	CHK. BY:
YC	HFN
SCALE:	NTS
DWG. #:	WWD049
SHEET:	

BILL OF MATERIALS				
ITEM	DESCRIPTION	MATERIAL	PART NO.	VENDOR
1	1/4" X 4" MULLION	STAINLESS STEEL (304)	17502680	ALRO
1A	1/4" X 4" MULLION	GALVANIZED STEEL (A36)	06502320	ALRO
2	1/2" X 4" MULLION	STAINLESS STEEL (304)	17506480	ALRO
2A	1/2" X 4" MULLION	GALVANIZED STEEL (A36)	06510320	ALRO
3	3/4" X 4" MULLION	STAINLESS STEEL (304)	40105350	ALRO
3A	3/4" X 4" MULLION	GALVANIZED STEEL (A36)	06513920	ALRO
4	1/4" X 5" MULLION	STAINLESS STEEL (304)	17502760	ALRO
4A	1/4" X 5" MULLION	GALVANIZED STEEL (A36)	06502620	ALRO
5	1/2" X 5" MULLION	STAINLESS STEEL (304)	17502760	ALRO
5A	1/2" X 5" MULLION	GALVANIZED STEEL (A36)	06510520	ALRO
6	4" X 2" X 1/4" ANGLE CLIP	ALUMINUM (6063-T52)	24911025	ALRO
7	1/4-20 X 15/16" FLAT HEAD BINDING BARREL AND SCREW SET	STAINLESS STEEL	98096A102	McMASTER
8	1/4-20 X 3/4" FLAT HEAD BINDING BARREL AND SCREW SET	STAINLESS STEEL	98096A102	McMASTER
9	0.003" PLASTIC ROUND SHIMS	PVC	98090A120	McMASTER
10	10-24 X 1 1/16" BINDING BARREL	STAINLESS STEEL	99637A221	McMASTER
11	10-24 X 1 1/4" HEX FLAT HEAD SCREW	STAINLESS STEEL	92210A249	McMASTER
12	10-24 X 1 1/2" HEX FLAT HEAD SCREW	STAINLESS STEEL	92210A251	McMASTER
13	10-24 X 1 3/4" HEX FLAT HEAD SCREW	STAINLESS STEEL	92210A252	McMASTER
14	10-24 X 2" HEX FLAT HEAD SCREW	STAINLESS STEEL	92210A253	McMASTER
15	10-24 X 2 1/2" HEX FLAT HEAD SCREW	STAINLESS STEEL	92210A256	McMASTER

NOTE: MATERIAL REFERENCED ABOVE ARE NOT SPECIFIC TO ONE VENDOR. EQUIVALENT SUPPLIER FOR SAME MATERIAL TYPE AND GRADE AREA ACCEPTABLE,



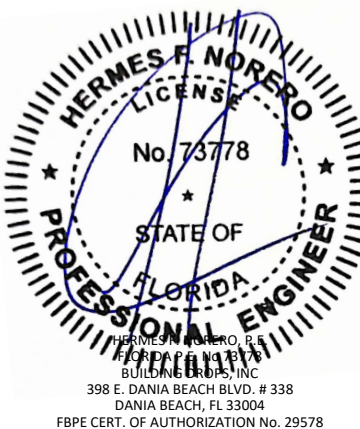
WINDSOR WINDOWS
& DOORS
900 S. 19TH STREET.
WEST DES MOINES, IA 50265
PH: (515)223-6660 FAX: (515)224-1938

TITLE: STEEL MULLION STIFFENERS
(WZ3) (IMPACT)
BILL OF MATERIALS

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
8TH FBC CODE CHANGE	MG	02/23

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FL #: **FL21905**

DATE: **09.10.19**

DWG. BY: **YC** CHK. BY: **HFN**

SCALE: **NTS**

DWG. #: **WWD049**

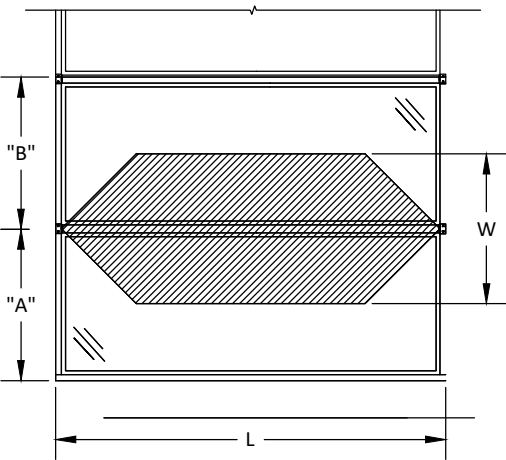
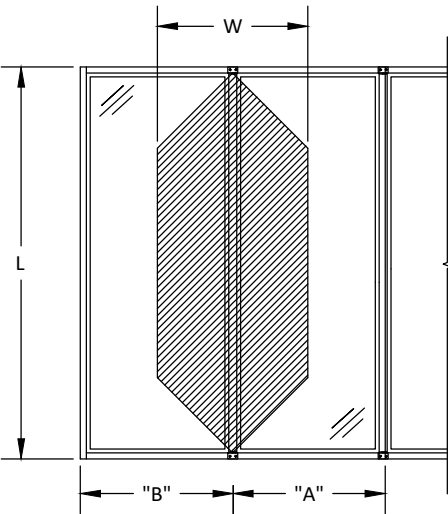
SHEET: **9** OF 19

1/4"X4" STIFFENER FOR PINNACLE SERIES PRODUCTS

DESIGN PRESSURE CAPACITIES FOR ONE-WAY CONFIGURATIONS

MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF): 1/4" x 4" STEEL MULLIONS (ONE-WAY CONFIGURATIONS) - INSTALLATION TO WOOD, CONCRETE, ALUMINUM, OR STEEL																		
L - MULL	TUTARY WIDTH (IN)																	
	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0	72.0	78.0	84.0	90.0	96.0	102.0	108.0	114.0	120.0	126.0
60.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
66.0	100.0	100.0	100.0	100.0	97.2	91.7	88.5	87.4	87.4	87.4	87.4	87.4	87.4	87.4	87.4	87.4	87.4	87.4
72.0	100.0	100.0	97.9	86.8	79.0	73.6	70.1	68.0	67.3	67.3	67.3	67.3	67.3	67.3	67.3	67.3	67.3	67.3
78.0	100.0	96.6	82.3	72.6	65.6	60.7	57.2	54.8	53.4	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0
84.0	100.0	82.7	70.3	61.7	55.5	51.0	47.7	45.3	43.7	42.7	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4
90.0	88.3	71.6	60.7	53.1	47.6	43.5	40.5	38.2	36.5	35.4	34.7	34.5	34.5	34.5	34.5	34.5	34.5	34.5
96.0	77.4	62.7	53.0	46.2	41.3	37.6	34.8	32.7	31.1	29.9	29.1	28.6	28.4	28.4	28.4	28.4	28.4	28.4
102.0	68.4	55.3	46.7	40.6	36.2	32.9	30.3	28.3	26.8	25.6	24.8	24.2	23.8	23.7	23.7	23.7	23.7	23.7
108.0	60.9	49.2	41.4	36.0	32.0	29.0	26.7	24.8	23.4	22.3	21.4	20.8	20.3	20.0	20.0	20.0	20.0	20.0
114.0	54.5	44.0	37.1	32.2	28.5	25.8	23.7	22.0	20.6	19.6	18.7	18.1	17.6	17.2	17.0	17.0	17.0	17.0
120.0	49.2	39.6	33.3	28.9	25.6	23.1	21.1	19.6	18.4	17.4	16.5	15.9	15.4	15.0	-	-	-	-
126.0	44.5	35.9	30.1	26.1	23.1	20.8	19.0	17.6	16.4	15.5	-	-	-	-	-	-	-	-
132.0	40.5	32.6	27.4	23.7	21.0	18.9	17.2	15.9	-	-	-	-	-	-	-	-	-	-
138.0	37.0	29.8	25.0	21.6	19.1	17.2	15.6	-	-	-	-	-	-	-	-	-	-	-
144.0	34.0	27.3	22.9	19.8	17.5	15.7	-	-	-	-	-	-	-	-	-	-	-	-
150.0	30.5	24.5	20.6	17.8	15.7	-	-	-	-	-	-	-	-	-	-	-	-	-
156.0	27.0	21.8	18.3	15.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162.0	24.1	19.4	16.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
168.0	21.6	17.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
174.0	19.5	15.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180.0	17.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
186.0	15.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
192.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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234.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
240.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- NOTE:
- MULLION CHART APPLIES TO ASSEMBLIES WHEN MULLED IN ONE-WAY, STACK OR RIBBON, CONFIGURATIONS. TYPICAL ELEVATIONS SHOWN AT RIGHT.
 - DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
 - MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
 - DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS SHALL BE UNDER SEPARATE FL APPROVAL.
 - TRIBUTARY WIDTH = $W = (A+B)/2$
 - REFER TO SHEETS 4-7 FOR INSTALLATION DETAILS.
 - WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



WINDSOR WINDOWS
& DOORS

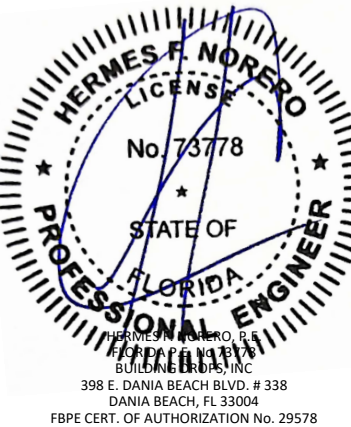
900 S. 19TH STREET.
WEST DES MOINES, IA 50265
PH: (515)223-6660 FAX: (515)224-1938

TITLE: STEEL MULLION STIFFENERS
(WZ3) (IMPACT)
1/4" X 4" ONE WAY
DESIGN PRESSURE TABLE

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
8TH FBC CODE CHANGE	MG	02/23

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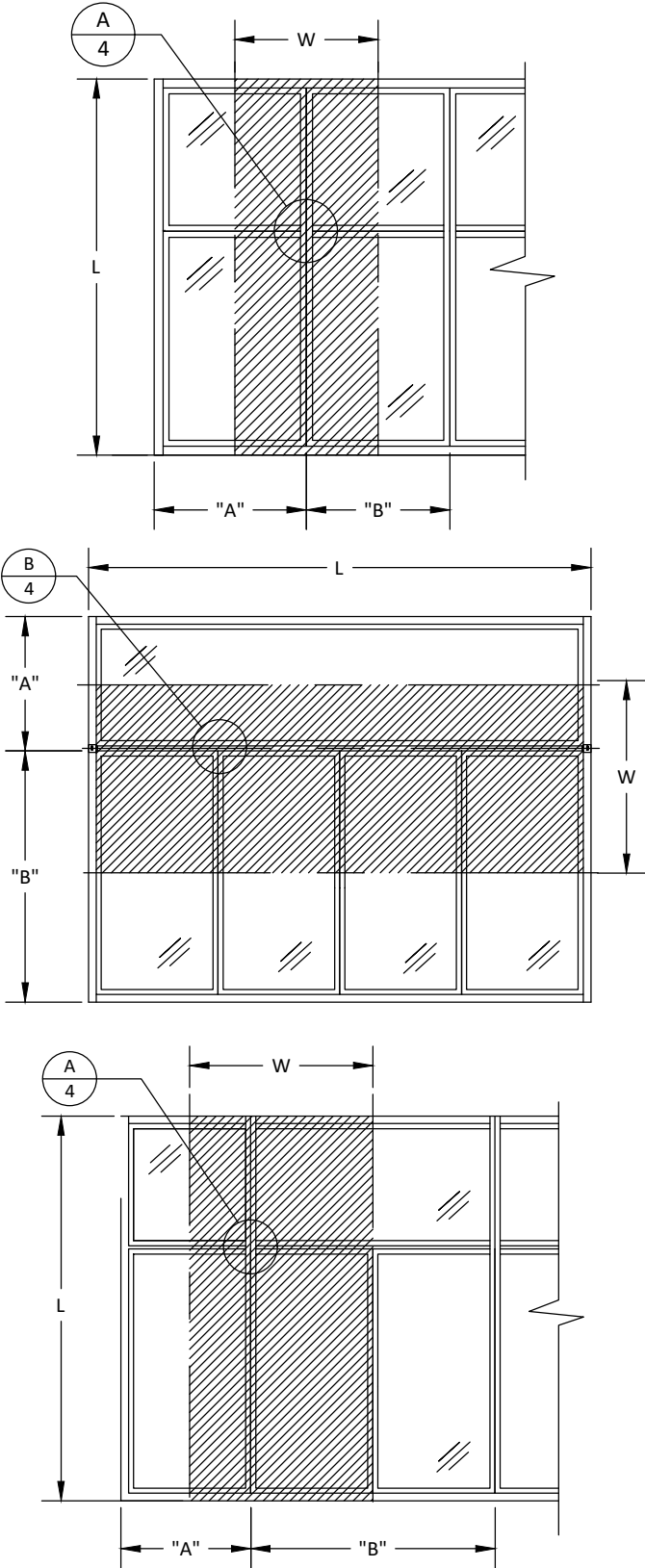
FL #:	FL21905
DATE:	09.10.19
DWG. BY:	CHK. BY:
YC	HFN
SCALE:	NTS
DWG. #:	WWD049
SHEET:	10 OF 19

1/4"X4" STIFFENER FOR PINNACLE SERIES PRODUCTS

DESIGN PRESSURE CAPACITIES FOR TWO-WAY CONFIGURATIONS

MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF): 1/4"x4" STEEL MULLIONS (TWO-WAY CONFIGURATIONS)																		
L - MULL LENGTH (IN)	W - TRIBUTARY WIDTH (IN)																	
	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0	72.0	78.0	84.0	90.0	96.0	102.0	108.0	114.0	120.0	126.0
60.0	100.0	100.0	100.0	100.0	97.0	86.2	77.6	70.5	64.6	59.7	55.4	51.7	48.5	45.6	43.1	40.8	38.8	36.9
66.0	100.0	100.0	100.0	91.6	80.1	71.2	64.1	58.3	53.4	49.3	45.8	42.7	40.1	37.7	35.6	33.7	32.1	30.5
72.0	100.0	100.0	89.8	77.0	67.3	59.9	53.9	49.0	44.9	41.4	38.5	35.9	33.7	31.7	29.9	28.4	26.9	25.7
78.0	100.0	91.8	76.5	65.6	57.4	51.0	45.9	41.7	38.3	35.3	32.8	30.6	28.7	27.0	25.5	24.2	23.0	21.9
84.0	98.9	79.2	66.0	56.5	49.5	44.0	39.6	36.0	33.0	30.4	28.3	26.4	24.7	23.3	22.0	20.8	19.8	18.8
90.0	86.2	69.0	57.5	49.3	43.1	38.3	34.5	31.3	28.7	26.5	24.6	23.0	21.5	20.3	19.2	18.1	17.2	16.4
96.0	75.8	60.6	50.5	43.3	37.9	33.7	30.3	27.5	25.3	23.3	21.6	20.2	18.9	17.8	16.8	15.9	15.2	-
102.0	67.1	53.7	44.7	38.3	33.6	29.8	26.8	24.4	22.4	20.6	19.2	17.9	16.8	15.8	-	-	-	-
108.0	59.9	47.9	39.9	34.2	29.9	26.6	23.9	21.8	20.0	18.4	17.1	16.0	-	-	-	-	-	-
114.0	53.7	43.0	35.8	30.7	26.9	23.9	21.5	19.5	17.9	16.5	15.3	-	-	-	-	-	-	-
120.0	48.5	38.8	32.3	27.7	24.2	21.5	19.4	17.6	16.2	-	-	-	-	-	-	-	-	-
126.0	44.0	35.2	29.3	25.1	22.0	19.5	17.6	16.0	-	-	-	-	-	-	-	-	-	-
132.0	40.1	32.1	26.7	22.9	20.0	17.8	16.0	-	-	-	-	-	-	-	-	-	-	-
138.0	36.7	29.3	24.4	20.9	18.3	16.3	-	-	-	-	-	-	-	-	-	-	-	-
144.0	33.7	26.9	22.4	19.2	16.8	-	-	-	-	-	-	-	-	-	-	-	-	-
150.0	30.2	24.1	20.1	17.2	15.1	-	-	-	-	-	-	-	-	-	-	-	-	-
156.0	26.8	21.5	17.9	15.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162.0	23.9	19.2	16.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
168.0	21.5	17.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
174.0	19.3	15.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180.0	17.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
186.0	15.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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240.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- NOTE:
- MULLION CHART APPLIES TO ASSEMBLIES WHEN MULLED IN TWO-WAY,'X' OR 'T' CONFIGURATIONS. TYPICAL ELEVATIONS SHOWN AT RIGHT.
 - DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
 - MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
 - DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS SHALL BE UNDER SEPARATE FL APPROVAL.
 - TRIBUTARY WIDTH = W = (A+B)/2
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WINDSOR WINDOWS
& DOORS

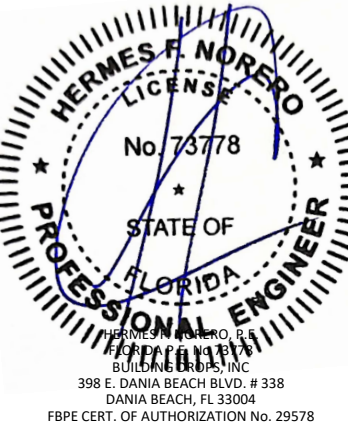
900 S. 19TH STREET.
WEST DES MOINES, IA 50265
PH: (515)223-6660 FAX: (515)224-1938

TITLE: STEEL MULLION STIFFENERS
(WZ3) (IMPACT)
1/4" X 4" TWO WAY
DESIGN PRESSURE TABLE

PREPARED BY:
BUILDING DROPS, INC.
398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004
PH: (954)399-8478
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REMARKS BY DATE
8TH FBC CODE CHANGE MG 02/23

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FL #: FL21905

DATE: 09.10.19

DWG. BY: YC
CHK. BY: HFN

SCALE: NTS

DWG. #: WWD049

SHEET:

11
OF 19

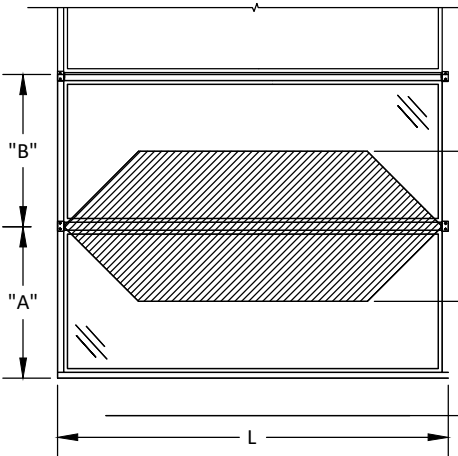
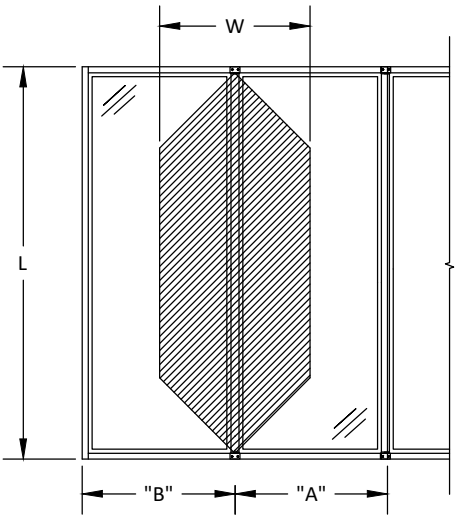
1/2"X4" STIFFENER FOR PINNACLE SERIES PRODUCTS

DESIGN PRESSURE CAPACITIES FOR ONE-WAY CONFIGURATIONS

MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF): 1/2" x 4" STEEL MULLIONS (ONE-WAY CONFIGURATIONS) - INSTALLATION TO CMU																		
L - MULL LENGTH (IN)	W - TRIBUTARY WIDTH (IN)																	
	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0	72.0	78.0	84.0	90.0	96.0	102.0	108.0	114.0	120.0	126.0
60.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
66.0	100.0	100.0	100.0	100.0	97.0	91.4	88.3	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2
72.0	100.0	100.0	97.7	86.5	78.8	73.5	69.9	67.9	67.2	67.2	67.2	67.2	67.2	67.2	67.2	67.2	67.2	67.2
78.0	100.0	96.3	82.1	72.4	65.5	60.5	57.0	54.7	53.3	52.8	52.8	52.8	52.8	52.8	52.8	52.8	52.8	52.8
84.0	100.0	82.5	70.1	61.5	55.3	50.8	47.5	45.2	43.6	42.6	42.3	42.3	42.3	42.3	42.3	42.3	42.3	42.3
90.0	88.1	71.4	60.5	53.0	47.5	43.4	40.3	38.1	36.4	35.3	34.6	34.4	34.4	34.4	34.4	34.4	34.4	34.4
96.0	77.2	62.5	52.9	46.1	41.2	37.5	34.7	32.6	31.0	29.8	29.0	28.5	28.3	28.3	28.3	28.3	28.3	28.3
102.0	68.2	55.2	46.6	40.5	36.1	32.8	30.2	28.3	26.7	25.6	24.7	24.1	23.8	23.6	23.6	23.6	23.6	23.6
108.0	60.7	49.0	41.3	35.9	32.0	28.9	26.6	24.8	23.4	22.2	21.4	20.7	20.3	20.0	19.9	19.9	19.9	19.9
114.0	54.4	43.9	37.0	32.1	28.5	25.7	23.6	21.9	20.6	19.5	18.7	18.0	17.5	17.2	17.0	16.9	16.9	16.9
120.0	49.0	39.5	33.2	28.8	25.5	23.0	21.1	19.5	18.3	17.3	16.5	15.9	15.4	-	-	-	-	-
126.0	44.4	35.8	30.1	26.0	23.0	20.8	19.0	17.5	16.4	15.5	-	-	-	-	-	-	-	-
132.0	40.4	32.5	27.3	23.6	20.9	18.8	17.2	15.8	-	-	-	-	-	-	-	-	-	-
138.0	37.0	29.7	25.0	21.6	19.1	17.1	15.6	-	-	-	-	-	-	-	-	-	-	-
144.0	33.9	27.3	22.9	19.8	17.4	15.7	-	-	-	-	-	-	-	-	-	-	-	-
150.0	30.4	24.4	20.5	17.7	15.7	-	-	-	-	-	-	-	-	-	-	-	-	-
156.0	27.0	21.7	18.2	15.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162.0	24.1	19.4	16.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
168.0	21.6	17.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
174.0	19.4	15.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180.0	17.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
186.0	15.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
192.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
204.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
210.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
222.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
228.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
240.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTE:

- MULLION CHART APPLIES TO ASSEMBLIES WHEN MULLED IN ONE-WAY, STACK OR RIBBON, CONFIGURATIONS. TYPICAL ELEVATIONS SHOWN AT RIGHT.
- DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
- MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
- DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS SHALL BE UNDER SEPARATE FL APPROVAL.
- TRIBUTARY WIDTH = $W = (A+B)/2$
- REFER TO SHEETS 4-7 FOR INSTALLATION DETAILS.
- WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



WINDSOR WINDOWS & DOORS

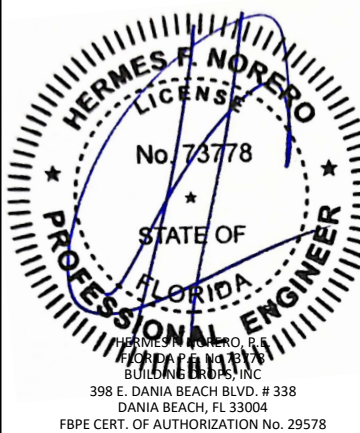
900 S. 19TH STREET.
WEST DES MOINES, IA 50265
PH: (515)223-6660 FAX: (515)224-1938

TITLE: STEEL MULLION STIFFENERS
(WZ3) (IMPACT)
1/2" X 4" ONE WAY
DESIGN PRESSURE TABLE

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
8TH FBC CODE CHANGE	MG	02/23

THE INSTALLATION DETAILS DESCRIBED HERE IN 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.



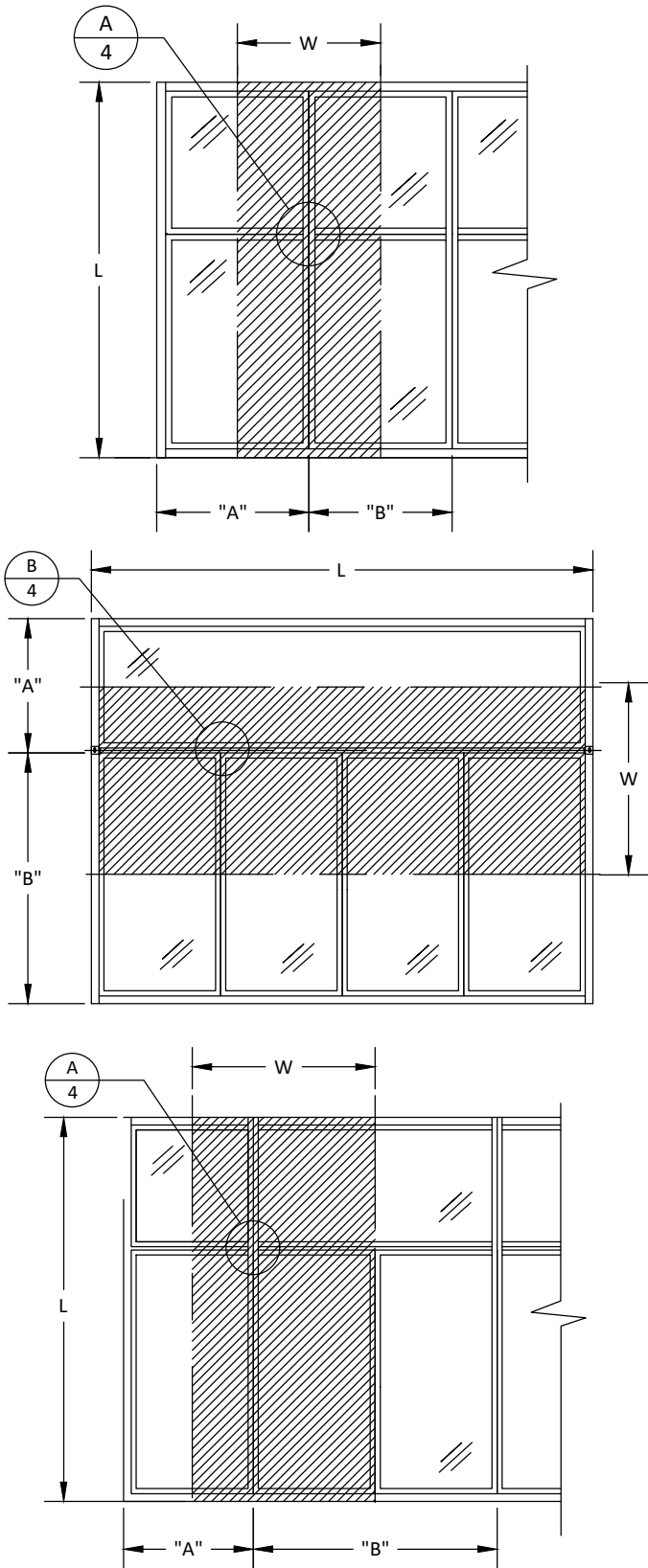
FL #:	FL21905
DATE:	09.10.19
DWG. BY:	YC
CHK. BY:	HFN
SCALE:	NTS
DWG. #:	WWD049
SHEET:	

1/2"X4" STIFFENER FOR PINNACLE SERIES PRODUCTS

DESIGN PRESSURE CAPACITIES FOR TWO-WAY CONFIGURATIONS

MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF): 1/2" x 4" STEEL MULLIONS (TWO-WAY CONFIGURATIONS)																		
L - MULL LENGTH (IN)	W - TRIBUTARY WIDTH (IN)																	
	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0	72.0	78.0	84.0	90.0	96.0	102.0	108.0	114.0	120.0	126.0
60.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.4	90.4	85.1	80.4	76.1	72.3	68.9
66.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.4	91.4	85.3	79.9	75.2	71.1	67.3	64.0	60.9
72.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.7	89.6	82.7	76.8	71.6	67.2	63.2	59.7	56.6	53.7	51.2
78.0	100.0	100.0	100.0	100.0	100.0	100.0	91.6	83.3	76.3	70.4	65.4	61.1	57.2	53.9	50.9	48.2	45.8	43.6
84.0	100.0	100.0	100.0	100.0	98.7	87.7	79.0	71.8	65.8	60.7	56.4	52.6	49.4	46.4	43.9	41.6	39.5	37.6
90.0	100.0	100.0	100.0	98.3	86.0	76.4	68.8	62.5	57.3	52.9	49.1	45.9	43.0	40.5	38.2	36.2	34.4	32.8
96.0	100.0	100.0	100.0	86.4	75.6	67.2	60.5	55.0	50.4	46.5	43.2	40.3	37.8	35.6	33.6	31.8	30.2	28.8
102.0	100.0	100.0	89.3	76.5	66.9	59.5	53.6	48.7	44.6	41.2	38.3	35.7	33.5	31.5	29.8	28.2	26.8	25.5
108.0	100.0	95.5	79.6	68.2	59.7	53.1	47.8	43.4	39.8	36.7	34.1	31.8	29.9	28.1	26.5	25.1	23.9	22.7
114.0	100.0	85.7	71.5	61.2	53.6	47.6	42.9	39.0	35.7	33.0	30.6	28.6	26.8	25.2	23.8	22.6	21.4	20.4
120.0	96.7	77.4	64.5	55.3	48.4	43.0	38.7	35.2	32.2	29.8	27.6	25.8	24.2	22.8	21.5	20.4	19.3	18.4
126.0	87.7	70.2	58.5	50.1	43.9	39.0	35.1	31.9	29.2	27.0	25.1	23.4	21.9	20.6	19.5	18.5	17.5	16.7
132.0	79.9	64.0	53.3	45.7	40.0	35.5	32.0	29.1	26.6	24.6	22.8	21.3	20.0	18.8	17.8	16.8	16.0	15.2
138.0	73.1	58.5	48.8	41.8	36.6	32.5	29.3	26.6	24.4	22.5	20.9	19.5	18.3	17.2	16.3	15.4	-	-
144.0	67.2	53.7	44.8	38.4	33.6	29.9	26.9	24.4	22.4	20.7	19.2	17.9	16.8	15.8	-	-	-	-
150.0	60.2	48.1	40.1	34.4	30.1	26.7	24.1	21.9	20.1	18.5	17.2	16.0	15.0	-	-	-	-	-
156.0	53.5	42.8	35.7	30.6	26.8	23.8	21.4	19.5	17.8	16.5	15.3	-	-	-	-	-	-	-
162.0	47.8	38.2	31.9	27.3	23.9	21.2	19.1	17.4	15.9	-	-	-	-	-	-	-	-	-
168.0	42.8	34.3	28.6	24.5	21.4	19.0	17.1	15.6	-	-	-	-	-	-	-	-	-	-
174.0	38.6	30.8	25.7	22.0	19.3	17.1	15.4	-	-	-	-	-	-	-	-	-	-	-
180.0	34.8	27.9	23.2	19.9	17.4	15.5	-	-	-	-	-	-	-	-	-	-	-	-
186.0	31.6	25.3	21.0	18.0	15.8	-	-	-	-	-	-	-	-	-	-	-	-	-
192.0	28.7	23.0	19.1	16.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198.0	26.2	20.9	17.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
204.0	23.9	19.1	16.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
210.0	21.9	17.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216.0	20.2	16.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
222.0	18.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
228.0	17.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234.0	15.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
240.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- NOTE:
- MULLION CHART APPLIES TO ASSEMBLIES WHEN MULLED IN TWO-WAY, 'X' OR 'T' CONFIGURATIONS. TYPICAL ELEVATIONS SHOWN AT RIGHT.
 - DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
 - MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
 - DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS SHALL BE UNDER SEPARATE FL APPROVAL.
 - TRIBUTARY WIDTH = $W = (A+B)/2$
 - REFER TO SHEETS 4-7 FOR INSTALLATION DETAILS.
 - WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



WINDSOR WINDOWS & DOORS

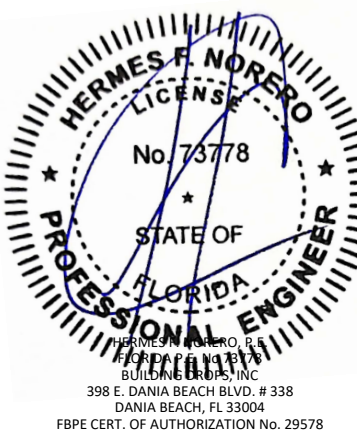
900 S. 19TH STREET.
WEST DES MOINES, IA 50265
PH: (515)223-6660 FAX: (515)224-1938

TITLE: STEEL MULLION STIFFENERS
(WZ3) (IMPACT)
1/2" X 4" TWO WAY
DESIGN PRESSURE TABLE

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
8TH FBC CODE CHANGE	MG	02/23

THE INSTALLATION DETAILS DESCRIBED HERE IN 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.



FL #:	FL21905
DATE:	09.10.19
DWG. BY:	YC
CHK. BY:	HFN
SCALE:	NTS
DWG. #:	WWD049
SHEET:	

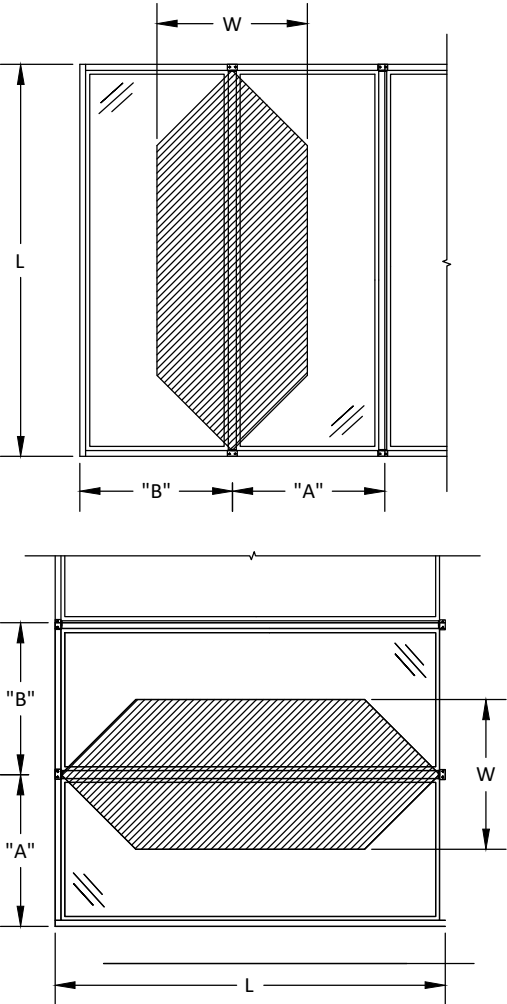
3/4"X4" STIFFENER FOR PINNACLE SERIES PRODUCTS


DESIGN PRESSURE CAPACITIES FOR ONE-WAY CONFIGURATIONS

MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF): 0.75" X 4" STEEL MULLION (ONE-WAY CONFIGURATIONS) - INSTALLATION TO WOOD, CONCRETE, ALUMINUM, OR STEEL																		
L - MULL LENGTH (IN)	W - TRIBUTARY WIDTH (IN)																	
	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0	72.0	78.0	84.0	90.0	96.0	102.0	108.0	114.0	120.0	126.0
60.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
66.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
72.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
78.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.3	96.7	95.2	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7
90.0	100.0	100.0	100.0	100.0	100.0	98.2	92.8	88.8	85.9	84.0	82.9	82.5	82.5	82.5	82.5	82.5	82.5	82.5
96.0	100.0	100.0	100.0	100.0	96.7	89.7	84.4	80.3	77.3	75.1	73.7	72.8	72.5	72.5	72.5	72.5	72.5	72.5
102.0	100.0	100.0	100.0	98.2	89.2	82.5	77.3	73.4	70.3	68.0	66.3	65.1	64.4	64.2	64.2	64.2	64.2	64.2
108.0	100.0	100.0	100.0	91.4	82.9	76.4	71.4	67.5	64.4	62.1	60.3	58.9	58.0	57.5	57.3	57.3	57.3	57.3
114.0	100.0	100.0	96.7	85.5	77.3	71.1	66.3	62.5	59.5	57.1	55.2	53.8	52.7	51.7	51.1	50.9	50.9	50.9
120.0	100.0	100.0	91.0	80.3	72.5	66.5	61.9	58.2	55.1	52.1	49.6	47.7	46.2	45.1	44.3	43.8	43.6	43.6
126.0	100.0	100.0	85.9	75.8	68.2	62.4	57.1	52.8	49.3	46.5	44.2	42.4	40.9	39.7	38.8	38.2	37.8	37.7
132.0	100.0	95.2	81.4	71.1	62.9	56.6	51.6	47.7	44.5	41.8	39.7	37.9	36.5	35.3	34.4	33.7	33.2	32.9
138.0	100.0	89.4	75.0	64.9	57.3	51.5	46.9	43.3	40.3	37.9	35.8	34.2	32.8	31.6	30.7	30.0	29.4	29.0
144.0	100.0	82.0	68.8	59.4	52.5	47.1	42.9	39.5	36.7	34.4	32.5	31.0	29.6	28.5	27.6	26.9	26.3	25.8
150.0	91.4	73.5	61.7	53.4	47.2	42.4	38.7	35.6	33.2	31.1	29.4	28.0	26.8	25.8	25.0	24.3	23.7	23.2
156.0	81.1	65.3	54.8	47.3	41.8	37.6	34.2	31.5	29.3	27.4	25.9	24.6	23.5	22.6	21.9	21.2	20.7	20.3
162.0	72.4	58.2	48.8	42.2	37.2	33.4	30.4	28.0	26.0	24.3	22.9	21.8	20.8	19.9	19.2	18.6	18.1	17.7
168.0	64.9	52.2	43.7	37.7	33.3	29.9	27.1	25.0	23.2	21.7	20.4	19.3	18.4	17.7	17.0	16.4	16.0	15.6
174.0	58.4	46.9	39.3	33.9	29.9	26.8	24.3	22.4	20.7	19.4	18.2	17.3	16.4	15.7	15.1	-	-	-
180.0	52.7	42.3	35.5	30.6	26.9	24.1	21.9	20.1	18.6	17.4	16.4	15.5	-	-	-	-	-	-
186.0	47.7	38.3	32.1	27.7	24.4	21.8	19.8	18.2	16.8	15.7	-	-	-	-	-	-	-	-
192.0	43.4	34.8	29.2	25.1	22.1	19.8	18.0	16.5	15.2	-	-	-	-	-	-	-	-	-
198.0	39.5	31.7	26.6	22.9	20.1	18.0	16.3	-	-	-	-	-	-	-	-	-	-	-
204.0	36.1	29.0	24.3	20.9	18.4	16.4	-	-	-	-	-	-	-	-	-	-	-	-
210.0	33.1	26.6	22.2	19.1	16.8	15.1	-	-	-	-	-	-	-	-	-	-	-	-
216.0	30.4	24.4	20.4	17.6	15.5	-	-	-	-	-	-	-	-	-	-	-	-	-
222.0	28.0	22.5	18.8	16.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
228.0	25.9	20.7	17.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234.0	23.9	19.2	16.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
240.0	22.2	17.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTE:

1. MULLION CHART APPLIES TO ASSEMBLIES WHEN MULLED IN ONE-WAY, STACK OR RIBBON, CONFIGURATIONS. TYPICAL ELEVATIONS SHOWN AT RIGHT.
2. DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
3. MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
4. DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS SHALL BE UNDER SEPARATE FL APPROVAL.
5. TRIBUTARY WIDTH = $W = (A+B)/2$
6. REFER TO SHEETS 4-7 FOR INSTALLATION DETAILS.
7. WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.





WINDSOR WINDOWS & DOORS
A Woodgrain Millwork Company

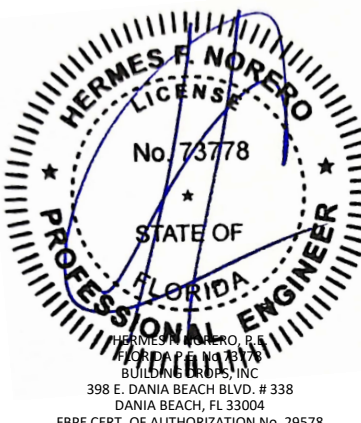
WINDSOR WINDOWS & DOORS
900 S. 19TH STREET.
WEST DES MOINES, IA 50265
PH: (515)223-6660 FAX: (515)224-1938

TITLE: STEEL MULLION STIFFENERS (WZ3) (IMPACT) 3/4" X 4" ONE WAY DESIGN PRESSURE TABLE

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
8TH FBC CODE CHANGE	MG	02/23

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

FL #:

FL21905

DATE: 09.10.19

DWG. BY: YC	CHK. BY: HFN
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SCALE: NTS

DWG. #: WWD049

SHEET:

14 OF 19

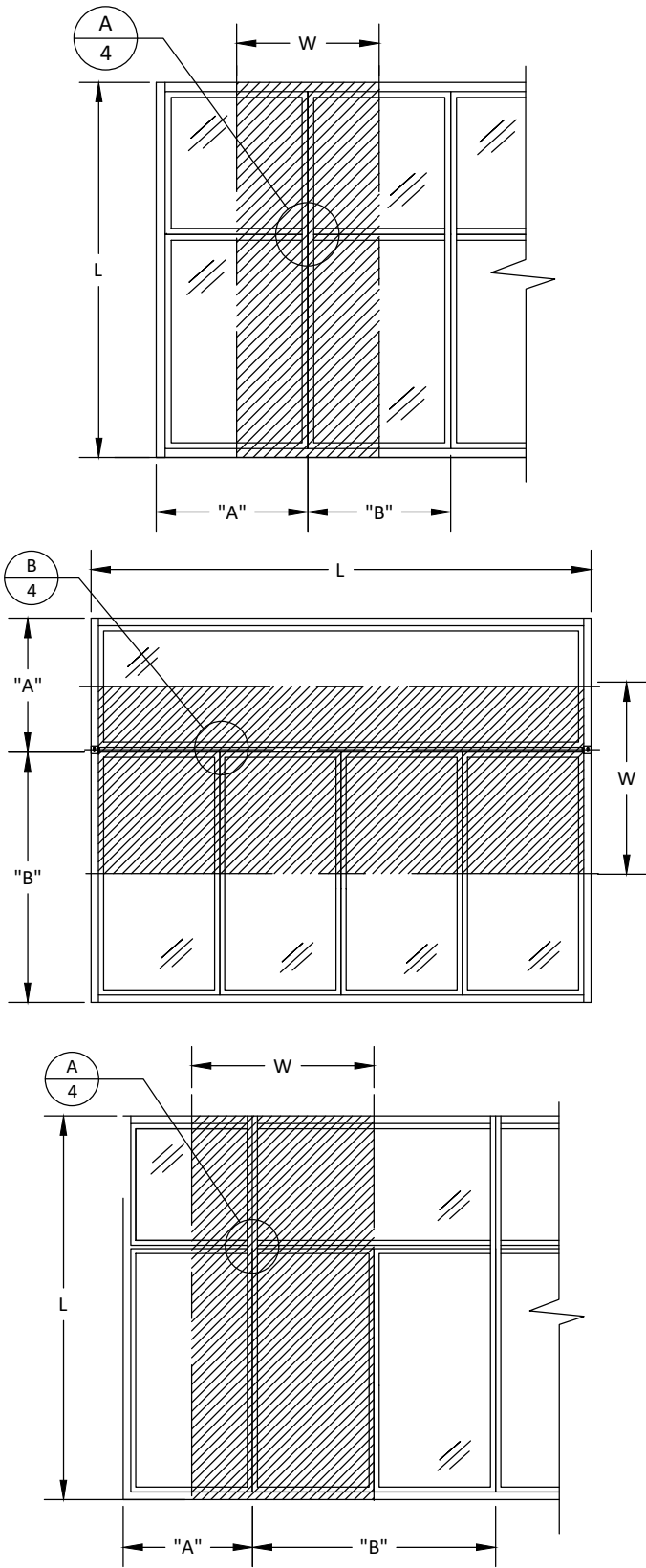
3/4"X4" STIFFENER FOR PINNACLE SERIES PRODUCTS

DESIGN PRESSURE CAPACITIES FOR TWO-WAY CONFIGURATIONS

MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF): 3/4" X 4" MULLIONS (TWO-WAY CONFIGURATIONS)																		
L - MULL LENGTH (IN)	W - TRIBUTARY WIDTH (IN)																	
	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0	72.0	78.0	84.0	90.0	96.0	102.0	108.0	114.0	120.0	126.0
60.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.4	90.4	85.1	80.4	76.1	72.3	68.9
66.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	93.9	87.7	82.2	77.3	73.1	69.2	65.7	62.6
72.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	92.7	86.1	80.4	75.3	70.9	67.0	63.4	60.3	57.4
78.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	92.7	85.6	79.5	74.2	69.5	65.4	61.8	58.6	55.6	53.0
84.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	93.9	86.1	79.5	73.8	68.9	64.6	60.8	57.4	54.4	51.7	49.2
90.0	100.0	100.0	100.0	100.0	100.0	100.0	96.4	87.7	80.4	74.2	68.9	64.3	60.3	56.7	53.6	50.8	48.2	45.9
96.0	100.0	100.0	100.0	100.0	100.0	100.0	90.4	82.2	75.3	69.5	64.6	60.3	56.5	53.2	50.2	47.6	45.2	43.0
102.0	100.0	100.0	100.0	100.0	100.0	89.5	80.5	73.2	67.1	61.9	57.5	53.7	50.3	47.4	44.7	42.4	40.3	38.3
108.0	100.0	100.0	100.0	100.0	89.8	79.8	71.8	65.3	59.9	55.3	51.3	47.9	44.9	42.3	39.9	37.8	35.9	34.2
114.0	100.0	100.0	100.0	92.1	80.6	71.6	64.5	58.6	53.7	49.6	46.0	43.0	40.3	37.9	35.8	33.9	32.2	30.7
120.0	100.0	100.0	97.0	83.1	72.7	64.6	58.2	52.9	48.5	44.8	41.6	38.8	36.4	34.2	32.3	30.6	29.1	27.7
126.0	100.0	100.0	88.0	75.4	66.0	58.6	52.8	48.0	44.0	40.6	37.7	35.2	33.0	31.0	29.3	27.8	26.4	25.1
132.0	100.0	96.2	80.1	68.7	60.1	53.4	48.1	43.7	40.1	37.0	34.3	32.1	30.1	28.3	26.7	25.3	24.0	22.9
138.0	100.0	88.0	73.3	62.8	55.0	48.9	44.0	40.0	36.7	33.8	31.4	29.3	27.5	25.9	24.4	23.2	22.0	20.9
144.0	99.5	79.6	66.3	56.8	49.7	44.2	39.8	36.2	33.2	30.6	28.4	26.5	24.9	23.4	22.1	20.9	19.9	18.9
150.0	88.0	70.4	58.7	50.3	44.0	39.1	35.2	32.0	29.3	27.1	25.1	23.5	22.0	20.7	19.6	18.5	17.6	16.8
156.0	78.2	62.6	52.1	44.7	39.1	34.8	31.3	28.4	26.1	24.1	22.3	20.9	19.6	18.4	17.4	16.5	15.6	-
162.0	69.8	55.9	46.6	39.9	34.9	31.0	27.9	25.4	23.3	21.5	20.0	18.6	17.5	16.4	15.5	-	-	-
168.0	62.6	50.1	41.8	35.8	31.3	27.8	25.1	22.8	20.9	19.3	17.9	16.7	15.7	-	-	-	-	-
174.0	56.4	45.1	37.6	32.2	28.2	25.1	22.5	20.5	18.8	17.3	16.1	15.0	-	-	-	-	-	-
180.0	50.9	40.7	33.9	29.1	25.5	22.6	20.4	18.5	17.0	15.7	-	-	-	-	-	-	-	-
186.0	46.1	36.9	30.8	26.4	23.1	20.5	18.5	16.8	15.4	-	-	-	-	-	-	-	-	-
192.0	42.0	33.6	28.0	24.0	21.0	18.6	16.8	15.3	-	-	-	-	-	-	-	-	-	-
198.0	38.3	30.6	25.5	21.9	19.1	17.0	15.3	-	-	-	-	-	-	-	-	-	-	-
204.0	35.0	28.0	23.3	20.0	17.5	15.5	-	-	-	-	-	-	-	-	-	-	-	-
210.0	32.1	25.7	21.4	18.3	16.0	-	-	-	-	-	-	-	-	-	-	-	-	-
216.0	29.5	23.6	19.6	16.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
222.0	27.1	21.7	18.1	15.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
228.0	25.1	20.0	16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234.0	23.2	18.5	15.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
240.0	21.5	17.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTE:

1. MULLION CHART APPLIES TO ASSEMBLIES WHEN MULLED IN TWO-WAY,'X' OR 'T' CONFIGURATIONS. TYPICAL ELEVATIONS SHOWN AT RIGHT.
2. DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
3. MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
4. DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS SHALL BE UNDER SEPARATE FL APPROVAL.
5. TRIBUTARY WIDTH = $W = (A+B)/2$
6. REFER TO SHEETS 4-7 FOR INSTALLATION DETAILS.
7. WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



WINDSOR WINDOWS & DOORS

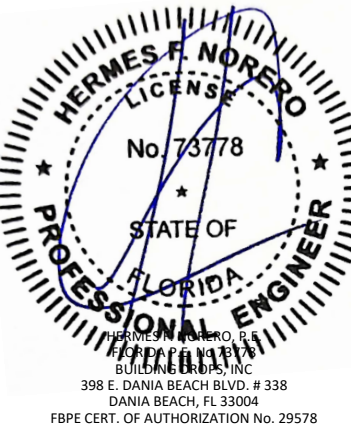
900 S. 19TH STREET.
WEST DES MOINES, IA 50265
PH: (515)223-6660 FAX: (515)224-1938

TITLE: STEEL MULLION STIFFENERS
(WZ3) (IMPACT)
3/4" X 4" TWO WAY
DESIGN PRESSURE TABLE

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
8TH FBC CODE CHANGE	MG	02/23

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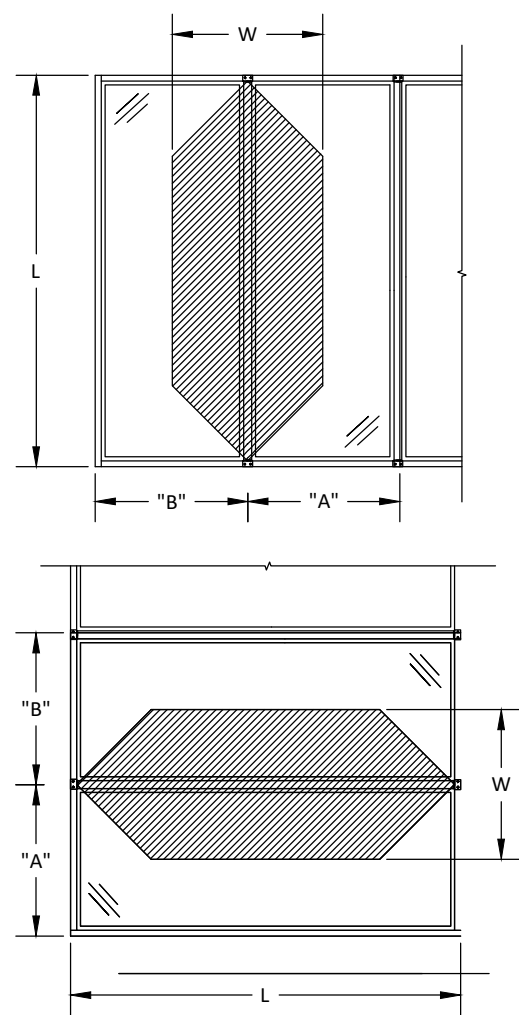
FL #:	FL21905
DATE:	09.10.19
DWG. BY:	YC
CHK. BY:	HFN
SCALE:	NTS
DWG. #:	WWD049
SHEET:	15 OF 19

1/4"X5" STIFFENER FOR PINNACLE SERIES PRODUCTS

DESIGN PRESSURE CAPACITIES FOR ONE-WAY CONFIGURATIONS

MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF): 0.25" X 5" (ONE-WAY CONFIGURATIONS) - INSTALLATION TO WOOD, CONCRETE, ALUMINUM, OR STEEL																		
L - MULL LENGTH (IN)	W - TRIBUTARY WIDTH (IN)																	
	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0	72.0	78.0	84.0	90.0	96.0	102.0	108.0	114.0	120.0	126.0
60.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
66.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
72.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
78.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84.0	100.0	100.0	100.0	100.0	100.0	99.4	92.9	88.3	85.2	83.3	82.7	82.7	82.7	82.7	82.7	82.7	82.7	82.7
90.0	100.0	100.0	100.0	100.0	92.8	84.8	78.9	74.4	71.2	69.0	67.7	67.2	67.2	67.2	67.2	67.2	67.2	67.2
96.0	100.0	100.0	100.0	90.2	80.5	73.4	67.9	63.7	60.6	58.3	56.7	55.7	55.4	55.4	55.4	55.4	55.4	55.4
102.0	100.0	100.0	91.0	79.2	70.6	64.1	59.1	55.3	52.3	50.0	48.3	47.1	46.4	46.2	46.2	46.2	46.2	46.2
108.0	100.0	95.9	80.8	70.2	62.5	56.6	52.0	48.5	45.6	43.5	41.8	40.5	39.6	39.1	38.9	38.9	38.9	38.9
114.0	100.0	85.8	72.3	62.7	55.7	50.3	46.1	42.9	40.3	38.2	36.5	35.3	34.3	33.6	33.2	33.1	33.1	33.1
120.0	95.9	77.3	65.0	56.3	49.9	45.1	41.2	38.2	35.8	33.8	32.3	31.0	30.0	29.3	28.8	28.5	28.4	28.4
126.0	86.8	69.9	58.8	50.9	45.1	40.6	37.1	34.3	32.1	30.2	28.7	27.5	26.6	25.8	25.2	24.8	24.6	24.5
132.0	79.0	63.6	53.4	46.2	40.9	36.8	33.6	31.0	28.9	27.2	25.8	24.6	23.7	22.9	22.3	21.9	21.6	21.4
138.0	72.2	58.1	48.8	42.2	37.2	33.5	30.5	28.1	26.2	24.6	23.3	22.2	21.3	20.6	20.0	19.5	19.1	18.9
144.0	66.3	53.3	44.7	38.6	34.1	30.6	27.9	25.7	23.9	22.4	21.1	20.1	19.3	18.5	17.9	17.5	17.1	16.8
150.0	59.4	47.8	40.1	34.7	30.7	27.6	25.1	23.2	21.6	20.2	19.1	18.2	17.4	16.8	16.2	15.8	15.4	15.1
156.0	52.7	42.4	35.6	30.8	27.2	24.4	22.2	20.5	19.0	17.8	16.8	16.0	15.3	-	-	-	-	-
162.0	47.1	37.9	31.7	27.4	24.2	21.7	19.8	18.2	16.9	15.8	-	-	-	-	-	-	-	-
168.0	42.2	33.9	28.4	24.5	21.6	19.4	17.6	16.2	15.0	-	-	-	-	-	-	-	-	-
174.0	37.9	30.5	25.5	22.0	19.4	17.4	15.8	-	-	-	-	-	-	-	-	-	-	-
180.0	34.2	27.5	23.0	19.9	17.5	15.7	-	-	-	-	-	-	-	-	-	-	-	-
186.0	31.0	24.9	20.9	18.0	15.8	-	-	-	-	-	-	-	-	-	-	-	-	-
192.0	28.2	22.6	19.0	16.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198.0	25.7	20.6	17.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
204.0	23.5	18.9	15.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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222.0	18.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
228.0	16.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234.0	15.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
240.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- NOTE:
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 - DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
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WINDSOR WINDOWS
& DOORS

900 S. 19TH STREET.
WEST DES MOINES, IA 50265
PH: (515)223-6660 FAX: (515)224-1938

TITLE: STEEL MULLION STIFFENERS
(WZ3) (IMPACT)
1/4" X 5" ONE WAY
DESIGN PRESSURE TABLE

PREPARED BY: BUILDING DROPS, INC.
398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004
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YC	HFN
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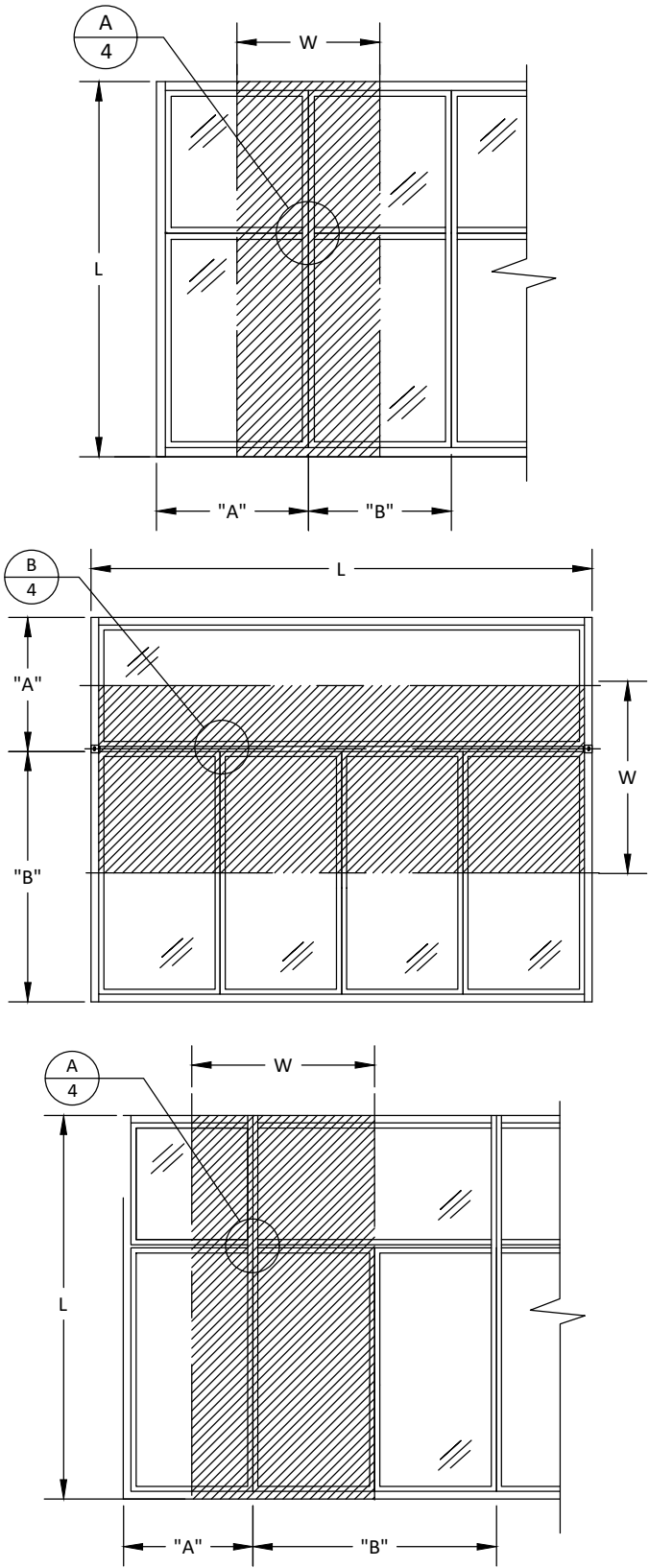
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60.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	94.5	89.0	84.0	79.6	75.6	72.0
66.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.2	89.3	83.3	78.1	73.5	69.5	65.8	62.5	59.5
72.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	95.5	87.5	80.8	75.0	70.0	65.7	61.8	58.4	55.3	52.5	50.0
78.0	100.0	100.0	100.0	100.0	100.0	99.5	89.5	81.4	74.6	68.9	63.9	59.7	55.9	52.7	49.7	47.1	44.8	42.6
84.0	100.0	100.0	100.0	100.0	96.5	85.8	77.2	70.2	64.3	59.4	55.1	51.5	48.2	45.4	42.9	40.6	38.6	36.8
90.0	100.0	100.0	100.0	96.0	84.0	74.7	67.2	61.1	56.0	51.7	48.0	44.8	42.0	39.5	37.4	35.4	33.6	32.0
96.0	100.0	100.0	98.5	84.4	73.9	65.7	59.1	53.7	49.2	45.5	42.2	39.4	36.9	34.8	32.8	31.1	29.5	28.1
102.0	100.0	100.0	87.2	74.8	65.4	58.2	52.3	47.6	43.6	40.3	37.4	34.9	32.7	30.8	29.1	27.5	26.2	24.9
108.0	100.0	93.4	77.8	66.7	58.4	51.9	46.7	42.4	38.9	35.9	33.3	31.1	29.2	27.5	25.9	24.6	23.3	22.2
114.0	100.0	83.8	69.8	59.9	52.4	46.6	41.9	38.1	34.9	32.2	29.9	27.9	26.2	24.6	23.3	22.1	21.0	20.0
120.0	94.5	75.6	63.0	54.0	47.3	42.0	37.8	34.4	31.5	29.1	27.0	25.2	23.6	22.2	21.0	19.9	18.9	18.0
126.0	85.8	68.6	57.2	49.0	42.9	38.1	34.3	31.2	28.6	26.4	24.5	22.9	21.4	20.2	19.1	18.1	17.2	16.3
132.0	78.1	62.5	52.1	44.6	39.1	34.7	31.3	28.4	26.0	24.0	22.3	20.8	19.5	18.4	17.4	16.4	15.6	-
138.0	71.5	57.2	47.7	40.9	35.7	31.8	28.6	26.0	23.8	22.0	20.4	19.1	17.9	16.8	15.9	15.1	-	-
144.0	64.6	51.7	43.1	36.9	32.3	28.7	25.9	23.5	21.5	19.9	18.5	17.2	16.2	15.2	-	-	-	-
150.0	57.2	45.8	38.1	32.7	28.6	25.4	22.9	20.8	19.1	17.6	16.3	15.3	-	-	-	-	-	-
156.0	50.8	40.7	33.9	29.1	25.4	22.6	20.3	18.5	16.9	15.6	-	-	-	-	-	-	-	-
162.0	45.4	36.3	30.3	25.9	22.7	20.2	18.2	16.5	15.1	-	-	-	-	-	-	-	-	-
168.0	40.7	32.6	27.1	23.3	20.4	18.1	16.3	-	-	-	-	-	-	-	-	-	-	-
174.0	36.6	29.3	24.4	20.9	18.3	16.3	-	-	-	-	-	-	-	-	-	-	-	-
180.0	33.1	26.5	22.1	18.9	16.5	-	-	-	-	-	-	-	-	-	-	-	-	-
186.0	30.0	24.0	20.0	17.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
192.0	27.3	21.8	18.2	15.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
198.0	24.9	19.9	16.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
204.0	22.7	18.2	15.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
210.0	20.8	16.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216.0	19.2	15.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
222.0	17.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
228.0	16.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234.0	15.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
240.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTE:

1. MULLION CHART APPLIES TO ASSEMBLIES WHEN MULLED IN TWO-WAY,'X' OR 'T' CONFIGURATIONS. TYPICAL ELEVATIONS SHOWN AT RIGHT.
2. DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
3. MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
4. DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS SHALL BE UNDER SEPARATE FL APPROVAL.
5. TRIBUTARY WIDTH = W = (A+B)/2
6. REFER TO SHEETS 4-7 FOR INSTALLATION DETAILS.
7. WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



WINDSOR WINDOWS & DOORS

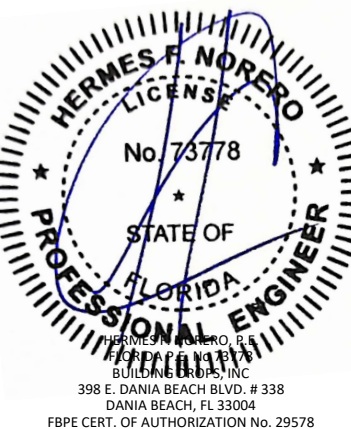
900 S. 19TH STREET.
WEST DES MOINES, IA 50265
PH: (515)223-6660 FAX: (515)224-1938

TITLE: STEEL MULLION STIFFENERS (WZ3) (IMPACT) 1/4" X 5" TWO WAY DESIGN PRESSURE TABLE

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
8TH FBC CODE CHANGE	MG	02/23

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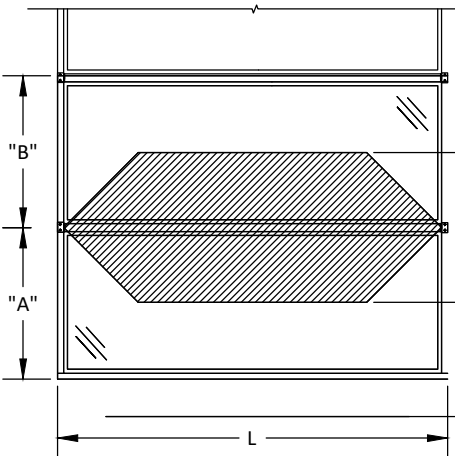
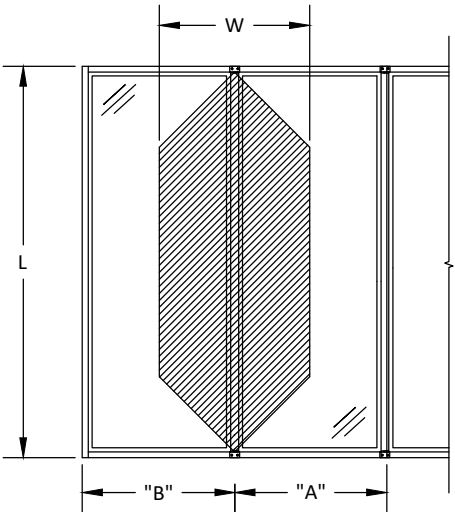
FL #:	FL21905
DATE:	09.10.19
DWG. BY:	YC
CHK. BY:	HFN
SCALE:	NTS
DWG. #:	WWD049
SHEET:	17 OF 19

1/2"X5" STIFFENER FOR PINNACLE SERIES PRODUCTS

DESIGN PRESSURE CAPACITIES FOR ONE-WAY CONFIGURATIONS

MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF): 1/2" X 5" (ONE-WAY CONFIGURATIONS)																		
L - MULL LENGTH (IN)	W - TRIBUTARY WIDTH (IN)																	
	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0	72.0	78.0	84.0	90.0	96.0	102.0	108.0	114.0	120.0	126.0
60.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
66.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
72.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
78.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
90.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
96.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
102.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.6	94.3	92.9	92.4	92.4	92.4	92.4	92.4
108.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.9	91.3	86.9	83.5	81.0	79.2	78.2	77.8	77.8	77.8	77.8
114.0	100.0	100.0	100.0	100.0	100.0	100.0	92.3	85.7	80.5	76.3	73.1	70.5	68.6	67.2	66.4	66.2	66.2	66.2
120.0	100.0	100.0	100.0	100.0	99.9	90.1	82.5	76.4	71.6	67.7	64.5	62.0	60.1	58.6	57.6	56.9	56.7	56.7
126.0	100.0	100.0	100.0	100.0	90.1	81.2	74.2	68.6	64.1	60.5	57.5	55.1	53.1	51.6	50.5	49.7	49.2	49.0
132.0	100.0	100.0	100.0	92.4	81.7	73.6	67.1	62.0	57.8	54.4	51.6	49.3	47.4	45.9	44.7	43.8	43.1	42.8
138.0	100.0	100.0	97.6	84.3	74.5	67.0	61.0	56.3	52.4	49.2	46.6	44.4	42.6	41.1	39.9	39.0	38.2	37.7
144.0	100.0	100.0	89.4	77.2	68.2	61.2	55.7	51.3	47.7	44.8	42.3	40.2	38.5	37.1	35.9	34.9	34.2	33.6
150.0	100.0	95.6	80.3	69.4	61.3	55.1	50.2	46.3	43.1	40.5	38.3	36.4	34.9	33.6	32.5	31.5	30.8	30.1
156.0	100.0	84.9	71.2	61.5	54.3	48.8	44.4	40.9	38.0	35.7	33.7	32.0	30.6	29.4	28.4	27.6	26.9	26.4
162.0	94.1	75.7	63.5	54.8	48.4	43.4	39.5	36.4	33.8	31.6	29.8	28.3	27.0	25.9	25.0	24.2	23.6	23.0
168.0	84.3	67.8	56.8	49.1	43.3	38.8	35.3	32.4	30.1	28.1	26.5	25.1	24.0	23.0	22.1	21.4	20.8	20.2
174.0	75.9	61.0	51.1	44.1	38.9	34.8	31.7	29.1	27.0	25.2	23.7	22.4	21.4	20.4	19.7	19.0	18.4	17.9
180.0	68.5	55.0	46.1	39.8	35.0	31.4	28.5	26.2	24.2	22.6	21.3	20.1	19.1	18.3	17.6	16.9	16.4	15.9
186.0	62.1	49.8	41.7	36.0	31.7	28.4	25.8	23.6	21.9	20.4	19.2	18.1	17.2	16.4	15.8	15.2	-	-
192.0	56.4	45.3	37.9	32.7	28.8	25.7	23.4	21.4	19.8	18.5	17.3	16.4	15.5	-	-	-	-	-
198.0	51.4	41.3	34.5	29.8	26.2	23.4	21.2	19.5	18.0	16.8	15.7	-	-	-	-	-	-	-
204.0	47.0	37.7	31.5	27.2	23.9	21.4	19.4	17.7	16.4	15.3	-	-	-	-	-	-	-	-
210.0	43.1	34.5	28.9	24.9	21.9	19.6	17.7	16.2	-	-	-	-	-	-	-	-	-	-
216.0	39.6	31.7	26.5	22.8	20.1	18.0	16.3	-	-	-	-	-	-	-	-	-	-	-
222.0	36.4	29.2	24.4	21.0	18.5	16.5	-	-	-	-	-	-	-	-	-	-	-	-
228.0	33.6	27.0	22.5	19.4	17.0	15.2	-	-	-	-	-	-	-	-	-	-	-	-
234.0	31.1	24.9	20.8	17.9	15.8	-	-	-	-	-	-	-	-	-	-	-	-	-
240.0	28.8	23.1	19.3	16.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- NOTE:
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 - TRIBUTARY WIDTH = $W = (A+B)/2$
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WINDSOR WINDOWS & DOORS

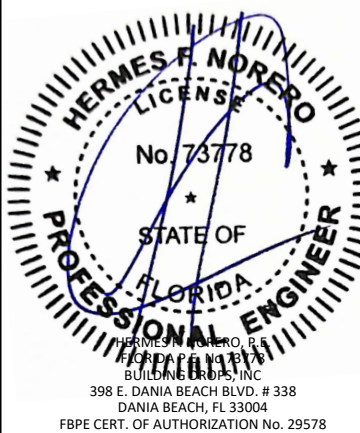
900 S. 19TH STREET.
WEST DES MOINES, IA 50265
PH: (515)223-6660 FAX: (515)224-1938

TITLE: STEEL MULLION STIFFENERS
(WZ3) (IMPACT)
1/2"X5" ONE WAY
DESIGN PRESSURE TABLE

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
8TH FBC CODE CHANGE	MG	02/23

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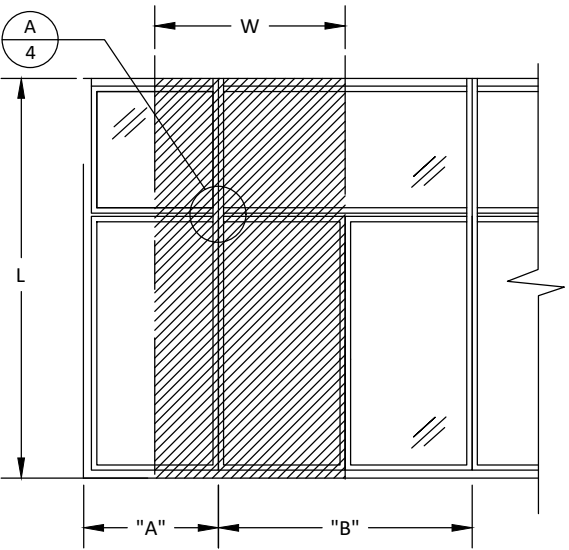
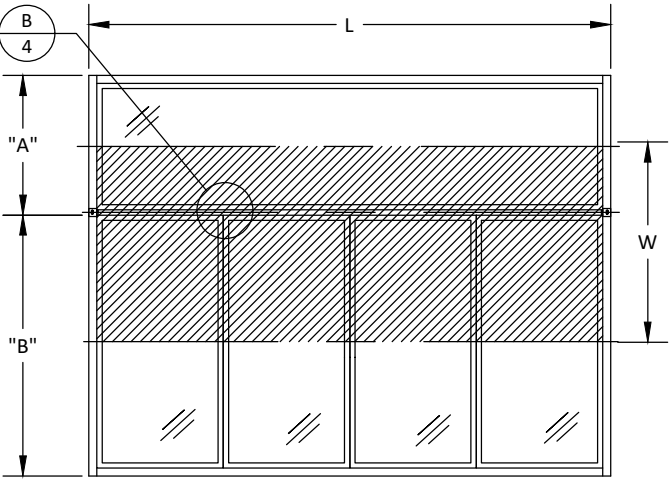
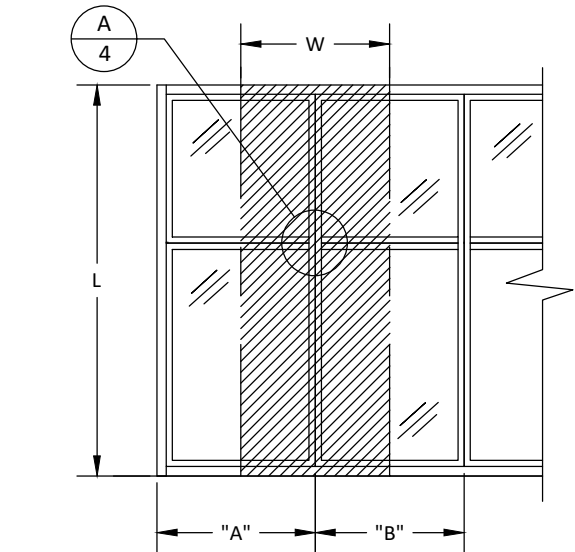
FL #:	FL21905
DATE:	09.10.19
DWG. BY:	CHK. BY:
YC	HFN
SCALE:	NTS
DWG. #:	WWD049
SHEET:	

1/2"X 5" STIFFENER FOR PINNACLE SERIES PRODUCTS

DESIGN PRESSURE CAPACITIES FOR TWO-WAY CONFIGURATIONS

MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF):1/2" X 5" MULLIONS (TWO-WAY CONFIGURATIONS)																		
L - MULL LENGTH (IN)	W - TRIBUTARY WIDTH (IN)																	
	24.0	30.0	36.0	42.0	48.0	54.0	60.0	66.0	72.0	78.0	84.0	90.0	96.0	102.0	108.0	114.0	120.0	126.0
60.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.4	90.4	85.1	80.4	76.1	72.3	68.9
66.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	93.9	87.7	82.2	77.3	73.1	69.2	65.7	62.6
72.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	92.7	86.1	80.4	75.3	70.9	67.0	63.4	60.3	57.4
78.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	92.7	85.6	79.5	74.2	69.5	65.4	61.8	58.6	55.6	53.0
84.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	93.9	86.1	79.5	73.8	68.9	64.6	60.8	57.4	54.4	51.7	49.2
90.0	100.0	100.0	100.0	100.0	100.0	100.0	96.4	87.7	80.4	74.2	68.9	64.3	60.3	56.7	53.6	50.8	48.2	45.9
96.0	100.0	100.0	100.0	100.0	100.0	100.0	90.4	82.2	75.3	69.5	64.6	60.3	56.5	53.2	50.2	47.6	45.2	43.0
102.0	100.0	100.0	100.0	100.0	100.0	94.5	85.1	77.3	70.9	65.4	60.8	56.7	53.2	50.0	47.3	44.8	42.5	40.5
108.0	100.0	100.0	100.0	100.0	100.0	89.3	80.4	73.1	67.0	61.8	57.4	53.6	50.2	47.3	44.6	42.3	40.2	38.3
114.0	100.0	100.0	100.0	100.0	95.2	84.6	76.1	69.2	63.4	58.6	54.4	50.8	47.6	44.8	42.3	40.1	38.1	36.3
120.0	100.0	100.0	100.0	100.0	90.4	80.4	72.3	65.7	60.3	55.6	51.7	48.2	45.2	42.5	40.2	38.1	36.2	34.4
126.0	100.0	100.0	100.0	98.0	85.8	76.2	68.6	62.4	57.2	52.8	49.0	45.7	42.9	40.4	38.1	36.1	34.3	32.7
132.0	100.0	100.0	100.0	89.3	78.1	69.5	62.5	56.8	52.1	48.1	44.6	41.7	39.1	36.8	34.7	32.9	31.3	29.8
138.0	100.0	100.0	95.3	81.7	71.5	63.5	57.2	52.0	47.7	44.0	40.9	38.1	35.7	33.6	31.8	30.1	28.6	27.2
144.0	100.0	100.0	86.2	73.9	64.6	57.5	51.7	47.0	43.1	39.8	36.9	34.5	32.3	30.4	28.7	27.2	25.9	24.6
150.0	100.0	91.5	76.3	65.4	57.2	50.8	45.8	41.6	38.1	35.2	32.7	30.5	28.6	26.9	25.4	24.1	22.9	21.8
156.0	100.0	81.3	67.8	58.1	50.8	45.2	40.7	37.0	33.9	31.3	29.1	27.1	25.4	23.9	22.6	21.4	20.3	19.4
162.0	90.8	72.6	60.5	51.9	45.4	40.4	36.3	33.0	30.3	27.9	25.9	24.2	22.7	21.4	20.2	19.1	18.2	17.3
168.0	81.4	65.1	54.3	46.5	40.7	36.2	32.6	29.6	27.1	25.1	23.3	21.7	20.4	19.2	18.1	17.1	16.3	15.5
174.0	73.3	58.6	48.9	41.9	36.6	32.6	29.3	26.6	24.4	22.5	20.9	19.5	18.3	17.2	16.3	15.4	-	-
180.0	66.2	53.0	44.1	37.8	33.1	29.4	26.5	24.1	22.1	20.4	18.9	17.7	16.5	15.6	-	-	-	-
186.0	60.0	48.0	40.0	34.3	30.0	26.7	24.0	21.8	20.0	18.5	17.1	16.0	-	-	-	-	-	-
192.0	54.5	43.6	36.4	31.2	27.3	24.2	21.8	19.8	18.2	16.8	15.6	-	-	-	-	-	-	-
198.0	49.7	39.8	33.2	28.4	24.9	22.1	19.9	18.1	16.6	15.3	-	-	-	-	-	-	-	-
204.0	45.5	36.4	30.3	26.0	22.7	20.2	18.2	16.5	15.2	-	-	-	-	-	-	-	-	-
210.0	41.7	33.3	27.8	23.8	20.8	18.5	16.7	15.2	-	-	-	-	-	-	-	-	-	-
216.0	38.3	30.6	25.5	21.9	19.2	17.0	15.3	-	-	-	-	-	-	-	-	-	-	-
222.0	35.3	28.2	23.5	20.2	17.6	15.7	-	-	-	-	-	-	-	-	-	-	-	-
228.0	32.6	26.1	21.7	18.6	16.3	-	-	-	-	-	-	-	-	-	-	-	-	-
234.0	30.1	24.1	20.1	17.2	15.1	-	-	-	-	-	-	-	-	-	-	-	-	-
240.0	27.9	22.3	18.6	16.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- NOTE:
- MULLION CHART APPLIES TO ASSEMBLIES WHEN MULLED IN TWO-WAY,'X' OR 'T' CONFIGURATIONS. TYPICAL ELEVATIONS SHOWN AT RIGHT.
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WINDSOR WINDOWS & DOORS

900 S. 19TH STREET.
WEST DES MOINES, IA 50265
PH: (515)223-6660 FAX: (515)224-1938

TITLE: STEEL MULLION STIFFENERS
(WZ3) (IMPACT)
1/2"X5" TWO WAY
DESIGN PRESSURE TABLE

PREPARED BY: BUILDING DROPS, INC.
398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004
PH: (954)399-8478
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REMARKS	BY	DATE
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FL #:	FL21905
DATE:	09.10.19
DWG. BY:	CHK. BY:
YC	HFN
SCALE:	NTS
DWG. #:	WWD049
SHEET:	19 OF 19