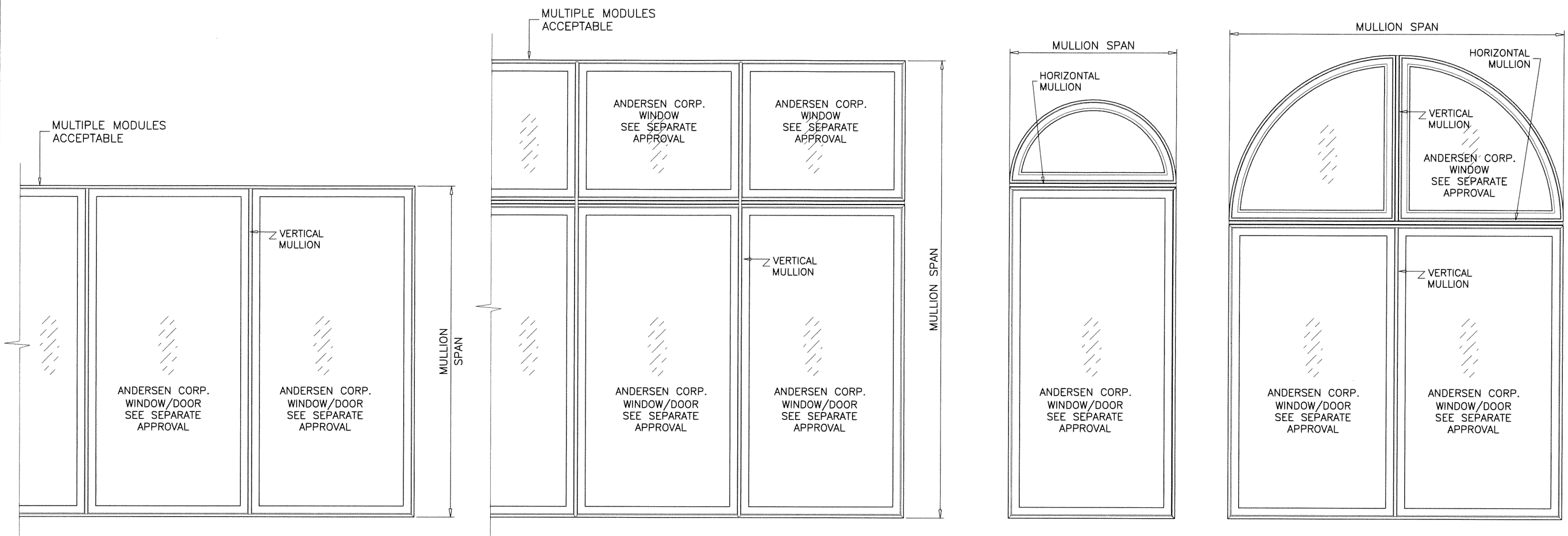




TYPICAL MULLION ARRANGEMENT

**NARROW ALUMINUM MULLION SYSTEM
WINDOW FRAME MEMBERS INCLUDED IN PROPERTIES**

DESIGN LOAD RATING FOR THIS MULLION TO BE AS PER CHARTS SHOWN ON SHEET 3.

APPROVAL APPLIES TO MULLIONS COMBINATIONS WITH FRAME MEMBERS OF ANDERSEN CORPORATION WINDOW AND DOORS IN ANY COMBINATIONS SEE SHEET 2 FOR WINDOW & DOOR FRAME MEMBER DETAILS.

SEE SEPARATE APPROVAL FOR WINDOW/DOOR ANCHORS AND DESIGN LOAD CAPACITY.

LOWEST VALUE RESULTING FROM MULLION, WINDOW OR DOOR APPROVAL WILL APPLY TO ENTIRE SYSTEM.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

ALL GLAZING PRODUCTS USED WITH THESE MULLIONS MUST MEET THE APPLICABLE BUILDING CODE REQUIREMENTS I.E: WIND LOAD, WATER INFILTRATION, FORCED ENTRY RESISTANCE, SAFEGUARDS ETC.

WOOD BUCKS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.

ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS, EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL COVERING (STUCCO, TILE ETC.).

ANCHORING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.

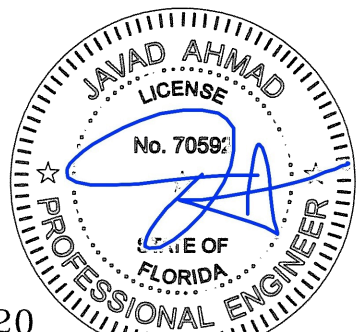
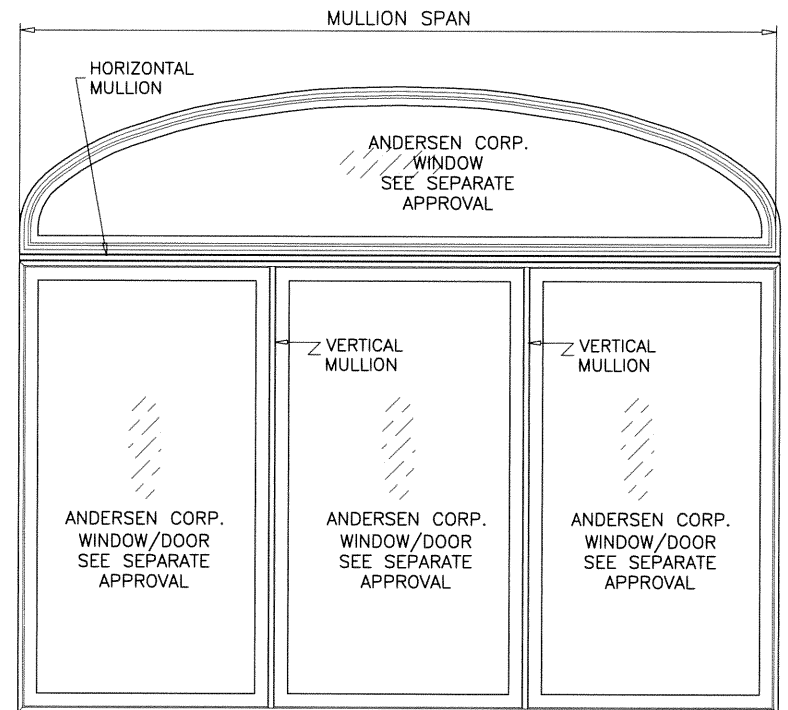
A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE.

MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION IN ACCORDANCE WITH SECTION 1710.8.3 OF FLORIDA BUILDING CODE. LABELING TO COMPLY WITH SECTION 1710.8.2.

MULLION SYSTEM IS RATED FOR LARGE MISSILE IMPACT. AND CAN BE USED WITH ALL F.B.C. APPROVED IMPACT AND NON-IMPACT RESISTANT PRODUCTS.

- A- THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; i.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.
- B- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.
- C- THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
- D- SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.E.D. ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.
- E- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.



FL #17720

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AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
MULLION M15-02AC

ANDERSEN CORPORATION
100 FOURTH AVE. NORTH
BAYPORT, MN. 55003-1096
TEL. (800) 426-7691 FAX (-)
NARROW ALUMINUM MULLION SYSTEM

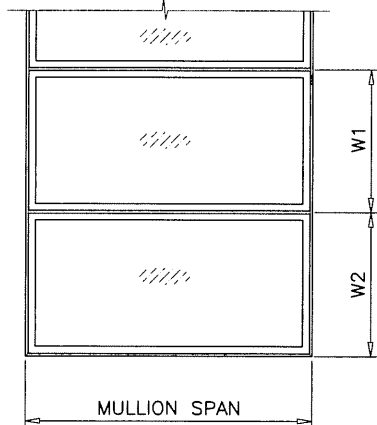
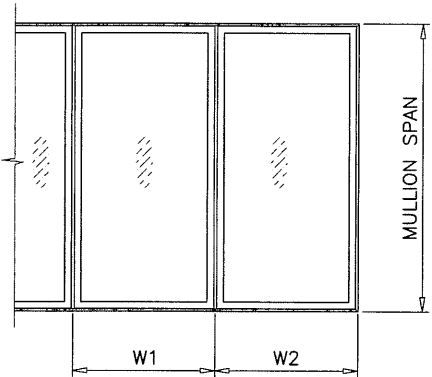
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dr. by: HAMID
chk. by:

drawing no.
M15-02
sheet 1 of 6

DESIGN LOAD CAPACITY - PSF W/O INTERMEDIATE HORIZONTALS		
WINDOW DIMS.		EXT. (+) INT. (-)
WIDTH (W)	MULL SPAN	
12"	36"	100.0
15"		100.0
18"		100.0
21"		100.0
24"		100.0
27"		100.0
30"		100.0
33"		100.0
36"		100.0
39"		100.0
42"	42"	100.0
45"		100.0
48"		100.0
12"		100.0
15"		100.0
18"		100.0
21"		100.0
24"		100.0
27"		100.0
30"		100.0
33"		100.0
36"		100.0
39"		100.0
42"		100.0
45"		100.0
48"		100.0
12"	48"	100.0
15"		100.0
18"		100.0
21"		100.0
24"		100.0
27"		100.0
30"		100.0
33"		100.0
36"		99.2
39"		96.4
42"		94.5
12"	54"	100.0
15"		100.0
18"		100.0
21"		100.0
24"		100.0
27"		98.0
30"		91.6
33"		86.6
36"		82.7
12"	60"	100.0
15"		100.0
18"		100.0
21"		100.0
24"		93.0
27"		85.3
30"		79.4
33"		74.6

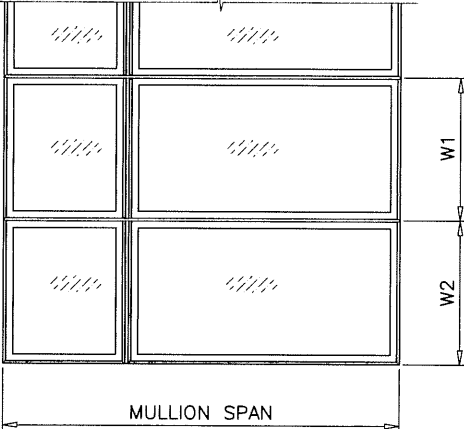
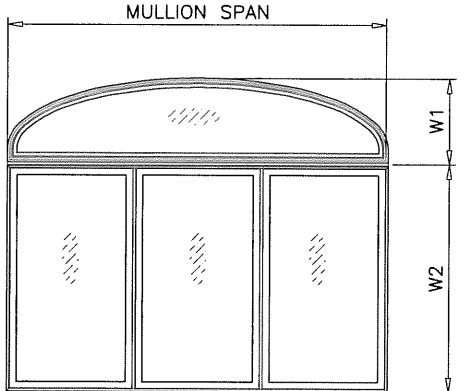
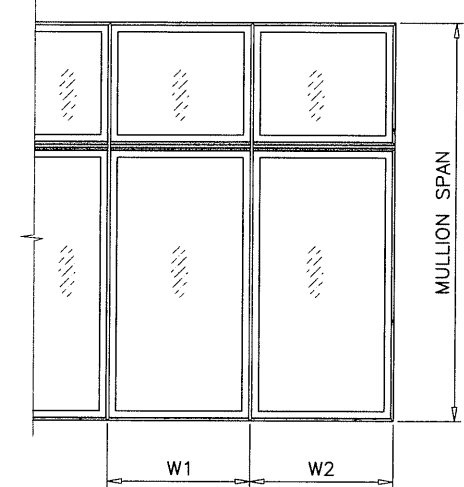
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WINDOW DIMS.		EXT. (+) INT. (-)
WIDTH (W)	MULL SPAN	
12"	66"	100.0
15"		100.0
18"		100.0
21"		91.9
24"		82.7
27"		75.6
30"		70.0
12"	72"	100.0
15"		100.0
18"		84.8
21"		73.4
24"		64.9
27"		58.4
12"	78"	98.6
15"		79.3
18"		66.5
21"		57.4
24"		50.7
12"	84"	78.9
15"		63.4
18"		53.1
21"		45.8
24"		40.4



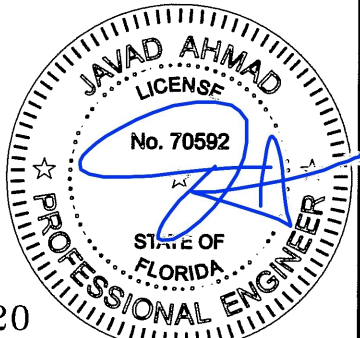
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DESIGN LOAD CAPACITY - PSF WITH INTERMEDIATE HORIZONTALS		
WINDOW DIMS.		EXT. (+) INT. (-)
WIDTH (W)	MULL SPAN	
12"	36"	100.0
15"		100.0
18"		100.0
21"		100.0
24"		100.0
27"		100.0
30"		100.0
33"		100.0
36"		100.0
39"		100.0
42"	42"	100.0
45"		100.0
48"		100.0
12"		100.0
15"		100.0
18"		100.0
21"		100.0
24"		100.0
27"		100.0
30"		100.0
33"		100.0
36"		100.0
39"		95.1
42"		88.3
45"		82.4
48"		77.3
12"	48"	100.0
15"		100.0
18"		100.0
21"		100.0
24"		100.0
27"		100.0
30"		94.7
33"		86.1
36"		78.9
39"		72.8
42"		67.6
12"	54"	100.0
15"		100.0
18"		100.0
21"		100.0
24"		93.5
27"		83.1
30"		74.8
33"		68.0
36"		62.3
12"	60"	100.0
15"		100.0
18"		93.2
21"		79.9
24"		69.9
27"		62.2
30"		55.9
33"		50.9

DESIGN LOAD CAPACITY - PSF WITH INTERMEDIATE HORIZONTALS		
WINDOW DIMS.		EXT. (+) INT. (-)
WIDTH (W)	MULL SPAN	
12"	66"	100.0
15"		84.1
18"		70.0
21"		60.0
24"		52.5
27"		46.7
30"		42.0
12"	72"	80.9
15"		64.7
18"		54.0
21"		46.2
24"		40.5
27"		36.0
12"	78"	63.7
15"		50.9
18"		42.4
21"		36.4
24"		31.8
12"	84"	51.0
15"		40.8
18"		34.0
21"		29.1
24"		25.5



$$\text{WIDTH (W)} = \frac{W1 + W2}{2}$$



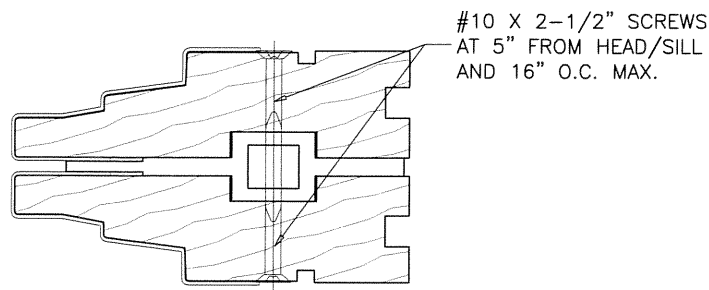
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AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
MULLION M15-02AC

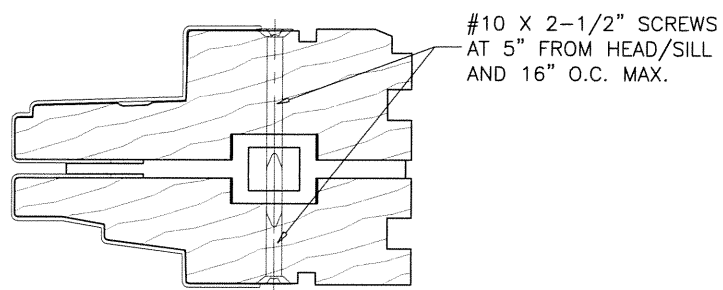
ANDERSEN CORPORATION
NARROW ALUMINUM MULLION SYSTEM
100 FOURTH AVE. NORTH
BAYPORT, MN. 55003-1096
TEL. (800) 426-7691 FAX (-)

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drawing no.
M15-02
sheet 3 of 6

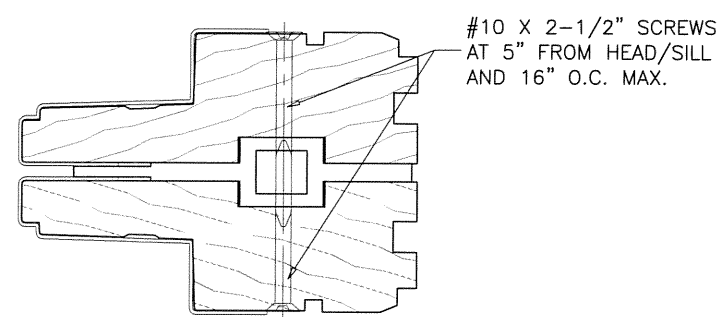


CASEMENT TO CASEMENT
VERTICAL JOIN

AWNING TO AWNING
HORIZONTAL JOIN

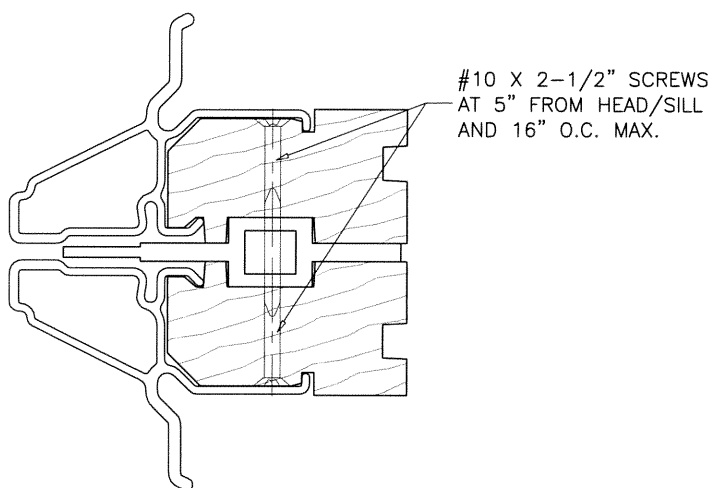


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VERTICAL OR HORIZONTAL JOIN

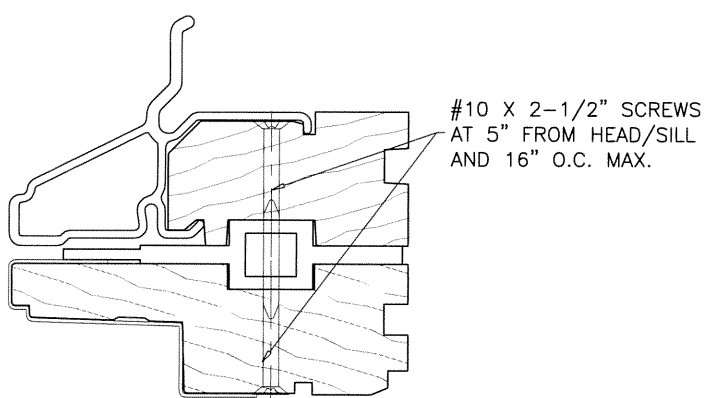


CASEMENT TO CASEMENT
HORIZONTAL JOIN

AWNING TO AWNING
VERTICAL JOIN

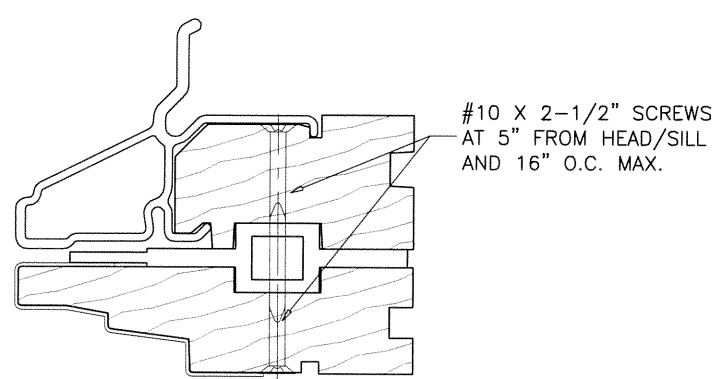


FLEXIFRAME TO FLEXIFRAME
VERTICAL OR HORIZONTAL JOIN



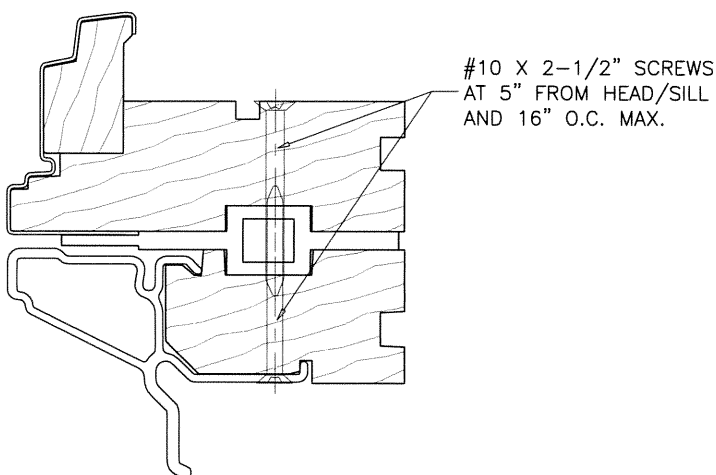
CASEMENT TO FLEXIFRAME
HORIZONTAL JOIN

AWNING TO FLEXIFRAME
VERTICAL JOIN

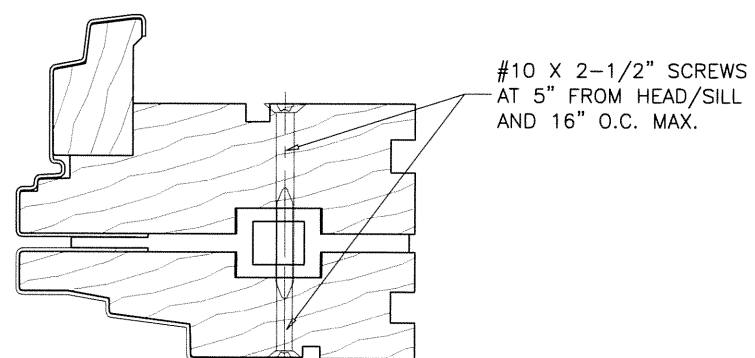


CASEMENT TO FLEXIFRAME
VERTICAL JOIN

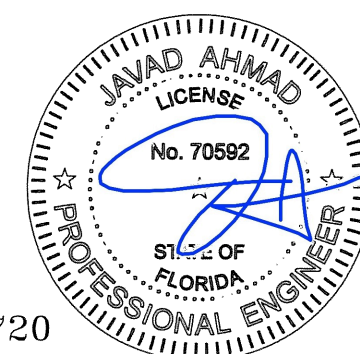
AWNING TO FLEXIFRAME
HORIZONTAL JOIN



FLEXIFRAME TO CIRCLE TOP/QUARTER
VERTICAL OR HORIZONTAL JOIN



CIRCLE TOP TO AWNING
HORIZONTAL JOIN



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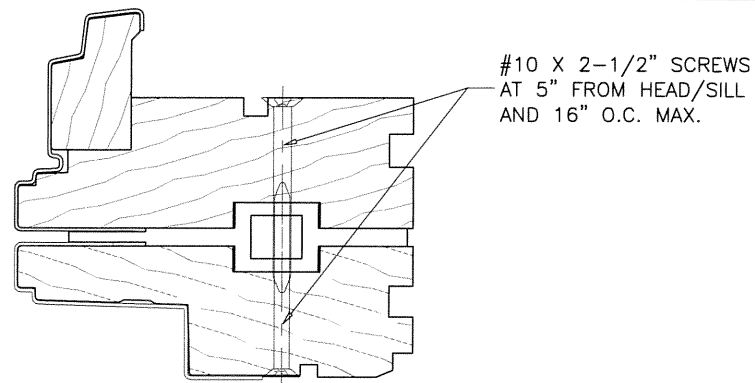
NARROW ALUMINUM MULLION SYSTEM
ANDERSEN CORPORATION
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BAYPORT, MN. 55003-1096
TEL. (800) 426-7691 FAX (-)

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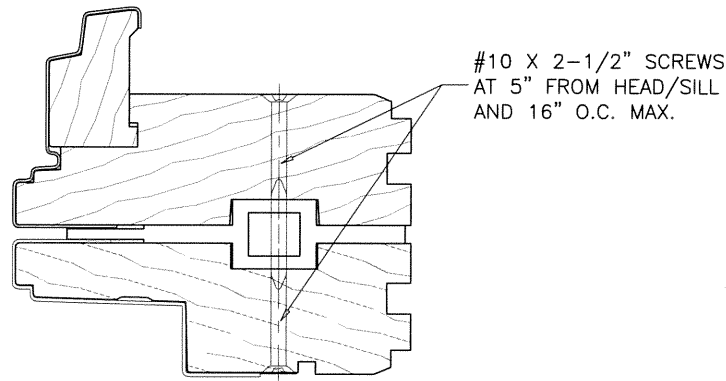
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M15-02
sheet 4 of 6

MULLION\M15-02AC



#10 X 2-1/2" SCREWS
AT 5" FROM HEAD/SILL
AND 16" O.C. MAX.

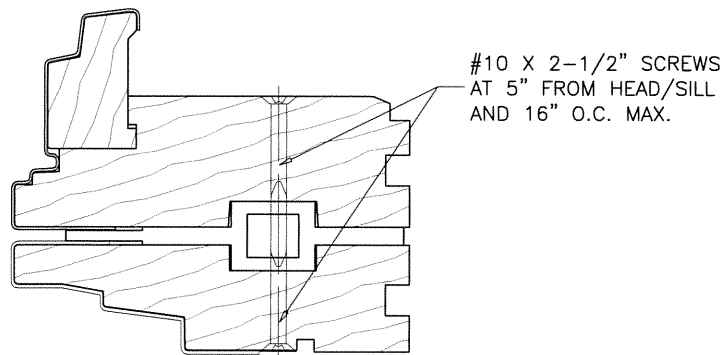
CIRCLE TOP TO CASEMENT
HORIZONTAL JOIN



#10 X 2-1/2" SCREWS
AT 5" FROM HEAD/SILL
AND 16" O.C. MAX.

CASMT PICTURE WDW. TO AWNING
VERTICAL JOIN

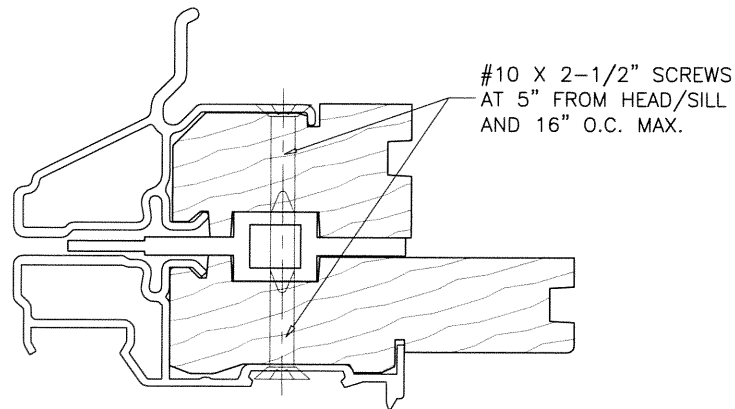
CASMT PICTURE WDW. TO CASEMENT
HORIZONTAL JOIN



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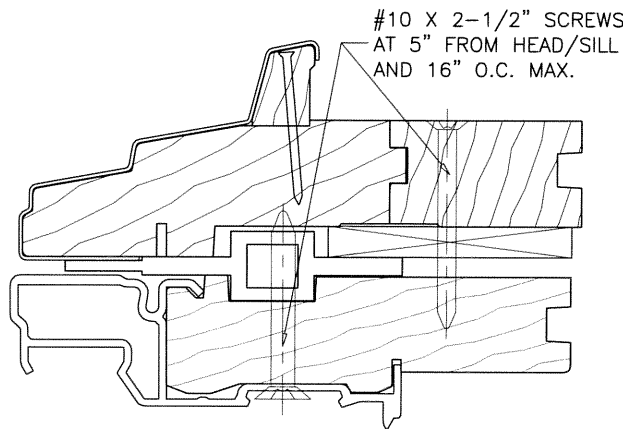
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HORIZONTAL JOIN

CASMT PICTURE WDW. TO CASEMENT
VERTICAL JOIN



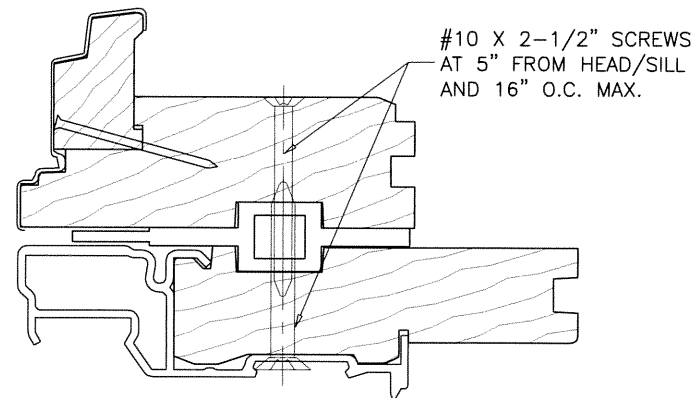
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AT 5" FROM HEAD/SILL
AND 16" O.C. MAX.

FLEXIFRAME/ARCH/SPRINGLINE TO FWH DOOR
HORIZONTAL JOIN



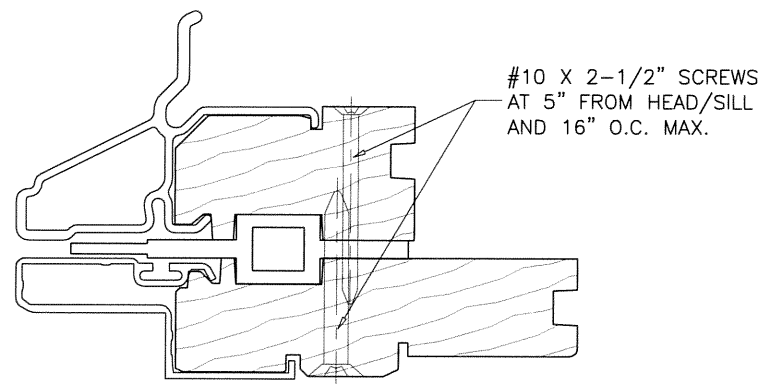
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AT 5" FROM HEAD/SILL
AND 16" O.C. MAX.

FLEXIFRAME/ARCH/SPRINGLINE TO FWH DOOR
HORIZONTAL JOIN



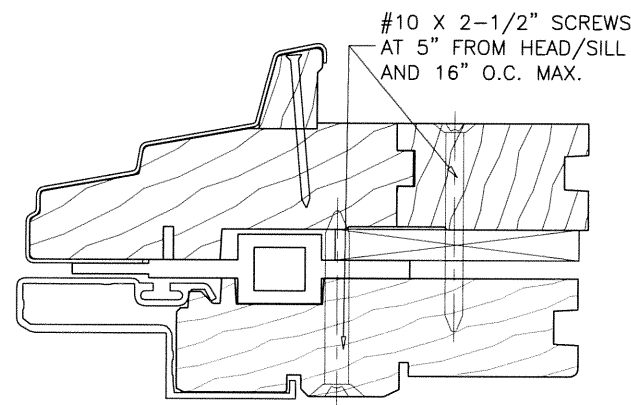
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AT 5" FROM HEAD/SILL
AND 16" O.C. MAX.

PSCA PICTURE WDW TO FWH DOOR
HORIZONTAL JOIN



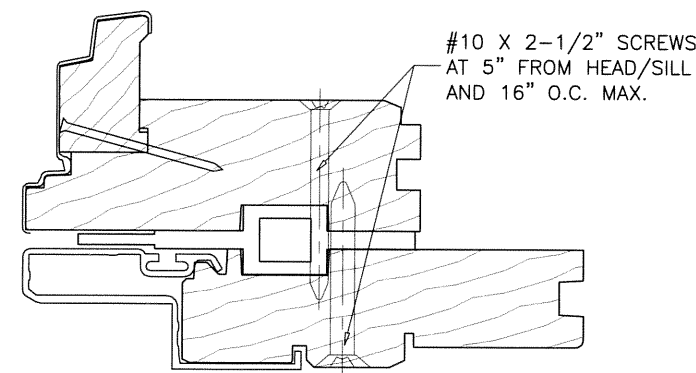
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AT 5" FROM HEAD/SILL
AND 16" O.C. MAX.

FLEXIFRAME/ARCH/SPRINGLINE TO FWO DOOR
HORIZONTAL JOIN



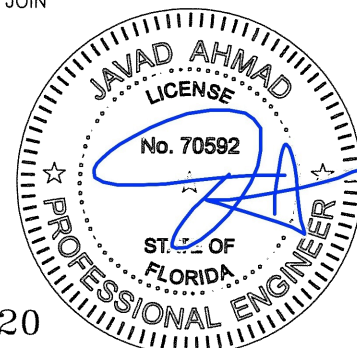
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AT 5" FROM HEAD/SILL
AND 16" O.C. MAX.

FLEXIFRAME/ARCH/SPRINGLINE TO FWO DOOR
HORIZONTAL JOIN



#10 X 2-1/2" SCREWS
AT 5" FROM HEAD/SILL
AND 16" O.C. MAX.

PSCA PICTURE WDW TO FWO DOOR
HORIZONTAL JOIN



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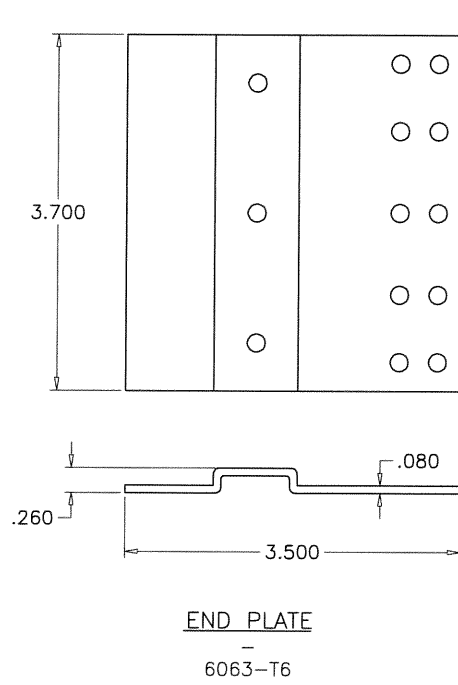
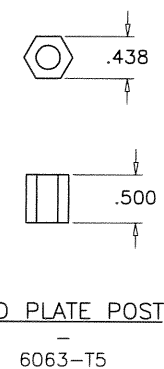
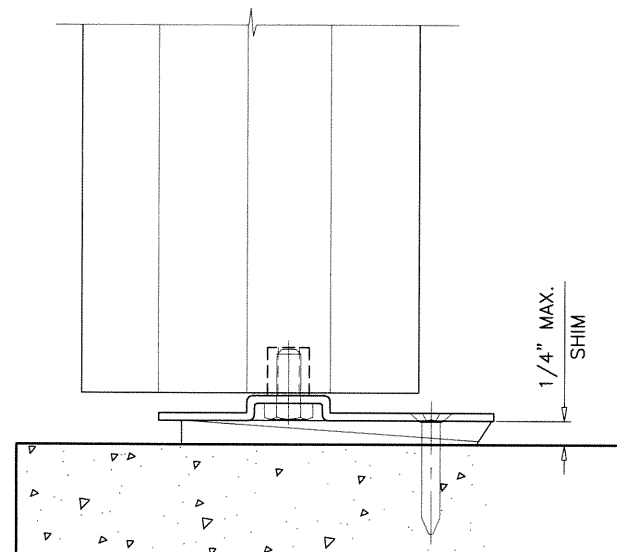
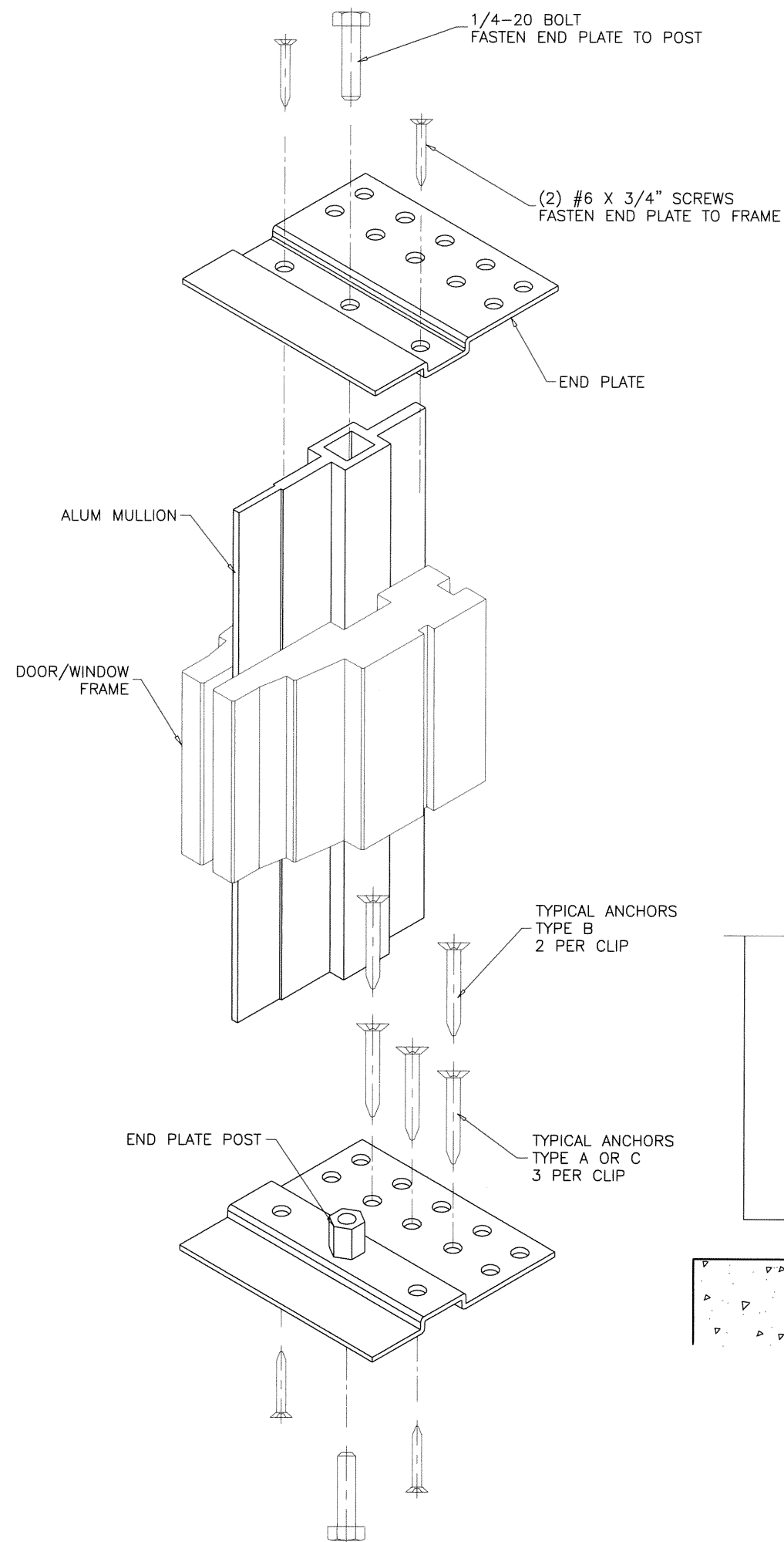
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revisions:	
no	date by description

date: 04-29-15
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
M15-02
sheet 5 of 6



TYPICAL ANCHORS: SEE ELEV. FOR SPACING

- TYPE 'A'- **#12 SMS OR WOOD SCREWS** (GRADE 2 CRS)
 INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
 1-1/2" MIN. PENETRATION INTO WOOD
- TYPE 'B'- **1/4" DIA. ULTRACON BY 'ELCO'** (Fu=177 KSI, Fy=155 KSI)
 THRU 1BY BUCKS INTO CONC. OR MASONRY
 1-3/8" MIN. EMBED INTO CONC. OR MASONRY
 DIRECTLY INTO CONC. OR MASONRY
 1-1/4" MIN. EMBED INTO CONC. OR MASONRY
- TYPE 'C'- **#12 SMS OR SELF DRILLING SCREWS**
 INTO METAL STRUCTURES (GRADE 2 CRS)
 STEEL : 12 GA. MIN. (Fy = 36 KSI MIN.)
 ALUMINUM : 1/8" THK. MIN. (6063-T5 MIN.)
 (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

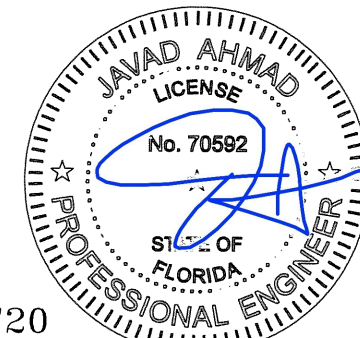
TYPICAL EDGE DISTANCE

- INTO CONCRETE AND MASONRY = 2-1/2" MIN.
 INTO WOOD STRUCTURE = 3/4" MIN.
 INTO METAL STRUCTURE = 1/2" MIN.

ANCHORS CL TO CL DISTANCES

- INTO CONCRETE AND MASONRY = 3" MIN.
 INTO WOOD STRUCTURE = 3/4" MIN.
 INTO METAL STRUCTURE = 3/4" MIN.

CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
 C-90 HOLLOW/FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.



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NARROW ALUMINUM MULLION SYSTEM

revisions:	no	date	by	description

date: 04-29-15	scale: 1/2" = 1"	dr. by: HAMID	chk. by:
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drawing no.	M15-02
sheet	6 of 6