

### I. GENERAL

#### Scope of Work

Furnish materials, labour plant, equipment, related items and services necessary for the supply, complete fabrication and installation of glazed curtain wall aluminum framing as shown on the drawings, required by job conditions and specified herein.

#### Work Not Included

Structural support for the system, steel and other embeds in concrete or masonry, interior moulding, closure or trim as well as roof membrane and flashing unless specifically detailed and called out as such.  
(Specifier List of Other Exclusions)

#### Related Work Specified Elsewhere (Specifier List)

#### Submittals

#### Shop Drawings

Prior to fabrication submit shop drawings showing frame elevations, full size details as far as practical, all dimensions, coordination with related work, provision for thermal expansion and main structure deformations and tolerances, sealing and caulking joints and their sizes, material and installation notes as well as all necessary references to local Building Code requirements.

#### Samples

Before any work is fabricated, all requested representative and properly labeled samples, including specified products with their finishes, shall be submitted to the Architect for his approval.

### II. PRODUCTS

#### Glazing System

- ° The system must allow for full integration with the building envelope, utilize the Rain Screen Principle Design.
- ° A properly designed vent system, with respect to the weep hole such as size, shape, number and locations, must allow for full pressure equalization and compartmentization of the wall.
- ° Aluminum framing shall be **5200 Series**, thermally insulated, as manufactured by **Aluminex**.
- ° The system shall be outside-glazed, able to accommodate 25.4mm/ 1" sealed units, 6.4mm/ ¼" single glass – at vision, and/ or single spandrel glass and framed metal back-pan utilizing extruded aluminum adaptor, or frameless metal back-pan (Specifier selection), with required thermal insulation, as specified and shown on the architectural drawings.
- ° The aluminum profile's standard dimensions shall be: 63.5 mm/ 2.5" wide and as deep as required by load and span conditions. If required, steel reinforcing shall contribute to the aluminum framing structural capacity.
- ° Glass retention shall be (one of the following – Specifier Selection)
  - exterior pressure plate throughout, dry-dry glazing, or
  - horizontal pressure plates and vertical structural glazing at typical mullions.
- ° Whenever substitute systems and/or products are considered, supporting data must be submitted ten (10) days prior to bid date to allow for valid comparison.

#### Performance

- ° The minimum requirements shall be based on the following ASTM test standards: E-283 Air Infiltration, E-331 Water Penetration, and E-330 Structural Performance with L/200 or 19mm / 0.75" (whichever is less) deflection limitations.
- ° Expected deformation and (seismic) movement allowances shall be referred to the structural design of the building.

#### Materials

- ° Extruded aluminum shall be AA 6063 T5,  $F_y = 110 \text{ MPa} / 16 \text{ KSI}$ , alloy and temper minimum, or other as required by the Code and Standards, able to meet or exceed structural and finishing criteria as specified.
- ° Any defects impairing strength, durability or appearance are not acceptable.
- ° Sufficient strength and size bolts and fasteners shall be made of corrosion-resistant and compatible material such as cadmium or zinc plated carbon steel type 302 or 304, or aluminum.
- ° Anchoring brackets, structurally adequate, shall be extruded aluminum, or formed aluminum or steel, all painted to match the framing.
- ° Anchoring fastener or bolt locations and minimum penetration requirements shall follow manufacturer's specifications.
- ° Dissimilar materials shall be separated with approved bituminous paint or spacers, to prevent any galvanic action (corrosion).
- ° Glazing gaskets shall be dense extruded elastomeric rubber such as Neoprene, EPDM, Silicone or other compatible materials.
- ° Glazing profiles shall be designed and sized to work with the system and properly serve glazing rabbet assembly providing uniform pressure in the range of 1.05 to 1.70 kN/m / 6 to 10 lb/in.
- ° Setting blocks must be properly sized (L mm = 25 mm/ 1" per each 1 m<sup>2</sup>/ 10 sqft of glass, but not less than 100 mm/ 4"), placed at 1/4 points, and compatible with the insulating glass sealant.

#### Finish

All exposed surfaces shall be free from defects, scratches and serious blemishes. Aluminum shall receive one of the following available finishes specified by the Architect:

- i) Standard commercial clear anodic coating integral colour (02),
- ii) Standard commercial bronze hardcolour anodic coating (04),
- iii) Optional anodic coating finishes are light bronze or black,
- iv) Other paint qualities and colours in baked enamel – Specifier selection

### III. EXECUTION

#### Fabrication

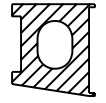
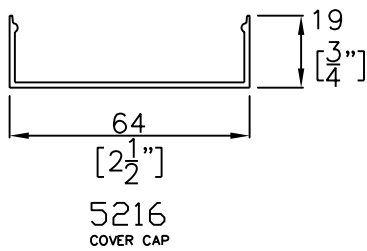
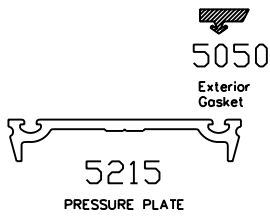
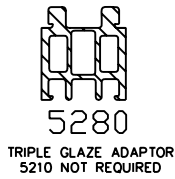
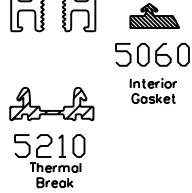
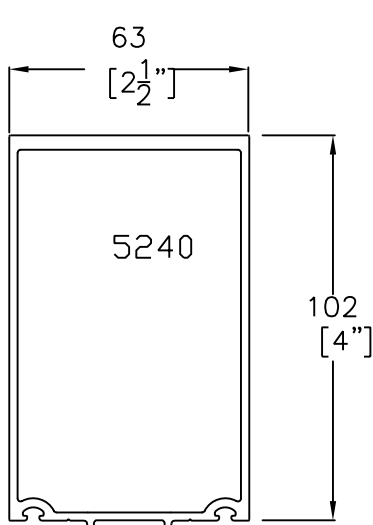
- ° Fabricate and assemble in strict accordance with the approved shop drawings and manufacturer's published recommendations.
- ° The System shall allow for conventional glazing on four (two – Structural Glazing) sides with projecting pressure plates and snap-on cap where required with glass hard bite not less than 12.7mm/ 0.5".
- ° Aluminum mullions shall be connected accurately to each other by standard spigot or screw spline method, properly sealed at all "air seal line" joints to assure air and water tight installation.
- ° Resilient glass setting must be achieved by use of applicable gaskets and/ or spacers.

#### Installation

- ° Framing shall be installed, secured and glazed by an experienced crew.
- ° Set framing level, plumb, square and aligned with other work, in accordance with approved shop drawings and manufacturer's installation instructions and published glazing standards.
- ° All perimeter joints shall be sealed and caulked with approved sealant materials to ensure a weather-tight installation and full connection with the building air and vapor barrier..

#### Protection and Cleaning

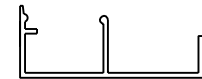
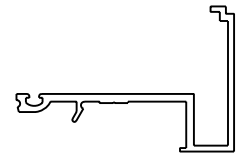
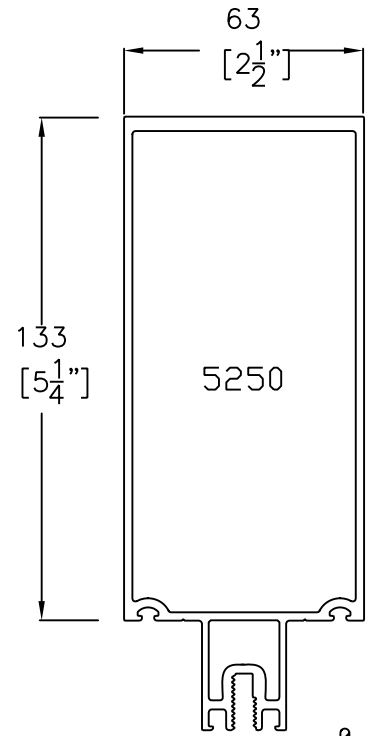
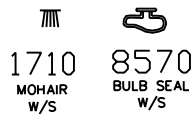
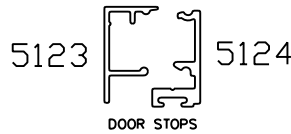
- ° All work shall be protected against damage during and after installation.
- ° After installation all exposed surfaces shall be cleaned of all contaminants.
- ° The General Contractor is responsible for protection and final cleaning.



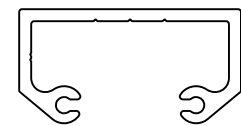
5214  
CORNER PLUG



5111  
GLAZING ADAPTOR



5222  
DOOR ADAPTOR CAP

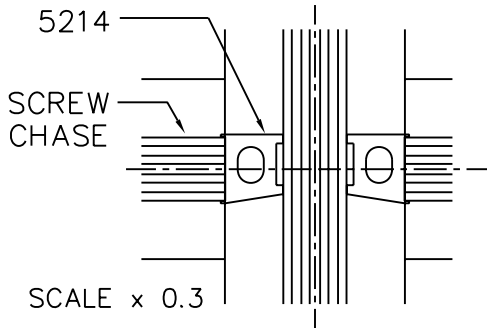
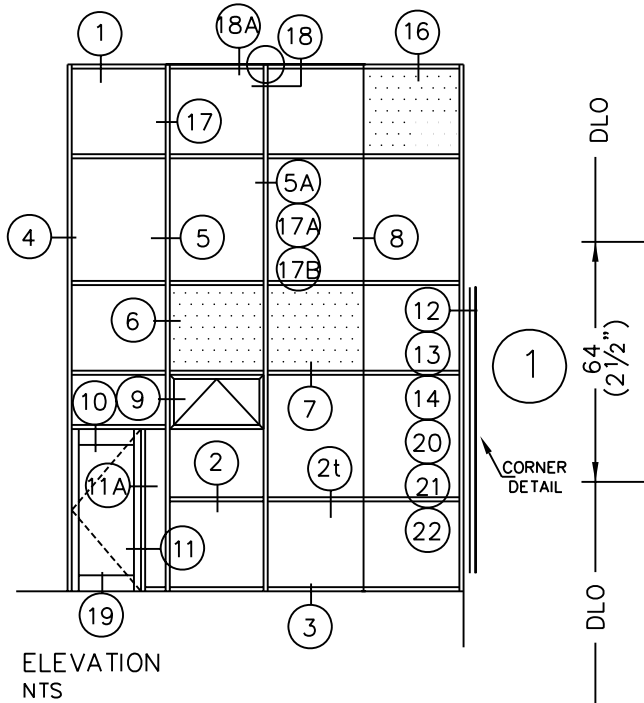


5220  
SHEAR BLOCK  
CUT & DRILLED  
5220P-4 FOR 5240  
5220P-5 FOR 5250

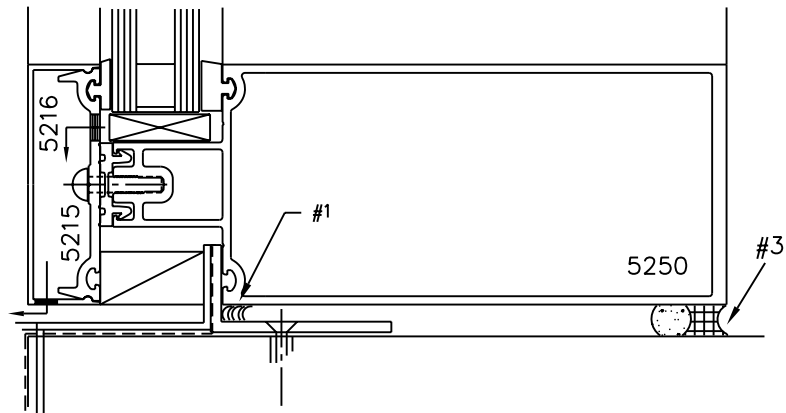
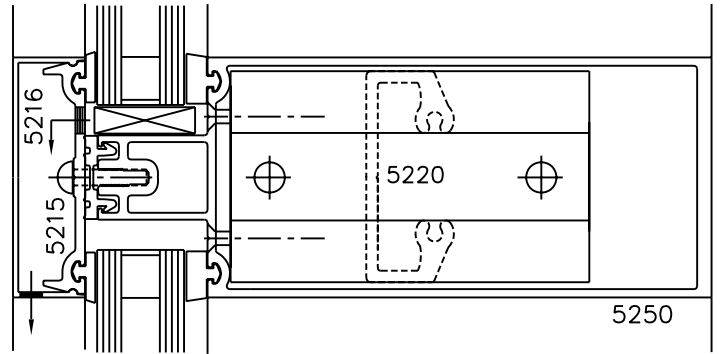
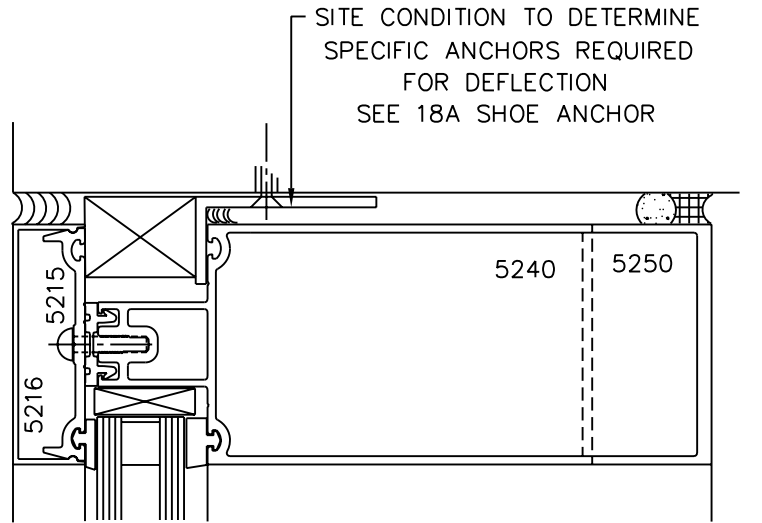
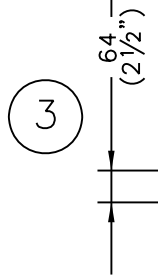
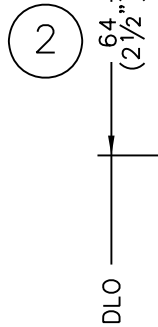
SCALE 1:2

# 5200 SERIES

## 64mm (2-1/2") PRESSURE PLATE / SSG FRAMING SYSTEM



(A) CORNER BLOCK  
INSTALLATION  
FRONT VIEW

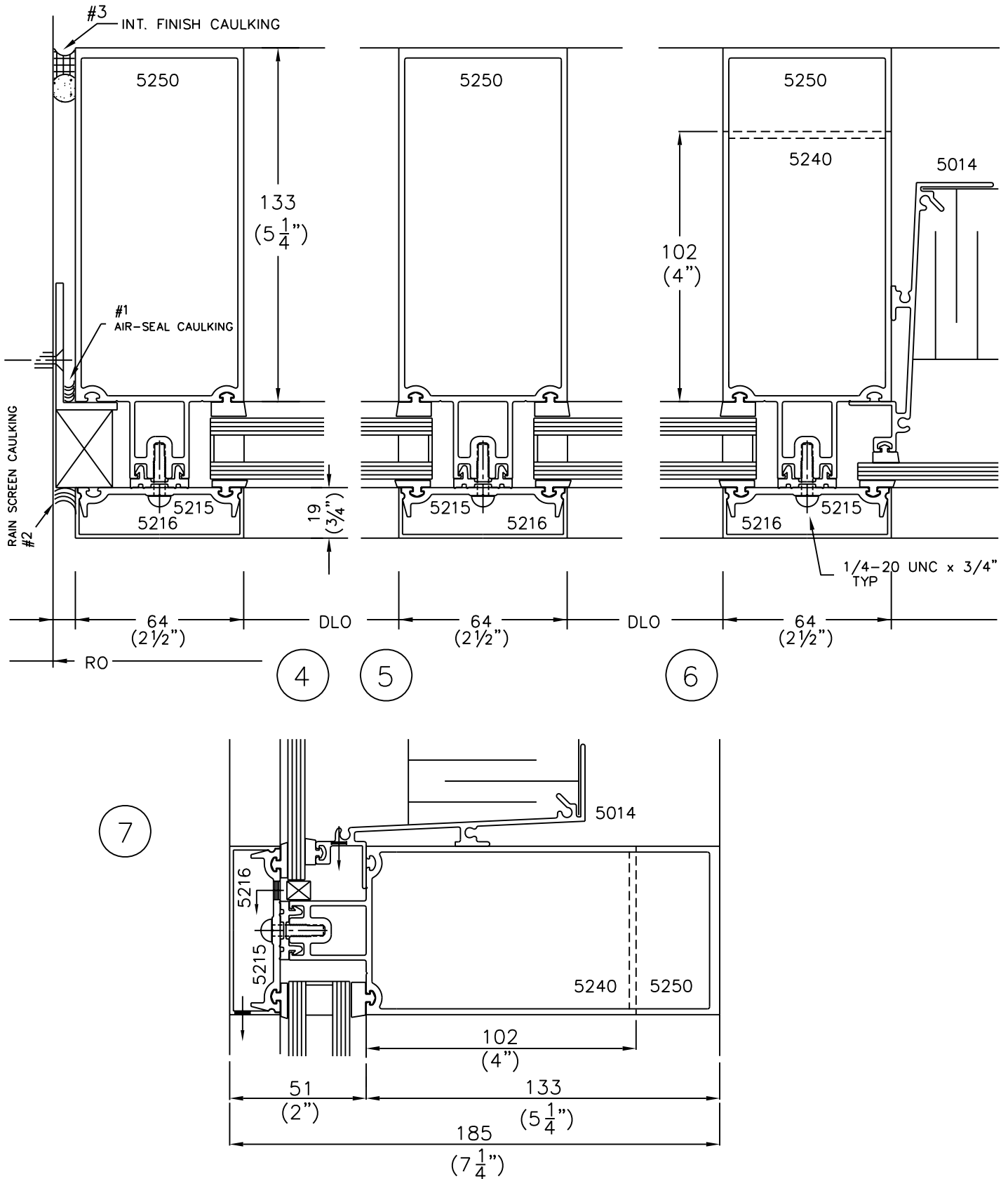


SCALE 1:2

The Pursuit of Excellence

**E-2.2**

SECTION-PAGE

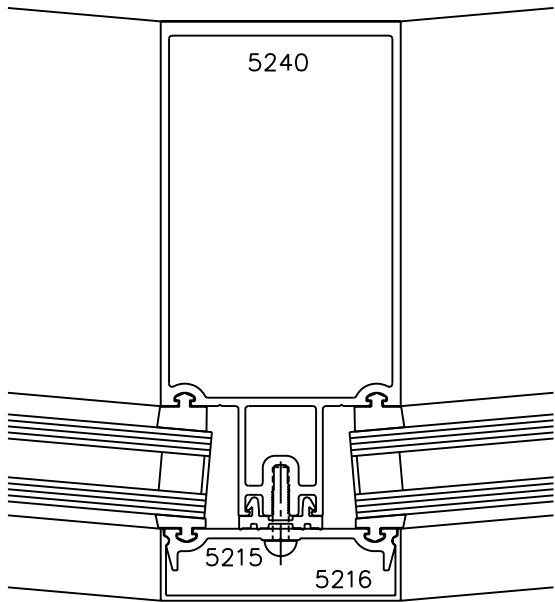


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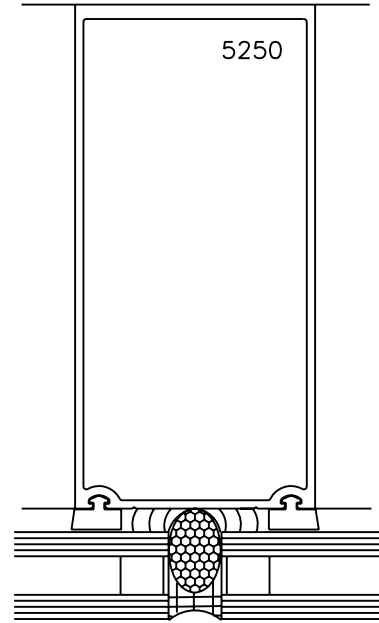
The Pursuit of Excellence

## E-2.3

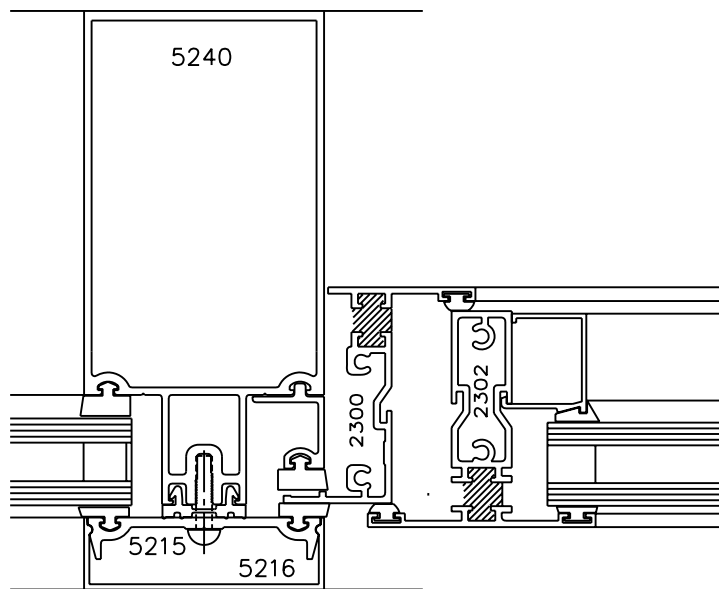
SECTION-PAGE



5A SIGMENTED  
MULLION  
0-5°

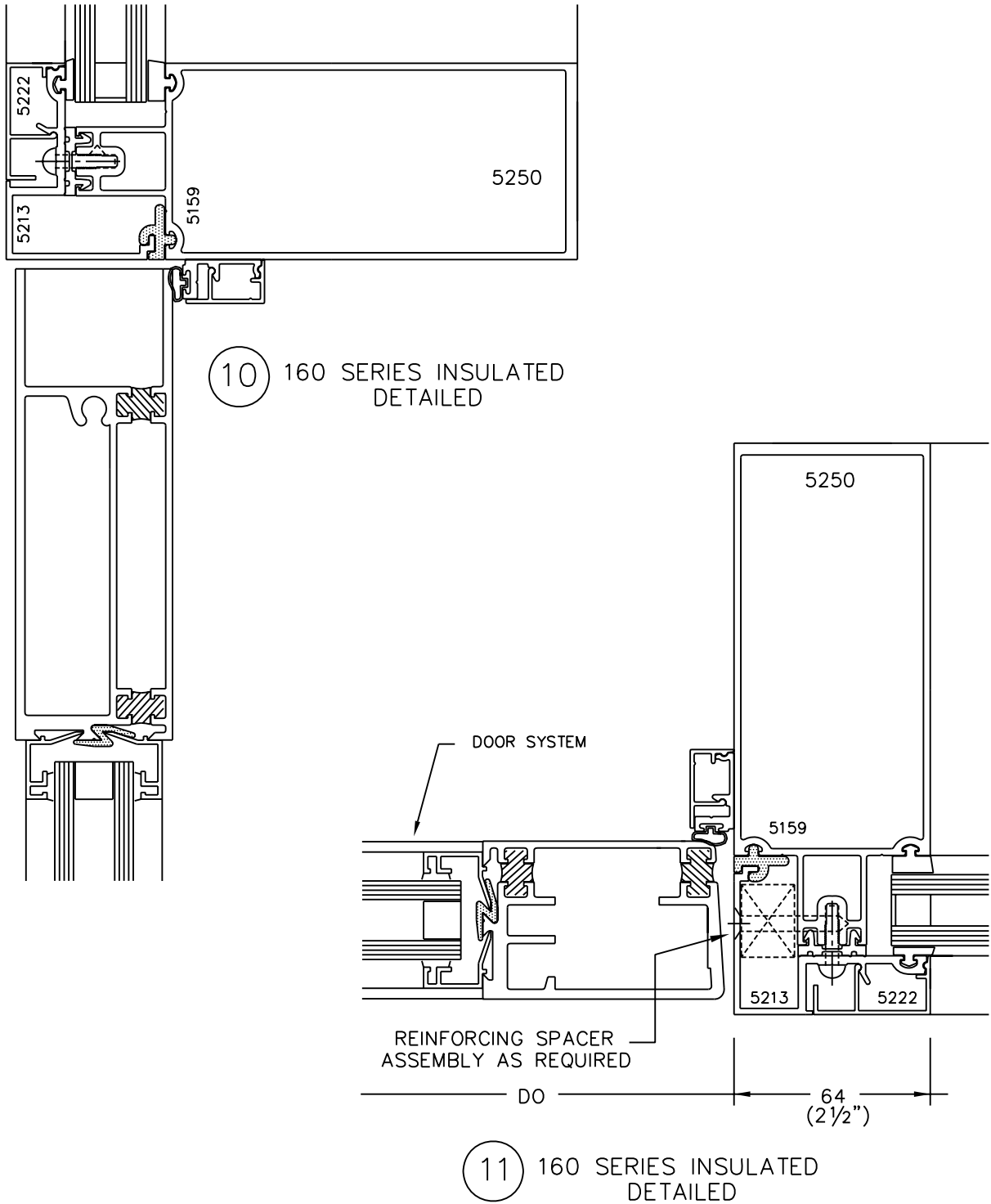


8

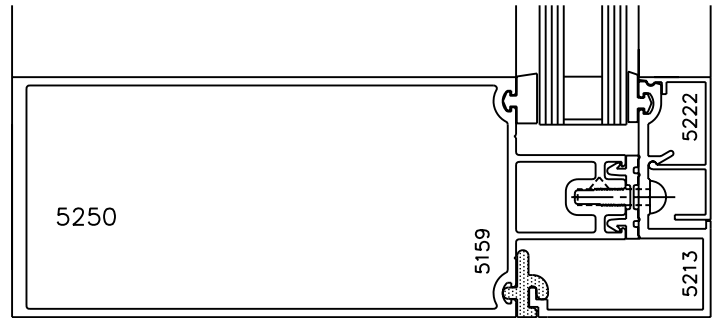


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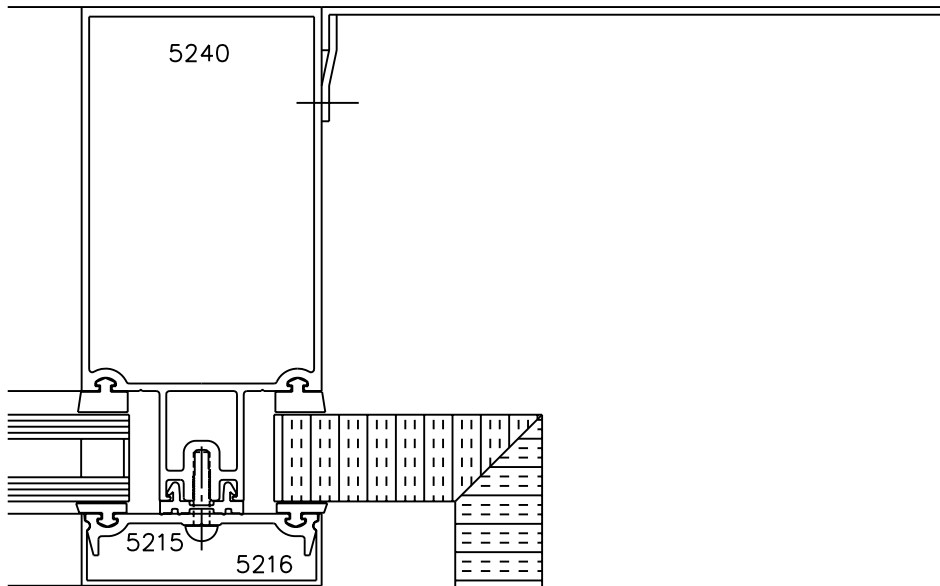
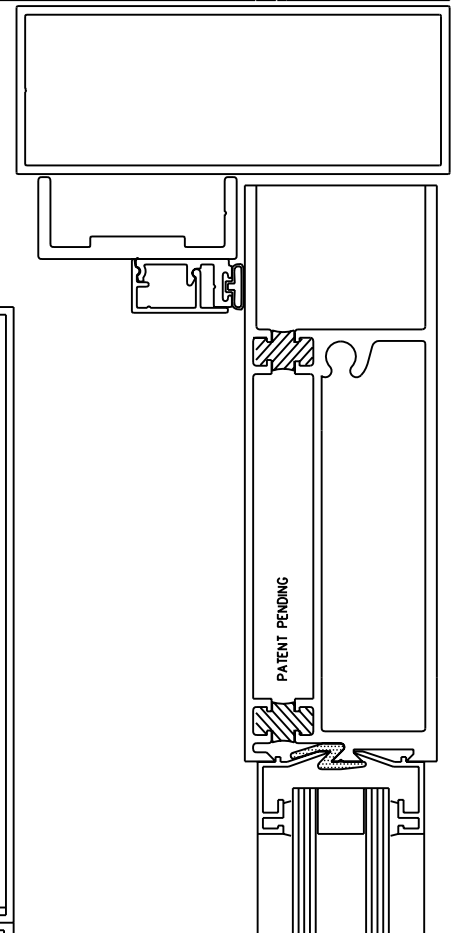
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SCALE 1:2

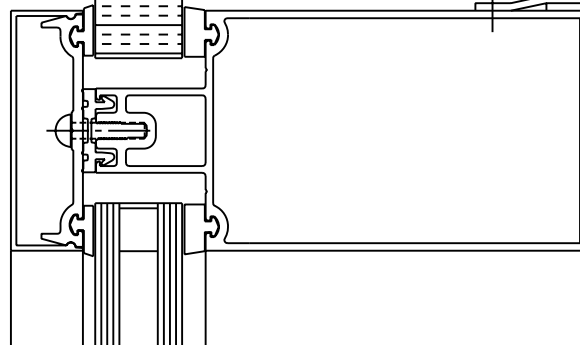


10A TRANSOM  
CONCEALED  
CLOSER



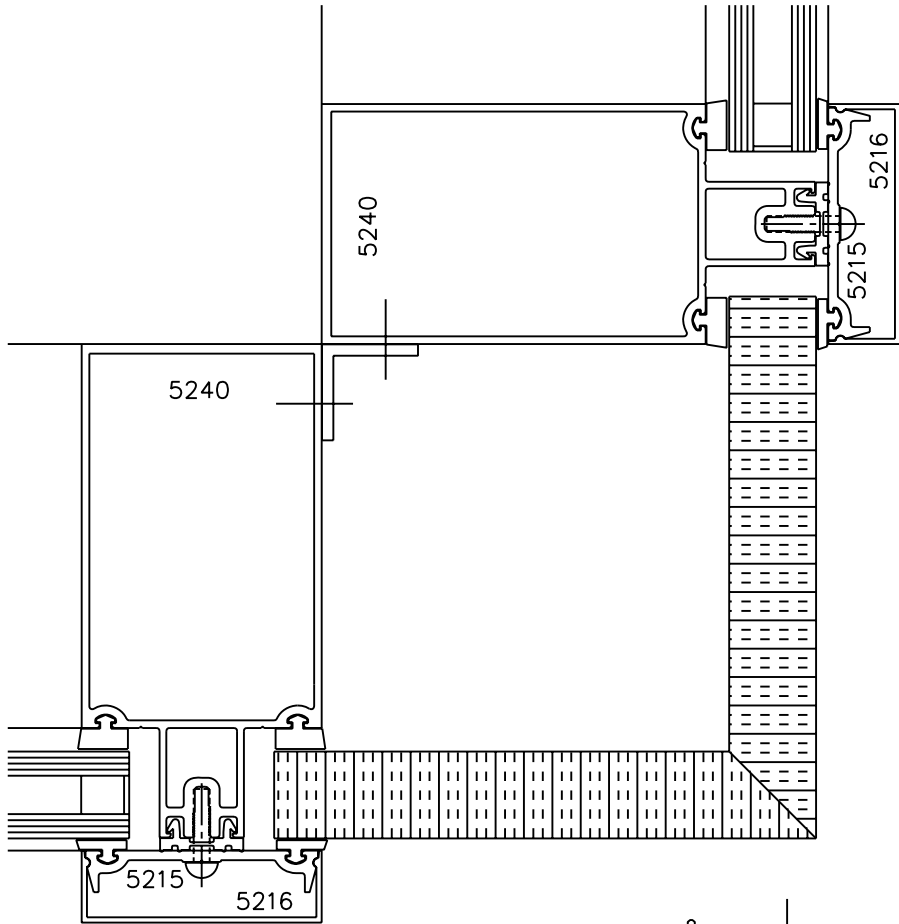
INSIDE CORNER 90°

12 INSIDE  
CORNER



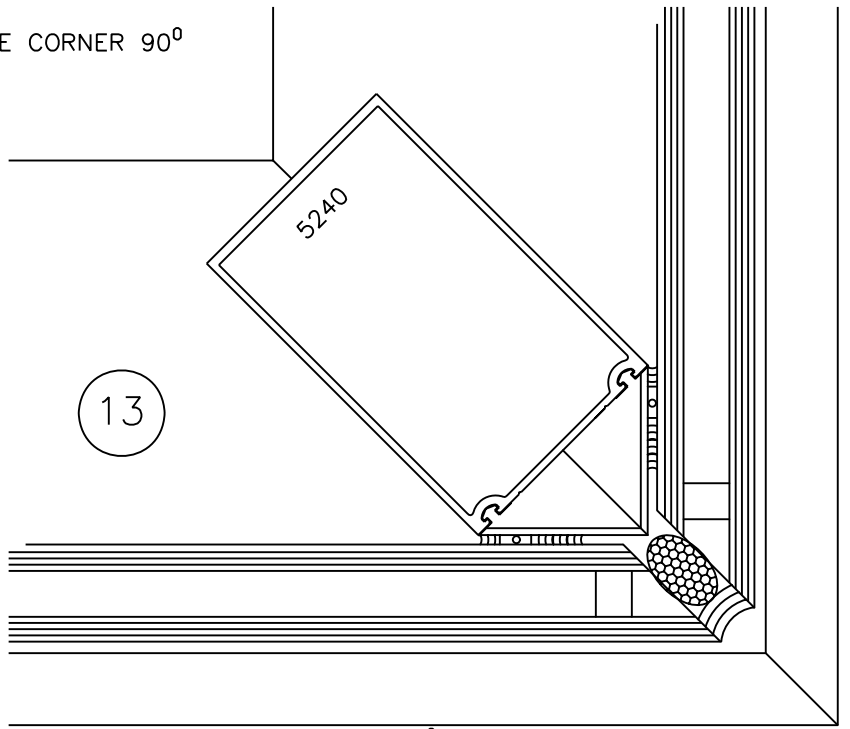
SCALE 1:2

**E-2.6**



12a

OUTSIDE CORNER 90°



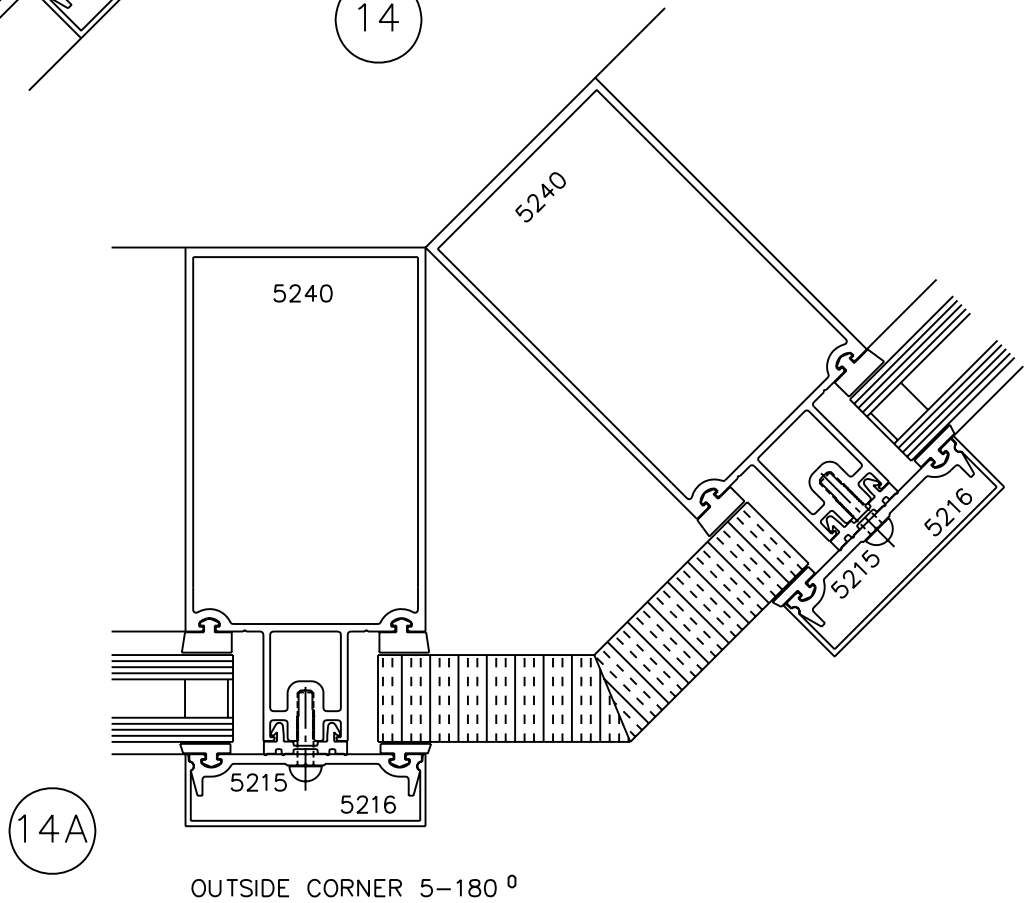
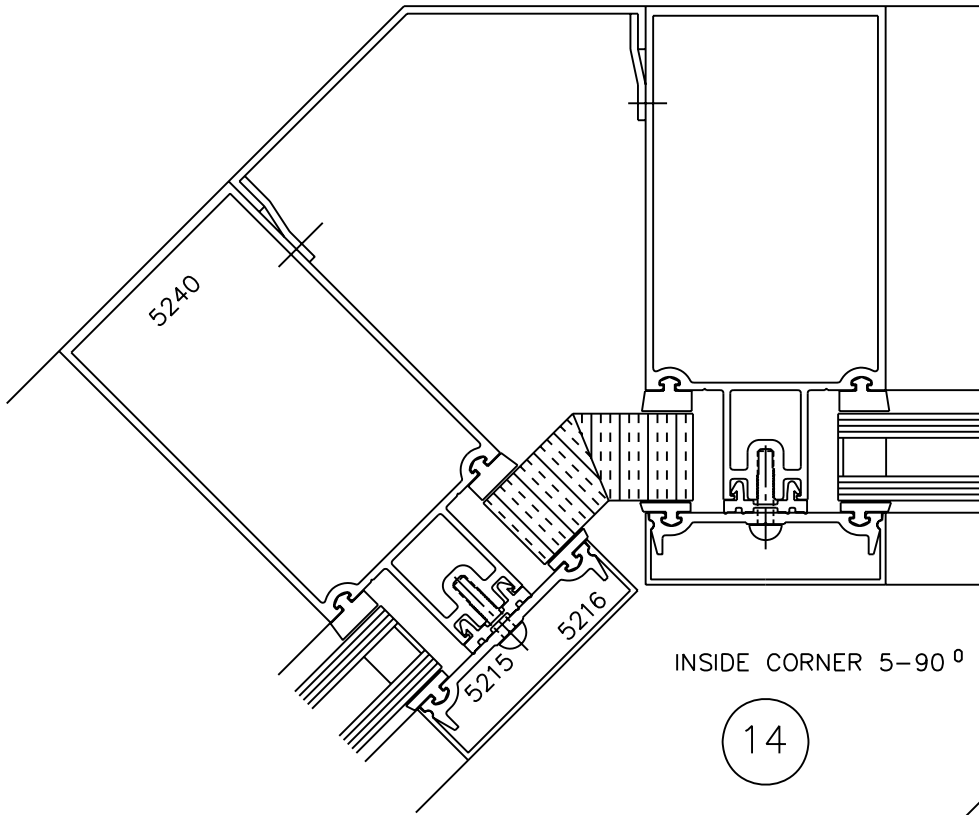
13

OUTSIDE CORNER 90°

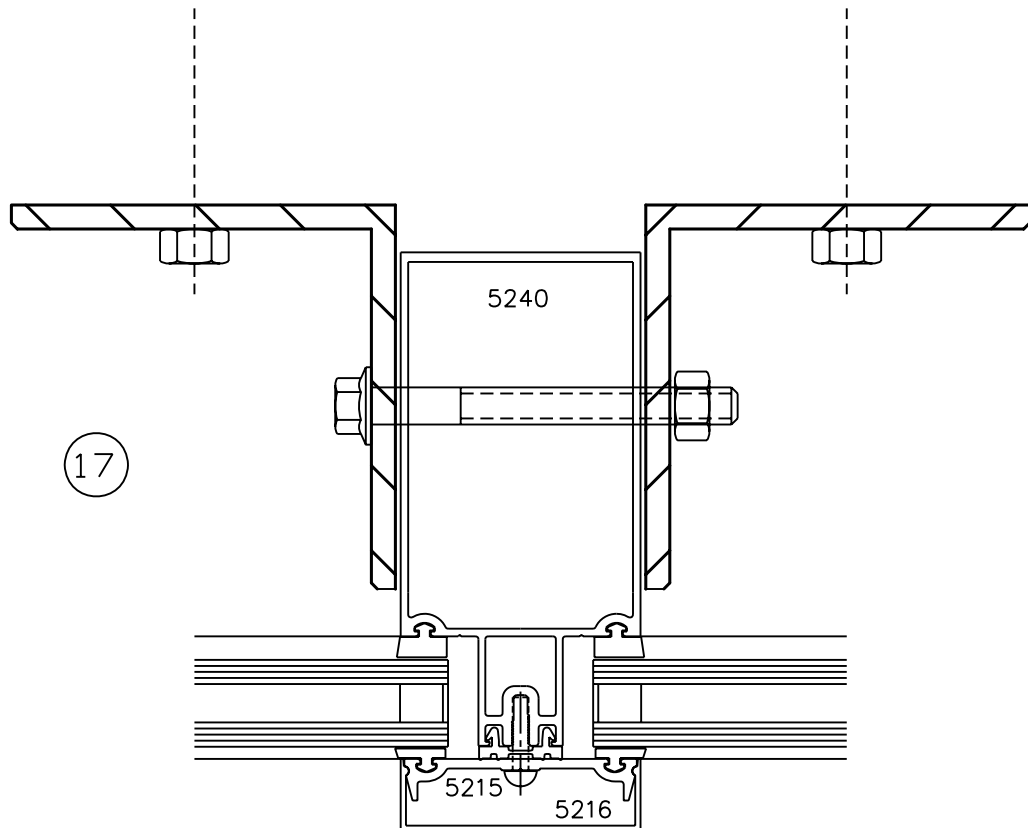
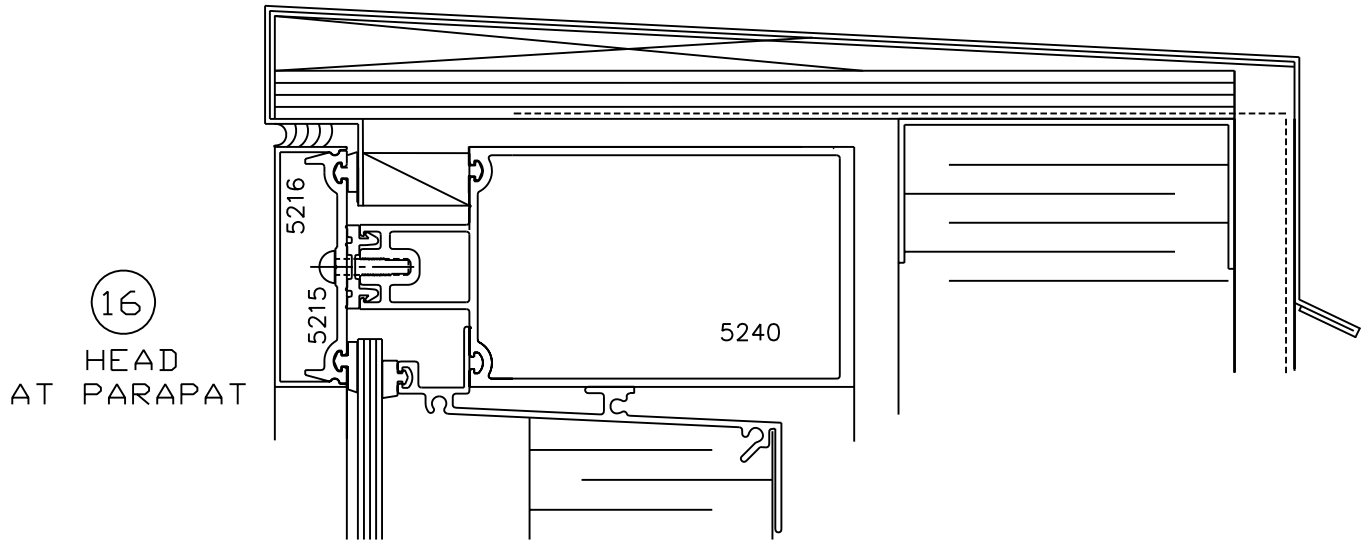
SCALE 1:2

**E-2.7**



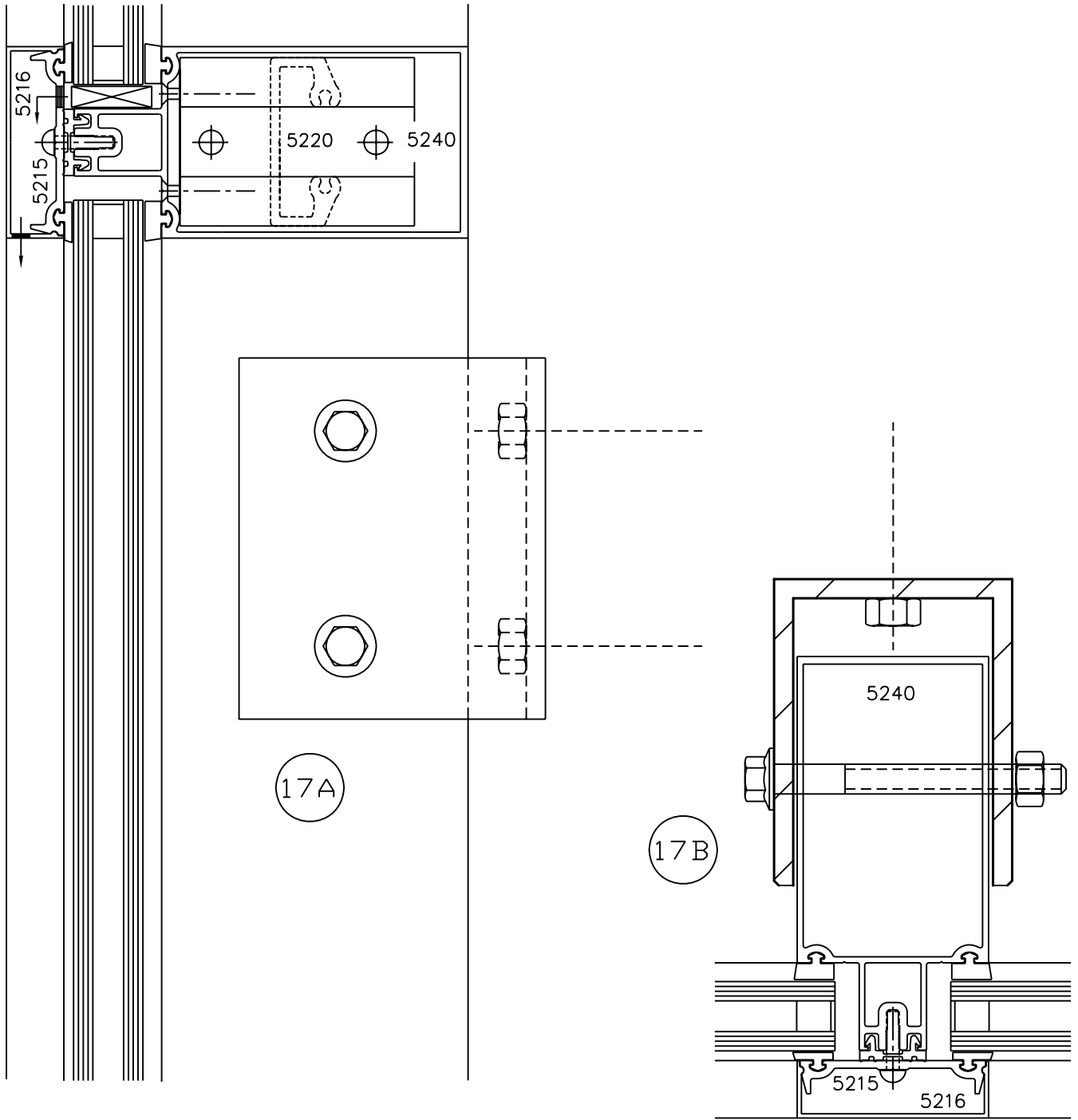


SCALE 1:2



VERTICAL ANCHOR TO STRUCTURE  
SITE CONDITION TO DETERMINE SPECIFIC ANCHORS REQUIRED

SCALE 1:2

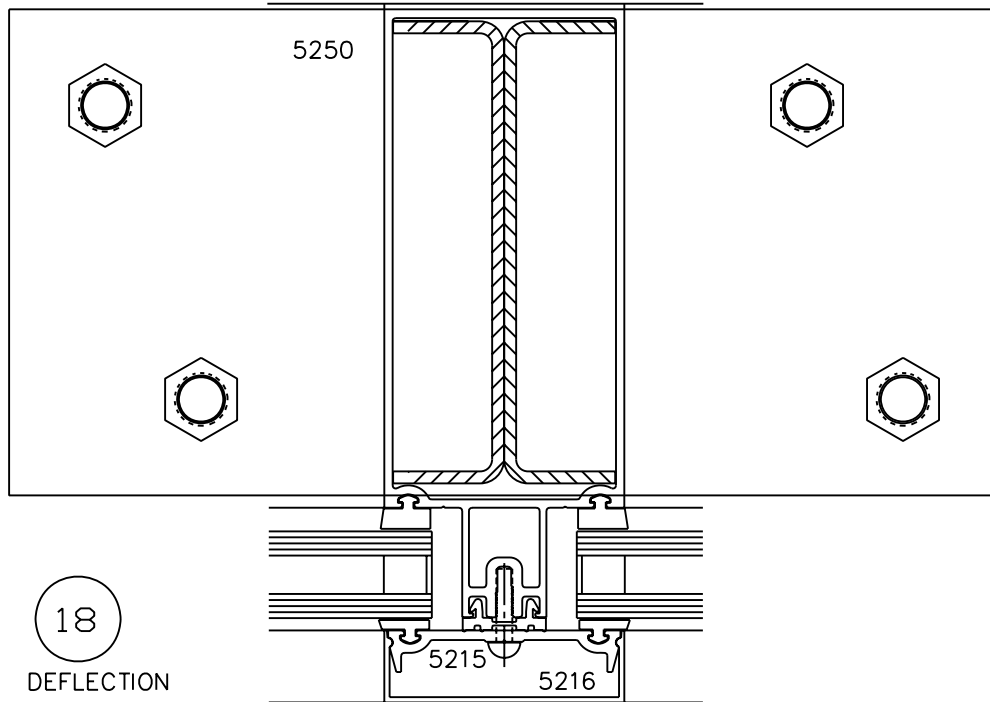


VERTICAL ANCHOR TO STRUCTURE  
SITE CONDITION TO DETERMINE SPECIFIC ANCHORS REQUIRED

SCALE 1:2

**E-2.10**

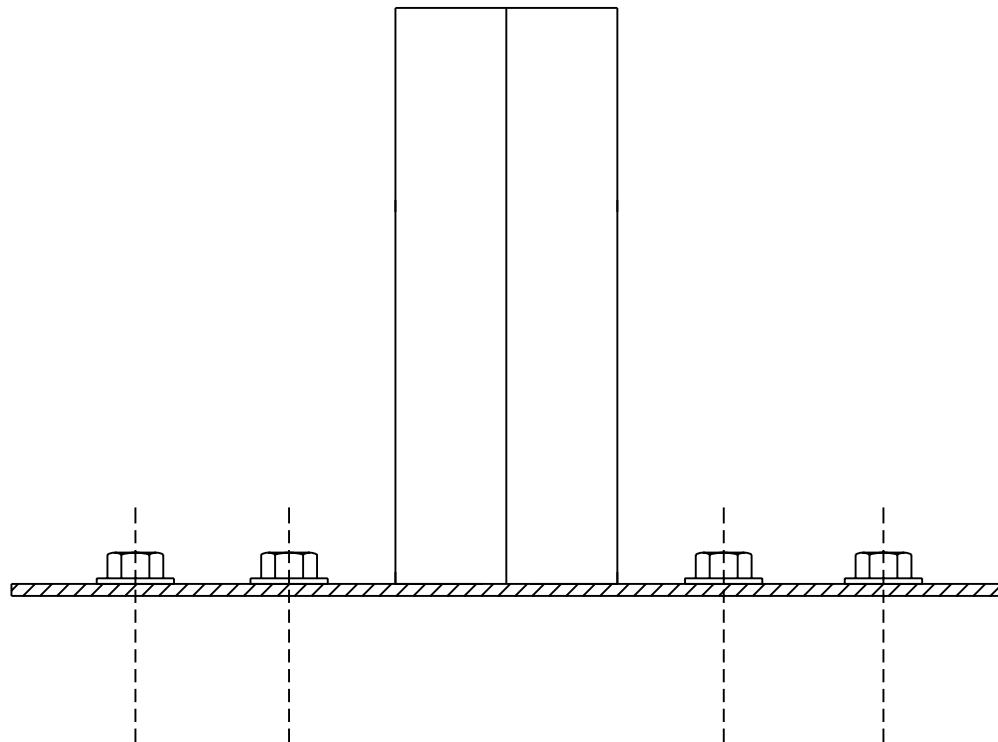
SECTION-PAGE



18

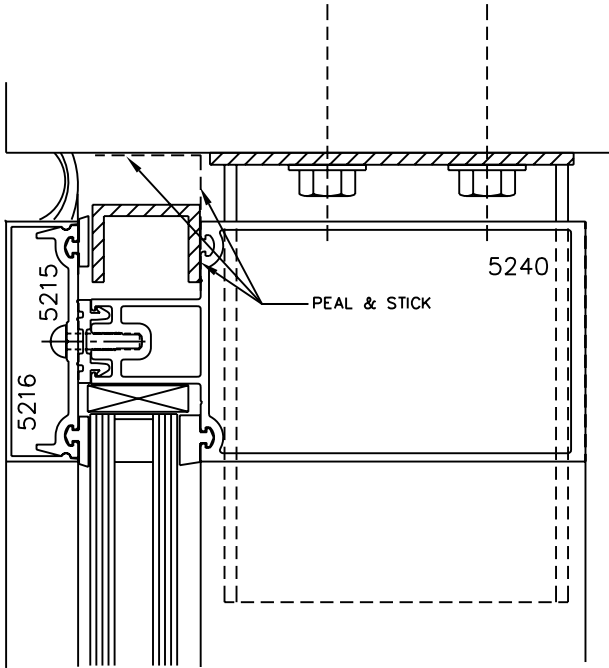
DEFLECTION  
SHOE ANCHOR

SITE CONDITION TO DETERMINE  
SPECIFIC ANCHORS REQUIRED



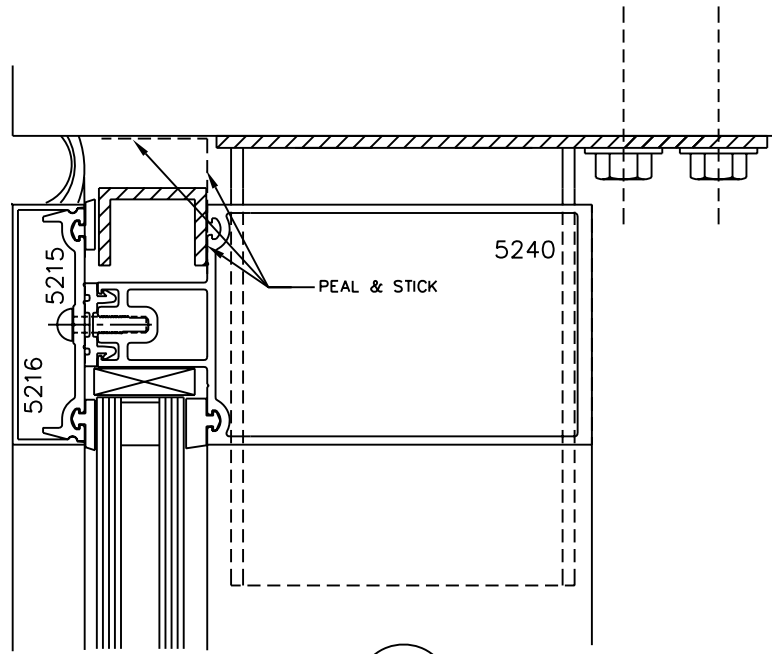
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**E-2.11**

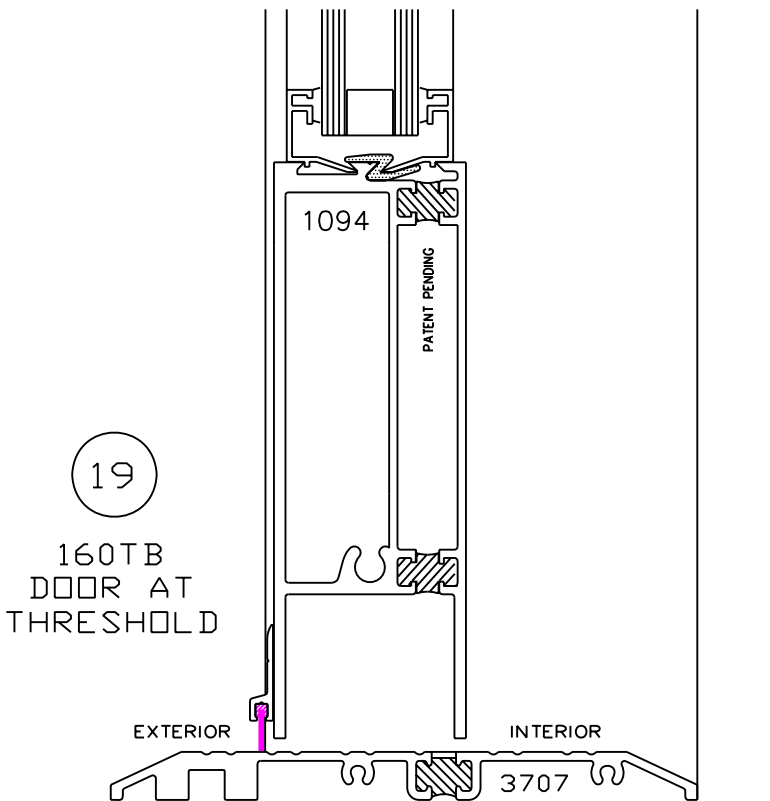


18A

DEFLECTION  
SHOE ANCHOR  
SITE CONDITION TO DETERMINE  
SPECIFIC ANCHORS REQUIRED

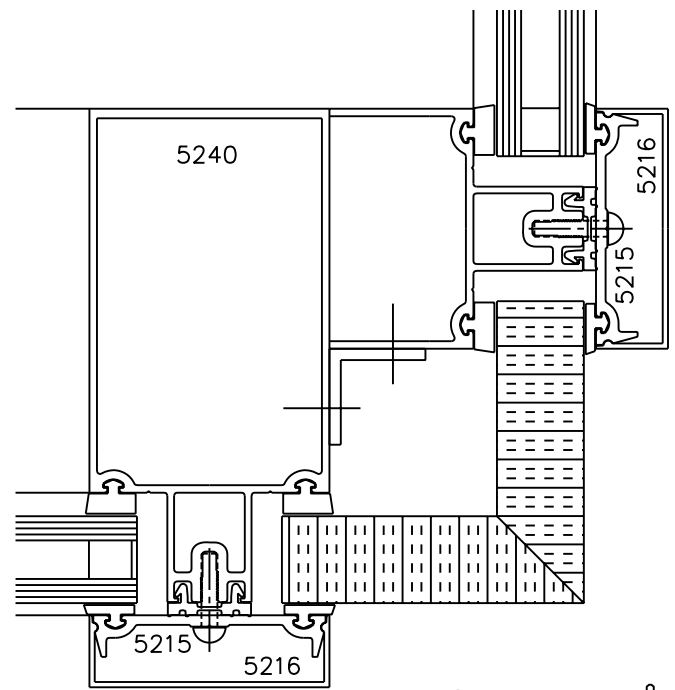


18B



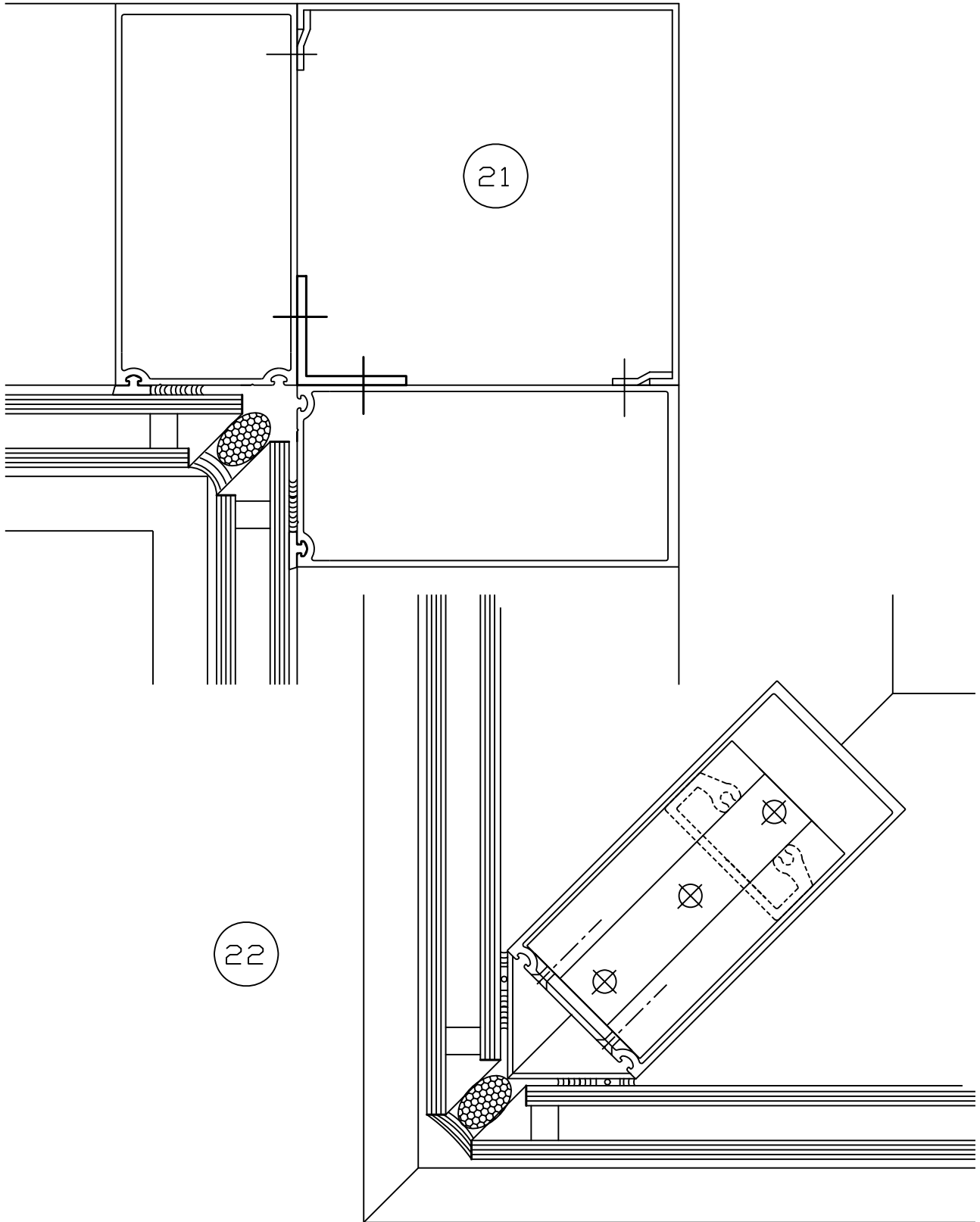
19

160TB  
DOOR AT  
THRESHOLD

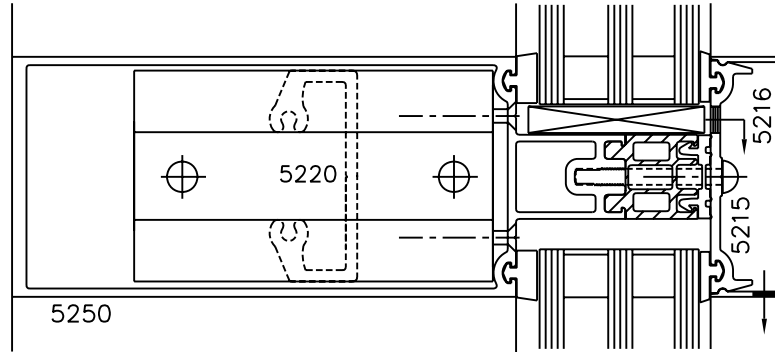


20

OUTSIDE CORNER 90°

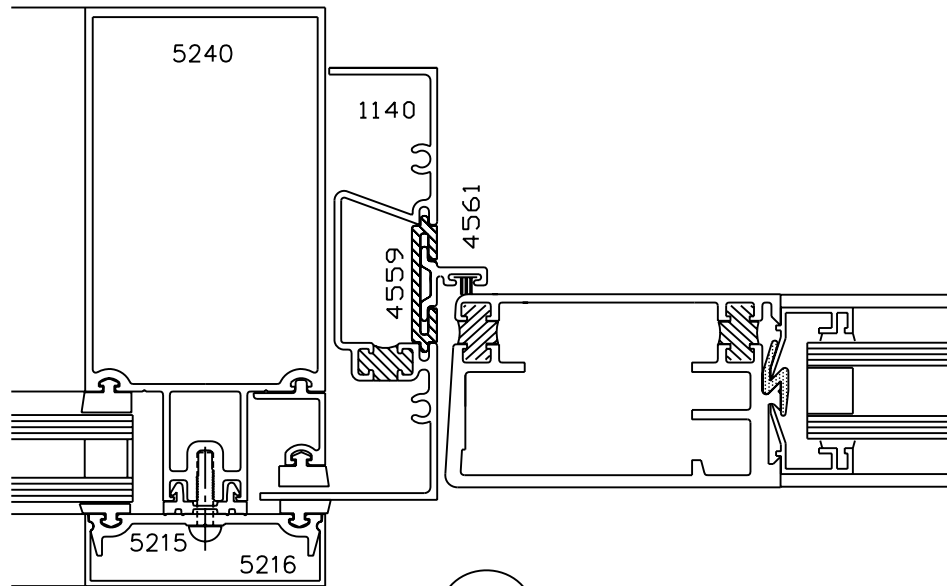


**5200** SERIES  
 64mm (2-1/2") PRESSURE  
 PLATE / SSG FRAMING  
 SYSTEM



2t

Optional  
 Triple Glazed



11A

PROFILE: <b>5250 + 5215</b>	MATERIAL: AA 6063 T5
A= 1491 mm <sup>2</sup> (2.311 IN <sup>2</sup> )	I= 5481270 mm <sup>4</sup> (13.169 IN <sup>4</sup> )
C/L <sub>max</sub> = 91.57 mm (3.61 IN)	S= 59860 mm <sup>3</sup> (3.653 IN <sup>3</sup> )

SPACING	MAX. ALLOWABLE MULLION LENGTH (m/ft) FOR SPECIFIED WIND LOAD					
	0.72 kPa 15 PSF	0.96 kPa 20 PSF	1.20 kPa 25 PSF	1.44 kPa 30 PSF	1.68 kPa 35 PSF	1.91 kPa 40 PSF
.45 m	8.05	7.30	6.80	6.40	6.05	5.80
1.5'	26.4	23.9	22.3	21.0	19.8	19.0
.60 m	7.30	6.65	6.15	5.80	5.50	5.25
2.0'	23.9	21.8	20.2	19.0	18.0	17.2
.75 m	6.80	6.15	5.70	5.40	5.00	4.70
2.5'	22.3	20.2	18.7	17.7	16.4	15.4
.90 m	6.40	5.80	5.40	4.95	4.55	4.30
3.0'	21.0	19.0	17.7	16.2	14.9	14.1
1.05 m	6.05	5.50	5.00	4.55	4.25	3.95
3.5'	19.8	18.0	16.4	14.9	13.9	13.0
1.20 m	5.80	5.25	4.70	4.25	3.95	3.70
4.0'	19.0	17.2	15.4	13.9	13.0	12.1
1.35 m	5.55	4.95	4.40	4.05	3.75	3.50
4.5'	18.2	16.2	14.4	13.3	12.3	11.5
1.50 m	5.40	4.70	4.20	3.80	3.55	3.30
5.0'	17.7	15.4	13.8	12.5	11.6	10.8
1.65 m	5.15	4.45	4.00	3.65	3.35	3.15
5.5'	16.9	14.6	13.1	12.0	11.0	10.3
1.80 m	4.95	4.25	3.80	3.50	3.25	3.05
6.0'	16.2	13.9	12.5	11.5	10.7	10.0
1.95 m	4.75	4.10	3.65	3.35	3.10	2.90
6.5'	15.6	13.5	12.0	11.0	10.2	9.5
2.10 m	4.55	3.95	3.55	3.25	3.00	2.80
7.0'	14.9	13.0	11.6	10.7	9.8	9.2
2.25 m	4.40	3.80	3.40	3.10	2.90	2.70
7.5'	14.4	12.5	11.2	10.2	9.5	8.9
2.40 m	4.25	3.70	3.30	3.00	2.80	2.60
8.0'	13.9	12.1	10.8	9.8	9.2	8.5

PROFILE: <b>5241 + 5215</b>	MATERIAL: AA 6063 T5
A= 1196 mm <sup>2</sup> (1.854 IN <sup>2</sup> )	I= 2857140 mm <sup>4</sup> (6.864 IN <sup>4</sup> )
C/L <sub>max</sub> = 77.31 mm (3.04 IN)	S= 36959 mm <sup>3</sup> (2.555 IN <sup>3</sup> )

SPACING	MAX. ALLOWABLE MULLION LENGTH (m/ft) FOR SPECIFIED WIND LOAD					
	0.72 kPa 15 PSF	0.96 kPa 20 PSF	1.20 kPa 25 PSF	1.44 kPa 30 PSF	1.68 kPa 35 PSF	1.91 kPa 40 PSF
.45 m	6.45	5.90	5.45	5.15	4.90	4.65
1.5'	21.2	19.4	17.9	16.9	16.1	15.3
.60 m	5.90	5.35	4.95	4.65	4.40	4.10
2.0'	19.4	17.6	16.2	15.3	14.4	13.5
.75 m	5.45	4.95	4.60	4.25	3.95	3.70
2.5'	17.9	16.2	15.1	13.9	13.0	12.1
.90 m	5.15	4.65	4.25	3.90	3.60	3.35
3.0'	16.9	15.3	13.9	12.8	11.8	11.0
1.05 m	4.90	4.40	3.95	3.60	3.30	3.10
3.5'	16.1	14.4	13.0	11.8	10.8	10.2
1.20 m	4.65	4.10	3.70	3.35	3.10	2.90
4.0'	15.3	13.5	12.1	11.0	10.2	9.5
1.35 m	4.50	3.90	3.45	3.15	2.95	2.75
4.5'	14.8	12.8	11.3	10.3	9.7	9.0
1.50 m	4.25	3.70	3.30	3.00	2.80	2.60
5.0'	13.9	12.1	10.8	9.8	9.2	8.5
1.65 m	4.05	3.50	3.15	2.85	2.65	2.50
5.5'	13.3	11.5	10.3	9.4	8.7	8.2
1.80 m	3.90	3.35	3.00	2.75	2.55	2.40
6.0'	12.8	11.0	9.8	9.0	8.4	7.9
1.95 m	3.70	3.20	2.90	2.65	2.45	2.30
6.5'	12.1	10.5	9.5	8.7	8.0	7.5
2.10 m	3.60	3.10	2.80	2.55	2.35	2.20
7.0'	11.8	10.2	9.2	8.4	7.7	7.2
2.25 m	3.45	3.00	2.70	2.45	2.25	2.15
7.5'	11.3	9.8	8.9	8.0	7.4	7.1
2.40 m	3.35	2.90	2.60	2.35	2.20	2.05
8.0'	11.0	9.5	8.5	7.7	7.2	6.7

- 1/ UNIFORM (RECTANGULAR) LOAD DISTRIBUTION
- 2/ BASED ON L/175 MAX ALLOWABLE DEFLECTION  
OR F<sub>y</sub> = 110 MPa FOR AA 6063 T5  
- WHICHEVER IS LESS - CONFORMING TO CAN3-S157-M83
- 3/ FOR ESTIMATING PURPOSES ONLY



Profile		5250 / 5215					Reinforcing with 1/4" x 4 1/2" - 1 Steed Bar
A ( mm <sup>2</sup> ) = 2214		A ( in <sup>2</sup> ) = 3.431707					
I ( mm <sup>4</sup> ) = 7738954		I ( in <sup>4</sup> ) = 18.59291					
LG.CEN ( mm ) = 79.32		LG.CEN ( in ) = 3.122835					
S = ( mm <sup>3</sup> ) = 97566		S ( in <sup>3</sup> ) = 5.953843					
Max. Allowable Length (m/ft) for specified Wind Load							
Spacing	0.72kPa	0.96kPa	1.20kPa	1.44kPa	1.68kPa	1.91kPa	
	15 PSF	20PSF	25PSF	30PSF	35PSF	40PSF	
0.30 m	10.30	9.40	8.70	8.20	7.80	7.45	
1.0'	33.8	30.8	28.5	26.9	25.6	24.4	
0.45 m	9.00	8.20	7.60	7.15	6.80	6.50	
1.5'	29.5	26.9	24.9	23.5	22.3	21.3	
0.60 m	8.20	7.45	6.90	6.50	6.20	5.90	
2.0'	26.9	24.4	22.6	21.3	20.3	19.4	
0.75 m	7.60	6.90	6.40	6.05	5.75	5.50	
2.5'	24.9	22.6	21.0	19.8	18.9	18.0	
0.90 m	7.15	6.50	6.05	5.70	5.40	5.15	
3.0'	23.5	21.3	19.8	18.7	17.7	16.9	
1.05 m	6.80	6.20	5.75	5.40	5.10	4.90	
3.5'	22.3	20.3	18.9	17.7	16.7	16.1	
1.20 m	6.50	5.90	5.50	5.15	4.90	4.70	
4.0'	21.3	19.4	18.0	16.9	16.1	15.4	
1.35 m	6.25	5.70	5.25	4.95	4.70	4.45	
4.5'	20.5	18.7	17.2	16.2	15.4	14.6	
1.50 m	6.05	5.50	5.10	4.80	4.50	4.25	
5.0'	19.8	18.0	16.7	15.7	14.8	13.9	
1.65 m	5.85	5.30	4.95	4.65	4.30	4.05	
5.5'	19.2	17.4	16.2	15.3	14.1	13.3	
1.80 m	5.70	5.15	4.80	4.45	4.10	3.85	
6.0'	18.7	16.9	15.7	14.6	13.5	12.6	
1.95 m	5.55	5.00	4.65	4.30	3.95	3.70	
6.5'	18.2	16.4	15.3	14.1	13.0	12.1	
2.10 m	5.40	4.90	4.50	4.10	3.80	3.60	
7.0'	17.7	16.1	14.8	13.5	12.5	11.8	
2.25 m	5.25	4.80	4.35	4.00	3.70	3.45	
7.5'	17.2	15.7	14.3	13.1	12.1	11.3	
2.40 m	5.15	4.70	4.20	3.85	3.55	3.35	
8.0'	16.9	15.4	13.8	12.6	11.6	11.0	

Profile		5250 / 5215					Reinforcing with 1/4" x 4 1/2" - 2 Steel Bars		
A (mm <sup>2</sup> ) = 2940			A (in <sup>2</sup> ) = 4.557009						
I (mm <sup>4</sup> ) = 9996638			I (in <sup>4</sup> ) = 24.01702						
LG.CEN (mm) = 73.9			LG.CEN (in) = 2.909449						
S (mm <sup>3</sup> ) = 135273			S (in <sup>3</sup> ) = 8.254865						
Max. Allowable Length (m/ft) for specified Wind Load									
Spacing	0.72kPa	0.96kPa	1.20kPa	1.44kPa	1.68kPa	1.91kPa			
	15 PSF	20PSF	25PSF	30PSF	35PSF	40PSF			
0.30 m	11.20	10.20	9.50	8.90	8.50	8.10			
1.0'	36.7	33.5	31.2	29.2	27.9	26.6			
0.45 m	9.80	8.90	8.30	7.80	7.40	7.10			
1.5'	32.2	29.2	27.2	25.6	24.3	23.3			
0.60 m	8.90	8.10	7.55	7.10	6.75	6.45			
2.0'	29.2	26.6	24.8	23.3	22.1	21.2			
0.75 m	8.30	7.55	7.00	6.55	6.25	6.00			
2.5'	27.2	24.8	23.0	21.5	20.5	19.7			
0.90 m	7.80	7.10	6.55	6.20	5.90	5.65			
3.0'	25.6	23.3	21.5	20.3	19.4	18.5			
1.05 m	7.40	6.75	6.25	5.90	5.60	5.35			
3.5'	24.3	22.1	20.5	19.4	18.4	17.6			
1.20 m	7.10	6.45	5.95	5.60	5.35	5.10			
4.0'	23.3	21.2	19.5	18.4	17.6	16.7			
1.35 m	6.80	6.20	5.75	5.40	5.15	4.90			
4.5'	22.3	20.3	18.9	17.7	16.9	16.1			
1.50 m	6.55	5.95	5.55	5.20	4.95	4.75			
5.0'	21.5	19.5	18.2	17.1	16.2	15.6			
1.65 m	6.35	5.80	5.35	5.05	4.80	4.60			
5.5'	20.8	19.0	17.6	16.6	15.7	15.1			
1.80 m	6.20	5.60	5.20	4.90	4.65	4.45			
6.0'	20.3	18.4	17.1	16.1	15.3	14.6			
1.95 m	6.00	5.45	5.10	4.80	4.55	4.35			
6.5'	19.7	17.9	16.7	15.7	14.9	14.3			
2.10 m	5.90	5.35	4.95	4.65	4.45	4.20			
7.0'	19.4	17.6	16.2	15.3	14.6	13.8			
2.25 m	5.75	5.20	4.85	4.55	4.35	4.05			
7.5'	18.9	17.1	15.9	14.9	14.3	13.2			
2.40 m	5.60	5.10	4.75	4.45	4.20	3.95			
8.0'	18.4	16.7	15.6	14.6	13.8	13.0			

Profile		5250/5215					Reinforcing with 2" x 4 3/4" x 1/8" Steel Channel
A (mm <sup>2</sup> ) = 100							A (in <sup>2</sup> ) = 0.1550003
I (mm <sup>4</sup> ) = 9790690							I (in <sup>4</sup> ) = 23.52223
LG.CEN (mm) = 76.5							LG.CEN (in) = 3.011811
S (mm <sup>3</sup> ) = 127983							S (in <sup>3</sup> ) = 7.810002
Max. Allowable Length (m/ft) for specified Wind Load							
Spacing	0.72kPa 15 PSF	0.96kPa 20PSF	1.20kPa 25PSF	1.44kPa 30PSF	1.68kPa 35PSF	1.91kPa 40PSF	
0.30 m	11.1	10.1	9.40	8.85	8.40	8.05	
1.0'	36.4	33.1	30.8	29.0	27.6	26.4	
0.45 m	9.75	8.85	8.25	7.75	7.35	7.05	
1.5'	32.0	29.0	27.1	25.4	24.1	23.1	
0.60 m	8.85	8.05	7.45	7.05	6.70	6.40	
2.0'	29.0	26.4	24.4	23.1	22.0	21.0	
0.75 m	8.25	7.45	6.95	6.55	6.20	5.95	
2.5'	27.1	24.4	22.8	21.5	20.3	19.5	
0.90 m	7.75	7.05	6.55	6.15	5.85	5.60	
3.0'	25.4	23.1	21.5	20.2	19.2	18.4	
1.05 m	7.35	6.70	6.20	5.85	5.55	5.30	
3.5'	24.1	22.0	20.3	19.2	18.2	17.4	
1.20 m	7.05	6.40	5.95	5.60	5.30	5.10	
4.0'	23.1	21.0	19.5	18.4	17.4	16.7	
1.35 m	6.75	6.15	5.70	5.35	5.10	4.90	
4.5'	22.1	20.2	18.7	17.6	16.7	16.1	
1.50 m	6.55	5.95	5.50	5.20	4.90	4.70	
5.0'	21.5	19.5	18.0	17.1	16.1	15.4	
1.65 m	6.30	5.75	5.35	5.00	4.75	4.55	
5.5'	20.7	18.9	17.6	16.4	15.6	14.9	
1.80 m	6.15	5.60	5.20	4.90	4.65	4.45	
6.0'	20.2	18.4	17.1	16.1	15.3	14.6	
1.95 m	6.00	5.45	5.05	4.75	4.50	4.25	
6.5'	19.7	17.9	16.6	15.6	14.8	13.9	
2.10 m	5.85	5.30	4.90	4.65	4.35	4.10	
7.0'	19.2	17.4	16.1	15.3	14.3	13.5	
2.25 m	5.70	5.20	4.80	4.55	4.20	3.95	
7.5'	18.7	17.1	15.7	14.9	13.8	13.0	
2.40 m	5.60	5.05	4.70	4.40	4.10	3.85	
8.0'	18.4	16.6	15.4	14.4	13.5	12.6	