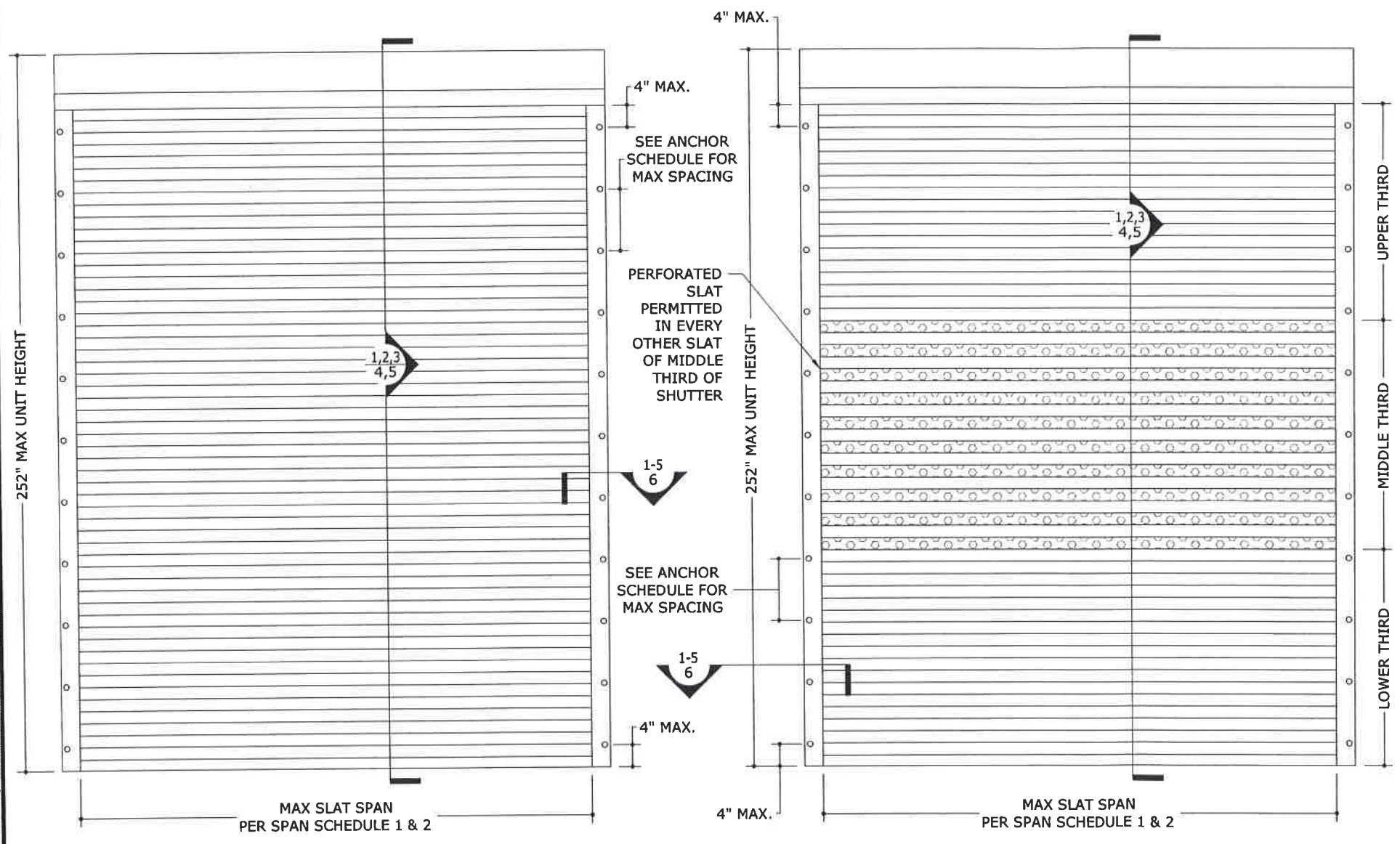


V:\Projects\15-30688 Magnum III (Security Star) Slat Shutter Master Plan Sheet - TX.dwg  
 01/08/2016 - 8:58am gabriels



**1**  
**1** END RETENTION SHUTTER WITH SINGLE WALL SLATS  
 N.T.S. EXTERIOR ELEV

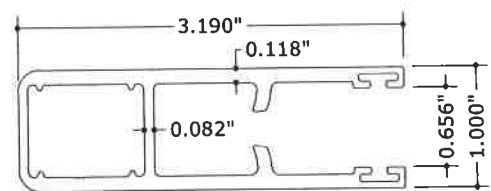
**2**  
**1** END RETENTION SHUTTER WITH SINGLE WALL SLATS (PERFORATED OPTION)  
 N.T.S. EXTERIOR ELEV

**MAXIMUM ALLOWABLE DESIGN PRESSURES:** AS NOTED IN SCHEDULES

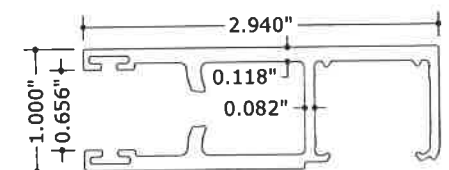
**DESIGN NOTES:**  
 POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED BY OTHERS ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE. SITE-SPECIFIC WIND LOAD REQUIREMENTS SHALL BE DETERMINED IN ACCORDANCE WITH ASCE 7 AND THE GOVERNING BUILDING CODE BY SEPARATE ENGINEERING CERTIFICATION AND SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE CAPACITY VALUE LISTED HEREIN FOR ANY ASSEMBLY WITHIN THE LIMITATIONS STATED HEREIN.

- GENERAL NOTES:**
1. THE SYSTEM DESCRIBED HEREIN HAS BEEN DESIGNED AND TESTED IN ACCORDANCE WITH THE 2006 & 2009 INTERNATIONAL BUILDING/RESIDENTIAL CODE. THIS SYSTEM HAS BEEN TESTED IN ACCORDANCE WITH ASTM E330, E1996, AND E1886 TESTING STANDARDS PER TEST REPORT D6939.01-109-44, D6939.02-109-44 AND D6939.03-109-44 BY ARCHITECTURAL TESTING.
  2. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM. WIND LOAD DURATION FACTOR Cd=1.6 HAS BEEN USED FOR WOOD ANCHOR DESIGN.
  3. THE ARCHITECT/ENGINEER OF RECORD FOR THE PROJECT SUPERSTRUCTURE WITH WHICH THIS DESIGN IS USED SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES TO THIS DESIGN WHICH SHALL BE COORDINATED BY THE PERMITTING CONTRACTOR.
  4. POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED PER SEPARATE ENGINEERING IN ACCORDANCE WITH THE GOVERNING CODE. PRESSURE REQUIREMENTS SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.
  5. DESIGN PRESSURES NOTED HEREIN ARE BASED ON MAXIMUM TESTED PRESSURES DIVIDED BY A 1.5 SAFETY FACTOR.
  6. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
  7. PERMIT HOLDER SHALL VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS.
  8. CONCRETE ANCHORS NOTED HEREIN SHALL BE EMBEDDED TO UN-CRAKCED CONCRETE ONLY. INSTALL ALL CONCRETE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS.
  9. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. MINIMUM EMBEDMENT SHALL BE AS NOTED HEREIN. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
  10. MAXIMUM SLAT SPAN: 18'-0".
  11. MAXIMUM ALLOWABLE DESIGN PRESSURE: PER DESIGN SCHEDULES AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
  13. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
  14. ALTERATIONS, ADDITIONS, HIGHLIGHTING, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.
  15. END RETENTION SHUTTER ASSEMBLY SHALL BEAR A PERMANENT LABEL ON THE BOTTOM OF THE HOOD OR ON THE BOTTOM SLAT FACING THE EXTERIOR WITH THE MINIMUM INFORMATION REQUIRED BY THE AFOREMENTIONED TEST STANDARDS.

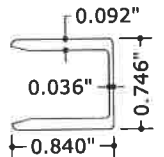
01/08/2016 - 8:58am gabriele V:\Projects\15-3068 Magnum III (Security Star) Slat Shutter Master Plan Sheet - TX.dwg



**1** **MAGNUM 3.57 END-RETENTION RAIL**  
 8" = 1'-0" 6063-T5 ALUM.



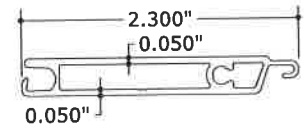
**2** **SNAP RAIL END-RETENTION RAIL**  
 8" = 1'-0" 6063-T5 ALUM.



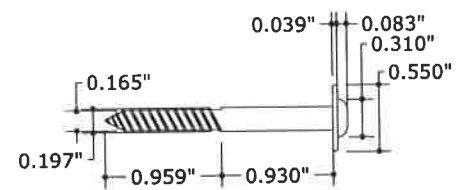
**3** **END-RETENTION RAIL INSERT**  
 8" = 1'-0" PLASTIC



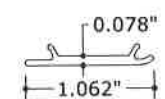
**4** **SINGLE WALL SLAT**  
 8" = 1'-0" 6063-T5 ALUM.



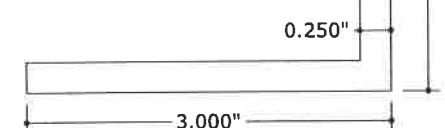
**5** **BASE SLAT**  
 8" = 1'-0" 6063-T5 ALUM.



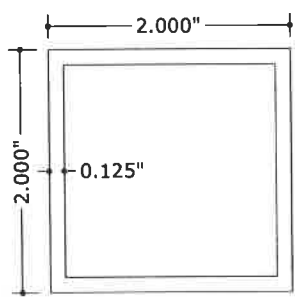
**6** **RETAINING SCREW**  
 8" = 1'-0" 304 S.S.



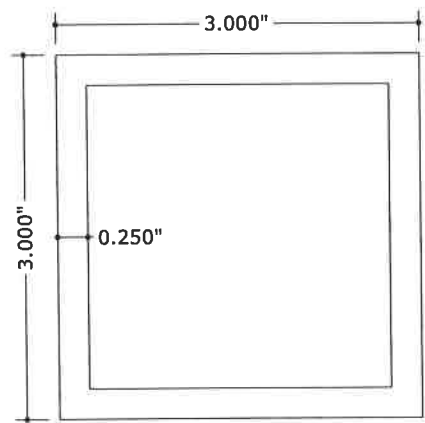
**7** **END-RETENTION RAIL SNAP COVER**  
 8" = 1'-0" 6063-T5 ALUM.



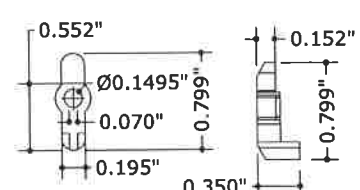
**8** **3"x3"x0.250" ANGLE**  
 8" = 1'-0" 6063-T5 ALUM.



**9** **2"x2"x0.125" TUBE**  
 8" = 1'-0" 6063-T5 ALUM.



**10** **3"x3"x0.250" TUBE**  
 8" = 1'-0" 6063-T5 ALUM.



**11** **SLAT SIDE LOCK**  
 8" = 1'-0" BAYBLEND T85 POLYCARB.

**ALLOWABLE SLAT SPAN SCHEDULES:**

SPAN SCHEDULE 1 MAGNUM 3.57 RETENTION SHUTTER WITH SINGLE WALL SLATS	
SLAT SPAN	ALLOWABLE DESIGN PRESSURE
48.0"	± 206.7 PSF
54.0"	± 171.7 PSF
60.0"	± 150.0 PSF
66.0"	± 135.7 PSF
72.0"	± 125.6 PSF
78.0"	± 118.2 PSF
84.0"	± 112.5 PSF
90.0"	± 107.9 PSF
96.0"	± 104.2 PSF
102.0"	± 101.0 PSF
108.0"	± 98.2 PSF
114.0"	± 95.8 PSF
120.0"	± 93.6 PSF
126.0"	± 91.7 PSF
132.0"	± 89.9 PSF
138.0"	± 88.2 PSF
144.0"	± 86.7 PSF
150.0"	± 82.6 PSF
156.0"	± 78.9 PSF
162.0"	± 75.5 PSF
168.0"	± 72.4 PSF
174.0"	± 69.6 PSF

SPAN SCHEDULE 2 SNAP RAIL RETENTION SHUTTER WITH SINGLE WALL SLATS	
SLAT SPAN	ALLOWABLE DESIGN PRESSURE
48.0"	± 130.0 PSF
54.0"	± 101.5 PSF
60.0"	± 84.9 PSF
66.0"	± 74.8 PSF
72.0"	± 68.3 PSF
78.0"	± 64.0 PSF
84.0"	± 60.9 PSF
90.0"	± 58.6 PSF
96.0"	± 56.9 PSF
102.0"	± 55.5 PSF
108.0"	± 54.4 PSF
114.0"	± 53.5 PSF
120.0"	± 52.6 PSF

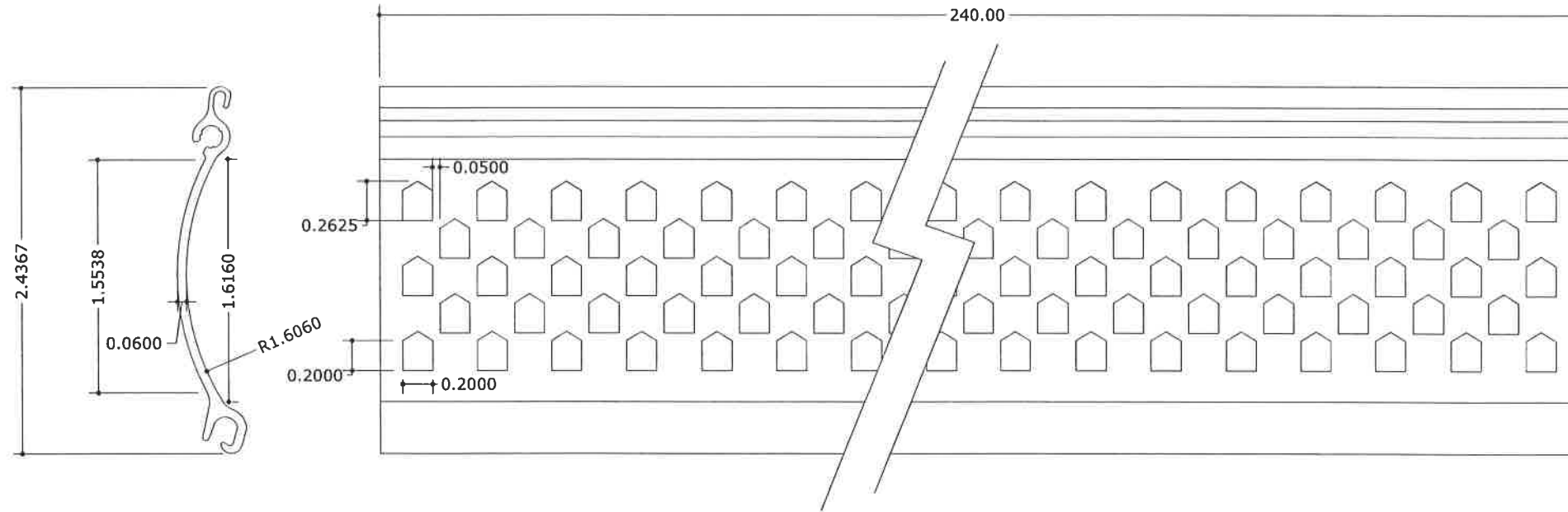
**SEPARATION FROM GLAZING SCHEDULES\*:**

GLASS SEPARATION SCHEDULE MAGNUM 3.57 END RETENTION SHUTTER WITH SINGLE WALL SLATS*		
SLAT SPAN	INSTALLATIONS ≤ 30' ABOVE GRADE	INSTALLATIONS > 30' ABOVE GRADE
48.0"	6.1"	6.1"
54.0"	14.0"	6.3"
60.0"	14.0"	6.6"
66.0"	14.0"	6.9"
72.0"	14.0"	7.2"
78.0"	14.0"	7.4"
84.0"	14.0"	7.7"
90.0"	14.0"	8.0"
96.0"	14.0"	8.3"
102.0"	14.0"	8.5"
108.0"	14.0"	8.8"
114.0"	14.0"	9.0"
120.0"	14.0"	9.3"
126.0"	12.2"	9.5"
132.0"	12.2"	9.8"
138.0"	12.2"	10.0"
144.0"	12.2"	10.3"
150.0"	12.2"	10.5"
156.0"	12.2"	10.8"
162.0"	12.2"	11.1"
168.0"	12.2"	11.3"
174.0"	12.2"	11.6"

GLASS SEPARATION SCHEDULE SNAP RAIL END RETENTION SHUTTER WITH SINGLE WALL SLATS*		
SLAT SPAN	INSTALLATIONS ≤ 30' ABOVE GRADE	INSTALLATIONS > 30' ABOVE GRADE
48.0"	9.0"	5.6"
54.0"	10.2"	5.9"
60.0"	10.2"	6.2"
66.0"	10.2"	6.5"
72.0"	10.2"	6.8"
78.0"	10.2"	7.1"
84.0"	10.2"	7.3"
90.0"	10.2"	7.6"
96.0"	10.2"	7.8"
102.0"	10.2"	8.1"
108.0"	10.2"	8.3"
114.0"	10.2"	8.5"
120.0"	10.2"	8.8"

- SPAN AND GLAZING SEPARATION NOTES:**
- SLAT SPAN IS DEFINED AS THE DISTANCE BETWEEN RAILS.
  - SEPARATION FROM GLAZING IS ONLY REQUIRED IN ASTM WIND ZONE 4 OR ESSENTIAL FACILITIES AS DEFINED IN ASTM E1996.
  - LINEAR INTERPOLATION BETWEEN SHUTTER SPANS IS NOT PERMITTED. FOR SPANS BETWEEN THOSE INDICATED ABOVE, THE SEPARATION FROM GLASS AND/OR DESIGN PRESSURE FOR THE NEXT HIGHER SPAN SHALL BE USED.

**\* NOTE: APPLIES TO INSTALLATIONS LOCATED WITHIN WIND ZONE 4 OR ESSENTIAL FACILITIES.**



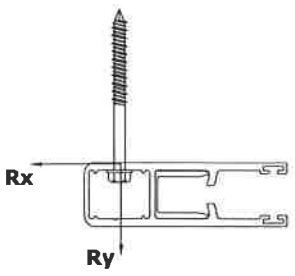
**12** PERFORATED SINGLE WALL SLAT  
12" = 1'-0" 6063-T5 ALUM.



ANCHOR SCHEDULE: : INDICATES VALUES NOT APPROVED FOR USE.

WALL MOUNT: MAGNUM 3.57 END RETENTION SHUTTER WITH SINGLE WALL SLATS

ANCHOR NOTES: SEE SHEET 5 FOR ANCHOR NOTES.

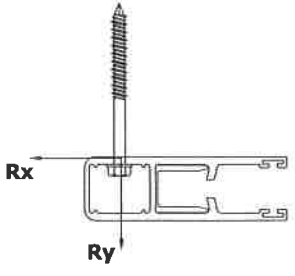
				MAXIMUM SPACING (O.C.)															
				1/4" ELCO ULTRACON TO 2846 PSI MIN. CONCRETE; 1.75" MIN. EMBEDMENT; 2.5" MIN. EDGE DISTANCE	1/4" SS ITW TAPCON TO 3192 PSI MIN. CONCRETE; 1.75" MIN. EMBEDMENT; 2.5" MIN. EDGE DISTANCE	5/16" ITW TAPCON			1/4" POWERS POWER-BOLT TO 3000 PSI MIN. CONCRETE; 2.5" MIN. EMBEDMENT; 3" MIN. EDGE DISTANCE	1/4" ALL-POINTS SOLID-SET		1/4" LAG SCREW TO G=0.55 MIN WOOD; 1.5" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	5/16" LAG SCREW TO G=0.42 MIN WOOD; 2" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	#14 WOOD SCREW TO G=0.55 MIN WOOD; 1.5" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	#14 316 SS SMS W/ FULL THREAD PENETRATION (OR 1/4-20 316 SS THRU-BOLT) W/ 5/8" WASHER TO 0.125" MIN. ALUM; 0.5" MIN. EDGE DISTANCE	#14 316 SS SMS W/ FULL THREAD PENETRATION (OR 1/4-20 316 SS THRU-BOLT) W/ 5/8" WASHER TO 0.25" MIN. ALUM; 0.5" MIN. EDGE DISTANCE	3/8" POWERS WEDGE BOLT TO 3000 PSI MIN. CONCRETE; 3.5" MIN. EMBEDMENT; 4.5" MIN. EDGE DISTANCE		
SLAT SPAN	DESIGN PRESSURE	Rx	Ry			TO 2899 PSI MIN. CONCRETE; 2.25" MIN. EMBEDMENT; 3.125" MIN. EDGE DISTANCE	TO GROUT-FILLED CONCRETE BLOCK; 2.25" MIN. EMBEDMENT; 4" MIN. EDGE DISTANCE	TO HOLLOW CONCRETE BLOCK; 1.75" MIN. EMBEDMENT; 4" MIN. EDGE DISTANCE		TO 3000 PSI MIN. CONCRETE; 0.875" MIN. EMBEDMENT; 3" MIN. EDGE DISTANCE	TO HOLLOW BLOCK; 0.875" MIN. EMBEDMENT; 3" MIN. EDGE DISTANCE								
48"	+/- 40 PSF	0.0 LB/FT	80.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 50 PSF	0.0 LB/FT	100.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 60 PSF	0.0 LB/FT	120.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 70 PSF	0.0 LB/FT	140.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 80 PSF	0.0 LB/FT	160.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 90 PSF	0.0 LB/FT	180.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 100 PSF	0.0 LB/FT	200.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 110 PSF	1.2 LB/FT	220.5 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 120 PSF	51.9 LB/FT	260.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 130 PSF	102.5 LB/FT	300.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 140 PSF	152.9 LB/FT	341.1 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 150 PSF	203.0 LB/FT	382.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 160 PSF	253.0 LB/FT	423.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 170 PSF	302.8 LB/FT	465.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
+/- 180 PSF	352.5 LB/FT	508.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
+/- 190 PSF	401.9 LB/FT	551.1 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.8"	3.8"	3.9"	4.0"	4.0"	4.0"	
+/- 206 PSF	480.6 LB/FT	620.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.5"	3.3"	2.9"	3.3"	3.1"	4.0"	4.0"	4.0"	
60"	+/- 40 PSF	0.0 LB/FT	100.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 50 PSF	0.0 LB/FT	125.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 60 PSF	68.7 LB/FT	173.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 70 PSF	140.0 LB/FT	224.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 80 PSF	211.1 LB/FT	274.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 90 PSF	282.0 LB/FT	326.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 100 PSF	352.8 LB/FT	377.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 110 PSF	423.4 LB/FT	429.9 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
+/- 120 PSF	493.8 LB/FT	482.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.9"	3.4"	3.0"	3.5"	3.8"	4.0"	4.0"		
+/- 130 PSF	564.0 LB/FT	535.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.5"	3.0"	2.6"	3.1"	3.4"	4.0"	4.0"		
+/- 140 PSF	634.1 LB/FT	589.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.1"	2.7"	2.3"	2.7"	3.1"	4.0"	4.0"		
+/- 150 PSF	703.9 LB/FT	643.5 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	2.7"	2.4"	2.1"	2.5"	2.8"	4.0"	4.0"		
72"	+/- 40 PSF	125.9 LB/FT	159.9 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 50 PSF	220.0 LB/FT	220.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 60 PSF	314.0 LB/FT	281.9 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 70 PSF	407.7 LB/FT	343.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 80 PSF	501.2 LB/FT	406.3 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.5"	3.0"	3.6"	4.0"	4.0"	4.0"	
	+/- 90 PSF	594.6 LB/FT	469.5 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.6"	3.0"	2.6"	3.1"	3.7"	4.0"	4.0"	
	+/- 100 PSF	687.7 LB/FT	533.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.1"	2.6"	2.2"	2.7"	3.2"	4.0"	4.0"	
+/- 110 PSF	780.6 LB/FT	597.5 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	2.3"	2.3"	2.3"	2.9"	4.0"	4.0"			
+/- 125 PSF	919.5 LB/FT	695.2 LB/FT	4.0"	3.7"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	2.3"	2.3"	2.3"	2.4"	4.0"	4.0"			
84"	+/- 40 PSF	291.3 LB/FT	226.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"		
	+/- 50 PSF	410.1 LB/FT	298.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"		
	+/- 60 PSF	528.7 LB/FT	371.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"		
	+/- 70 PSF	647.0 LB/FT	444.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"		
	+/- 80 PSF	765.1 LB/FT	519.1 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"		
	+/- 90 PSF	882.9 LB/FT	594.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"		
+/- 112 PSF	1141.1 LB/FT	762.1 LB/FT	4.0"	3.1"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.5"	2.4"	2.0"	2.1"	2.2"	4.0"	4.0"		



ANCHOR SCHEDULE: [Hatched Box]: INDICATES VALUES NOT APPROVED FOR USE.

WALL MOUNT: MAGNUM 3.57 END RETENTION SHUTTER WITH SINGLE WALL SLATS (CONTINUED)

ANCHOR NOTES: SEE SHEET 5 FOR ANCHOR NOTES.

				MAXIMUM SPACING (O.C.)													
				1/4" ELCO ULTRACON TO 2846 PSI MIN. CONCRETE; 1.75" MIN. EMBEDMENT; 2.5" MIN. EDGE DISTANCE	1/4" SS ITW TAPCON TO 3192 PSI MIN. CONCRETE; 1.75" MIN. EMBEDMENT; 2.5" MIN. EDGE DISTANCE	5/16" ITW TAPCON			1/4" POWERS POWER-BOLT TO 3000 PSI MIN. CONCRETE; 2.5" MIN. EMBEDMENT; 3" MIN. EDGE DISTANCE	1/4" ALL-POINTS SOLID-SET		1/4" LAG SCREW TO G=0.55 MIN WOOD; 1.5" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	5/16" LAG SCREW TO G=0.42 MIN WOOD; 2" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	#14 WOOD SCREW TO G=0.55 MIN WOOD; 1.5" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	#14 316 SS SMS W/ FULL THREAD PENETRATION (OR 1/4-20 316 SS THRU-BOLT) W/ 5/8" WASHER TO 0.125" MIN. ALUM; 0.5" MIN. EDGE DISTANCE	#14 316 SS SMS W/ FULL THREAD PENETRATION (OR 1/4-20 316 SS THRU-BOLT) W/ 5/8" WASHER TO 0.125" MIN. ALUM; 0.5" MIN. EDGE DISTANCE	3/8" POWERS WEDGE BOLT TO 3000 PSI MIN. CONCRETE; 3.5" MIN. EMBEDMENT; 4.5" MIN. EDGE DISTANCE
SLAT SPAN	DESIGN PRESSURE	Rx	Ry														
96"	+/- 40 PSF	441.4 LB/FT	284.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 50 PSF	586.8 LB/FT	367.4 LB/FT	4.0"	4.0"	4.0"	4.0"	3.9"	4.0"	4.0"	4.0"	4.0"	3.1"	2.7"	3.3"	4.0"	4.0"
	+/- 60 PSF	731.8 LB/FT	451.6 LB/FT	4.0"	4.0"	4.0"	4.0"		4.0"	4.0"	3.2"	2.5"	2.1"	2.6"	3.5"	4.0"	4.0"
	+/- 70 PSF	876.6 LB/FT	536.8 LB/FT		4.0"	4.0"	4.0"		4.0"	4.0"		2.1"		2.2"	3.0"	4.0"	4.0"
	+/- 80 PSF	1021.1 LB/FT	623.0 LB/FT		3.6"	4.0"	4.0"		4.0"	4.0"					2.6"	4.0"	4.0"
	+/- 90 PSF	1165.2 LB/FT	710.2 LB/FT		3.2"	4.0"	4.0"		4.0"	3.6"					2.2"	4.0"	4.0"
108"	+/- 40 PSF	585.0 LB/FT	336.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.2"	2.7"	3.3"	4.0"	4.0"	4.0"
	+/- 50 PSF	758.7 LB/FT	431.2 LB/FT	4.0"	4.0"	4.0"	4.0"		4.0"	4.0"	3.2"	2.5"	2.1"	2.6"	3.6"	4.0"	4.0"
	+/- 60 PSF	932.1 LB/FT	527.0 LB/FT		4.0"	4.0"	4.0"		4.0"	4.0"			2.1"	2.9"	4.0"	4.0"	4.0"
	+/- 70 PSF	1105.1 LB/FT	624.1 LB/FT		3.4"	4.0"	4.0"		4.0"	3.9"				2.5"	4.0"	4.0"	4.0"
	+/- 80 PSF	1277.7 LB/FT	722.5 LB/FT			4.0"	4.0"		4.0"	3.3"				2.1"	4.0"	4.0"	4.0"
	+/- 90 PSF	1449.9 LB/FT	822.1 LB/FT			4.0"	4.0"		4.0"						3.5"	4.0"	4.0"
120"	+/- 30 PSF	522.8 LB/FT	281.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.6"	3.1"	3.8"	4.0"	4.0"	4.0"
	+/- 40 PSF	726.9 LB/FT	386.2 LB/FT	4.0"	4.0"	4.0"	4.0"		4.0"	4.0"	3.4"	2.6"	2.2"	2.7"	3.9"	4.0"	4.0"
	+/- 50 PSF	930.6 LB/FT	492.2 LB/FT		4.0"	4.0"	4.0"		4.0"	4.0"		2.0"		2.1"	3.1"	4.0"	4.0"
	+/- 60 PSF	1133.8 LB/FT	599.9 LB/FT			4.0"	4.0"		4.0"	3.9"					2.5"	4.0"	4.0"
	+/- 70 PSF	1336.6 LB/FT	709.1 LB/FT			4.0"	3.9"		4.0"	3.3"					2.1"	3.9"	4.0"
	+/- 80 PSF	1539.0 LB/FT	820.0 LB/FT			4.0"			4.0"							3.4"	4.0"
132"	+/- 30 PSF	633.9 LB/FT	318.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.0"	2.5"	3.1"	4.0"	4.0"	4.0"
	+/- 40 PSF	869.6 LB/FT	434.0 LB/FT	4.0"	4.0"	4.0"	4.0"		4.0"	4.0"		2.2"		2.3"	3.4"	4.0"	4.0"
	+/- 50 PSF	1104.8 LB/FT	551.8 LB/FT		3.6"	4.0"	4.0"		4.0"	4.0"					2.7"	4.0"	4.0"
	+/- 60 PSF	1338.3 LB/FT	676.1 LB/FT			4.0"	4.0"		4.0"	3.3"					2.2"	3.9"	4.0"
	+/- 70 PSF	1573.6 LB/FT	793.2 LB/FT			4.0"			4.0"							3.4"	4.0"
	+/- 80 PSF	1805.1 LB/FT	925.1 LB/FT			4.0"			4.0"							2.9"	4.0"
144"	+/- 20 PSF	476.3 LB/FT	228.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.4"	4.0"	4.0"	4.0"	4.0"
	+/- 30 PSF	745.6 LB/FT	353.6 LB/FT	4.0"	4.0"	4.0"	4.0"		4.0"	4.0"	3.5"	2.6"	2.2"	2.7"	4.0"	4.0"	4.0"
	+/- 40 PSF	1014.4 LB/FT	481.0 LB/FT		4.0"	4.0"	4.0"		4.0"	4.0"					3.0"	4.0"	4.0"
	+/- 50 PSF	1282.6 LB/FT	610.7 LB/FT		3.1"	4.0"	4.0"		4.0"	3.5"					2.4"	4.0"	4.0"
	+/- 60 PSF	1547.4 LB/FT	754.0 LB/FT			4.0"			4.0"							3.5"	4.0"
	+/- 70 PSF	1817.2 LB/FT	877.1 LB/FT			4.0"			4.0"							2.9"	4.0"
156"	+/- 20 PSF	555.0 LB/FT	252.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.4"	2.9"	3.6"	4.0"	4.0"	4.0"
	+/- 30 PSF	858.8 LB/FT	389.5 LB/FT	4.0"	4.0"	4.0"	4.0"		4.0"	4.0"	3.0"	2.2"		2.4"	3.7"	4.0"	4.0"
	+/- 40 PSF	1161.8 LB/FT	529.4 LB/FT		3.5"	4.0"	4.0"		4.0"	4.0"					2.7"	4.0"	4.0"
	+/- 50 PSF	1464.1 LB/FT	672.4 LB/FT			4.0"			4.0"	3.1"					2.1"	3.7"	4.0"
	+/- 60 PSF	1761.7 LB/FT	834.4 LB/FT			3.8"			4.0"							3.1"	4.0"
	+/- 70 PSF	2066.4 LB/FT	967.6 LB/FT			4.0"			4.0"							2.6"	4.0"
168"	+/- 20 PSF	634.5 LB/FT	276.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.0"	2.6"	3.2"	4.0"	4.0"	4.0"
	+/- 30 PSF	974.0 LB/FT	425.4 LB/FT		4.0"	4.0"	4.0"		4.0"	4.0"				2.1"	3.3"	4.0"	4.0"
	+/- 40 PSF	1312.7 LB/FT	578.4 LB/FT		3.1"	4.0"	4.0"		4.0"	3.5"					2.4"	4.0"	4.0"
	+/- 50 PSF	1650.3 LB/FT	735.3 LB/FT			4.0"			4.0"							3.3"	4.0"
	+/- 60 PSF	1981.6 LB/FT	918.0 LB/FT			4.0"			4.0"							2.7"	4.0"
	+/- 72 PSF	2389.7 LB/FT	1094.2 LB/FT			4.0"			4.0"							2.3"	4.0"

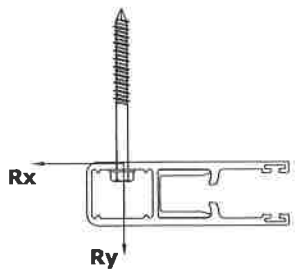


ANCHOR SCHEDULE: : INDICATES VALUES NOT APPROVED FOR USE.

WALL MOUNT: MAGNUM 3.57 END RETENTION SHUTTER WITH SINGLE WALL SLATS (CONTINUED)

ANCHOR NOTES: SEE SHEET 5 FOR ANCHOR NOTES.

SLAT SPAN	DESIGN PRESSURE	Rx	Ry	MAXIMUM SPACING (O.C.)													
				1/4" ELCO ULTRACON TO 2846 PSI MIN. CONCRETE; 1.75" MIN. EMBEDMENT; 2.5" MIN. EDGE DISTANCE	1/4" SS ITW TAPCON TO 3192 PSI MIN. CONCRETE; 1.75" MIN. EMBEDMENT; 2.5" MIN. EDGE DISTANCE	5/16" ITW TAPCON		1/4" POWERS POWER-BOLT TO 3000 PSI MIN. CONCRETE; 2.5" MIN. EMBEDMENT; 3" MIN. EDGE DISTANCE	1/4" ALL-POINTS SOLID-SET		1/4" LAG SCREW TO G=0.55 MIN WOOD; 1.5" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	5/16" LAG SCREW TO G=0.42 MIN WOOD; 2" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	#14 WOOD SCREW TO G=0.55 MIN WOOD; 1.5" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	#14 316 SS SMS W/ FULL THREAD PENETRATION (OR 1/4-20 316 SS THRU-BOLT) W/ 5/8" WASHER TO 0.125" MIN. ALUM; 0.5" MIN. EDGE DISTANCE	#14 316 SS SMS W/ FULL THREAD PENETRATION (OR 1/4-20 316 SS THRU-BOLT) W/ 5/8" WASHER TO 0.25" MIN. ALUM; 0.5" MIN. EDGE DISTANCE	3/8" POWERS WEDGE BOLT TO 3000 PSI MIN. CONCRETE; 3.5" MIN. EMBEDMENT; 4.5" MIN. EDGE DISTANCE	
180"	+/- 20 PSF	715.2 LB/FT	300.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.7"	2.7"	2.3"	2.9"	4.0"	4.0"	4.0"
	+/- 30 PSF	1091.7 LB/FT	461.6 LB/FT		3.8"	4.0"	4.0"		4.0"						3.0"	4.0"	4.0"
	+/- 40 PSF	1467.1 LB/FT	628.1 LB/FT			4.0"	3.8"			3.2"					2.2"	3.8"	4.0"
	+/- 50 PSF	1841.4 LB/FT	799.6 LB/FT				3.8"									3.0"	4.0"
	+/- 67 PSF	2474.8 LB/FT	1102.4 LB/FT													2.2"	4.0"
192"	+/- 10 PSF	381.2 LB/FT	155.3 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 20 PSF	797.3 LB/FT	323.6 LB/FT	4.0"	4.0"	4.0"	4.0"		4.0"	4.0"	3.4"	2.4"	2.1"	2.6"	4.0"	4.0"	4.0"
	+/- 30 PSF	1212.0 LB/FT	498.2 LB/FT		3.4"	4.0"	4.0"			3.9"					2.7"	4.0"	4.0"
	+/- 40 PSF	1625.4 LB/FT	678.9 LB/FT			4.0"									2.0"	3.4"	4.0"
	+/- 50 PSF	2037.4 LB/FT	865.7 LB/FT													2.7"	4.0"
204"	+/- 10 PSF	425.2 LB/FT	166.9 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.9"	4.0"	4.0"	4.0"	4.0"
	+/- 20 PSF	880.9 LB/FT	347.3 LB/FT	4.0"	4.0"	4.0"	4.0"		4.0"	4.0"	3.1"	2.2"		2.3"	3.9"	4.0"	4.0"
	+/- 30 PSF	1335.1 LB/FT	535.3 LB/FT		3.2"	4.0"	4.0"			3.6"					2.5"	4.0"	4.0"
	+/- 40 PSF	1787.6 LB/FT	730.8 LB/FT			4.0"										3.1"	4.0"
	+/- 50 PSF	2238.3 LB/FT	933.8 LB/FT													2.5"	4.0"
216"	+/- 10 PSF	469.7 LB/FT	178.5 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.5"	4.0"	4.0"	4.0"	4.0"
	+/- 20 PSF	966.3 LB/FT	371.3 LB/FT	4.0"	4.0"	4.0"	4.0"		4.0"	4.0"		2.0"		2.1"	3.6"	4.0"	4.0"
	+/- 30 PSF	1461.0 LB/FT	573.2 LB/FT			4.0"	3.9"			3.3"					2.3"	3.9"	4.0"
	+/- 40 PSF	1953.7 LB/FT	784.1 LB/FT													2.9"	4.0"
	+/- 50 PSF	2444.2 LB/FT	1004.0 LB/FT													2.3"	4.0"
+/- 55 PSF	2688.7 LB/FT	1117.3 LB/FT													2.1"	4.0"	



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