GENERAL NOTES: (IBC 2006 & IRC 2006 w/ 2006 TEXAS REVISIONS)

1- DEFINITION: THIS PRODUCT IS A HURRICANE PROTECTION DEVICE; DESIGNED, CONSTRUCTED AND ERECTED TO EASILY ENCLOSE AN AREA, PROVIDING PROTECTION FROM HURRICANE FORCE WINDS AND WIND BORNE DEBRIS WITHIN THE ALLOWABLE DESIGNED PRESSURES AND LIMITATIONS STATED IN THIS APPROVAL.

2- POSTING: A PERMANENT LABEL SHALL BE PROVIDED AS PER IBC 2006 SECTION 1703.5. IT SHALL BE PLACED ON A READILY VISIBLE LOCATION AND A MINIMUM OF ONE LABEL PER OPENING

3- GLASS SEPARATION: PRODUCT IS QUALIFIED AS "NON POROUS", THEREFORE GLAZING SEPARATION IS NOT REQUIRED WITH EXCEPTION FOR THE FOLLOWING LOCATIONS:
3.1- WIND ZONE 4 AS DEFINED IN ASTM E 1996 (LOCATIONS WITH WIND GUST GREATER THAN 140 MPH)
3.2- ESSENTIAL FACILITIES AS DEFINED IN ASCE 7

USE "GS" ON TABLE 1 TO COMPLY WITH 3.1 AND 3.2 AND TO DETERMINE THE PROPER GLASS SEPARATION.

4- LOADS: DESIGNED LOAD CALCULATED BASED ON THE ASCE 7 AND PROVIDED BY A PROFESSIONAL ARCHITECT OR ENGINEER FOR EACH SPECIFIC PROJECT. THE CALCULATED DESIGNED PRESSURE MUST NOT EXCEED THE ALLOWABLE PRESSURES FOR EACH PRODUCT COMPONENT TO BE USED.

5- MATERIAL: ALL EXTRUDED ALUMINUM SHAPES SHALL BE MADE OF 6063-T6 OR AS NOTED.

6- FASTENERS: ASSEMBLY SCREWS AND ANCHORS SHALL BE CORROSION RESISTANT AS SPECIFIED IN SECTION R325 (IRC 2006 TEXAS REVISIONS) AND CHAPTER 17 (IBC 2006 TEXAS REVISIONS). ANCHORS ARE TO BE SELECTED BASED ON AREA LOCATION (SEAWARD, INLAND I OR INLAND II).

7- REINFORCEMENTS SUCH AS MULLIONS WERE DESIGNED BY RATIONAL ANALYSIS AND ARE PART OF THESE DRAWINGS. DUE TO MANY VARIATIONS OF REINFORCEMENTS, LOADS AND SHUTTER DIMENSIONS BECOME IMPRACTICAL ADDRESSING ALL CONDITIONS IN ONE SET OF DRAWINGS. THE CONDITIONS ADDRESSED IN THE PROPOSED DRAWINGS HAVE CONSERVATIVE LIMITATIONS IN ORDER TO FACILITATE THE DESIGN. SITE SPECIFIC CONDITIONS CAN BE ADDRESSED ON A JOB BASIS PROVIDED PROPER ENGINEERING BASEDON THE ALUMINUM DESIGN MANUAL 05.

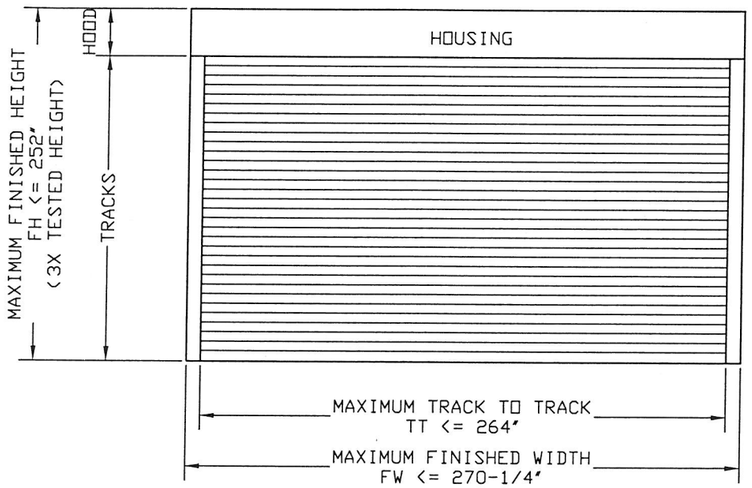
8- USE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, ARCHITECT OR ENGINEER OF RECORD TO VERIFY THE FOLLOWING:
8.1- THE STABILITY OF THE STRUCTURE WHERE THE PRODUCT IS TO BE ATTACHED INSURING PROPER ANCHORAGE.
8.2- THE SITE SPECIFIC PROJECT CRITERIA, SUCH AS BUT NOT LIMITED TO, LOCAL CODE REQUIREMENTS, DESIGNED PRESSURES ETC.
8.3- THAT THIS APPROVAL IS ADEQUATE TO THE SPECIFIC PROJECT.

9- INCREASE IN ALLOWABLE STRESS BY 33 1/3% HAVE NOT BEEN USED IN THE DESIGN OF THE ANCHORS FOR THIS PRODUCT APPROVAL.

TABLE 1
ALLOWABLE DESIGNED RATING (PSF)

FW MAX. (IN)	TT MAX. (IN)	DESIGN RATING MOUNT TYPE		TOTAL GLASS SEPARATION (GS) INCHES REFER TO GENERAL NOTES 3
		WALL	INSET	
126.25	120	150	150	7 1/4"
156.25	150	110	110	7 1/4"
186.25	180	70	70	8"
228.25	222	70	68	8"
270.25	264	70	65	11 1/4"

NOTES:
1- FOR MOUNT COMBINATION WALL/INSET USE INSET MOUNT PRESSURES
2- FOR ALTERNATE INSET USE INSET MOUNT PRESSURES



DESIGN SCHEDULE	
COMPONENT	SHEET
SLAT ALLOWABLE PRESSURE - TABLE 1	1
GLASS SEPARATION - TABLE 1	1
TRACK REACTION - TABLE 2 & 3	5 & 6
TRACK ANCHORAGE - TABLE 2 & 3	5 & 6
MULLION	7 & 8

NOTES:
1- ALLOWABLE DESIGNED PRESSURE ARE FUNCTION OF THE LOWEST ALLOWABLE DESIGNED LOAD FOR EACH COMPONENT (SLATS, ANCHORAGE & MULLIONS)
2- DESIGNED PRESSURES MUST NOT EXCEED 150 PSF.
3- FINISHED WIDTH (FW) MUST NOT EXCEED 270-1/4".
4- MAXIMUM HEIGHT MUST NOT EXCEED 252"

CODE AND STANDARD COMPLIANCE:
INTERNATIONAL BUILDING CODE (IBC 2006) WITH TEXAS REVISIONS
INTERNATIONAL RESIDENTIAL CODE (IRC 2006) WITH TEXAS REVISIONS
ASTM E330, E1886, E1996 (LEVEL D MISSILE)

MANUFACTURER:
RolSafe

12801 COMMONWEALTH DRIVE - SUITE 2
FORT MYERS, FL. 33913
Phone: (239) 225-2487
Fax: (239) 561-0780

PRODUCT:
53 mm Herculean
IMPACT ROLLING WALL
LARGE & SMALL MISSILE
IMPACT RATED

Engineering:
EngCo Inc.
CR 11234
6971 W. Sunrise Blvd. 104
Plantation, Fl. 33313
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STATE OF TEXAS
PEDRO FIGUEIREDO
102937
LICENSED
PROFESSIONAL ENGINEER
NOV 04 2009

Engineer Seal
Pedro De Figueiredo
TEXAS - PE 102937

DRAFTING:
PK DRAFTING & MORE

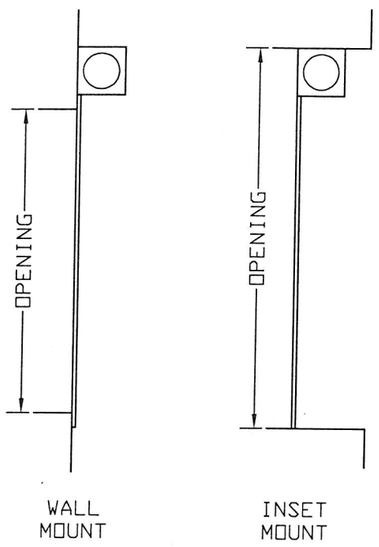
REVISIONS:

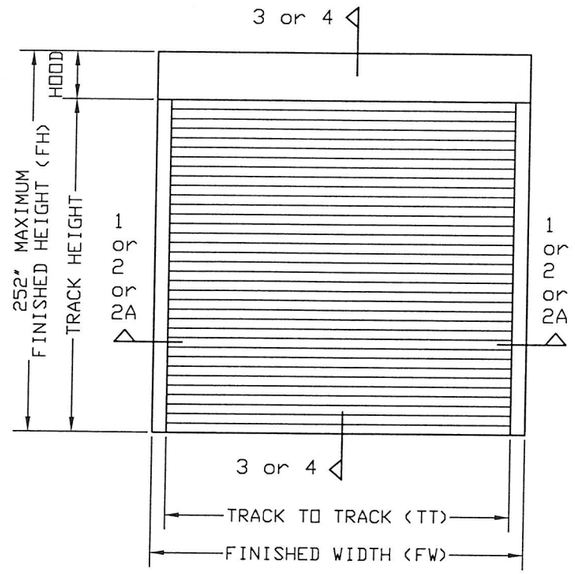
Date: 09/26/2009
Scale: NA
Design by: PPMF

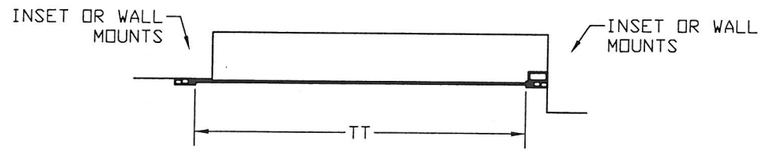
Drawing Number
09-214

SHEET
1 of 9

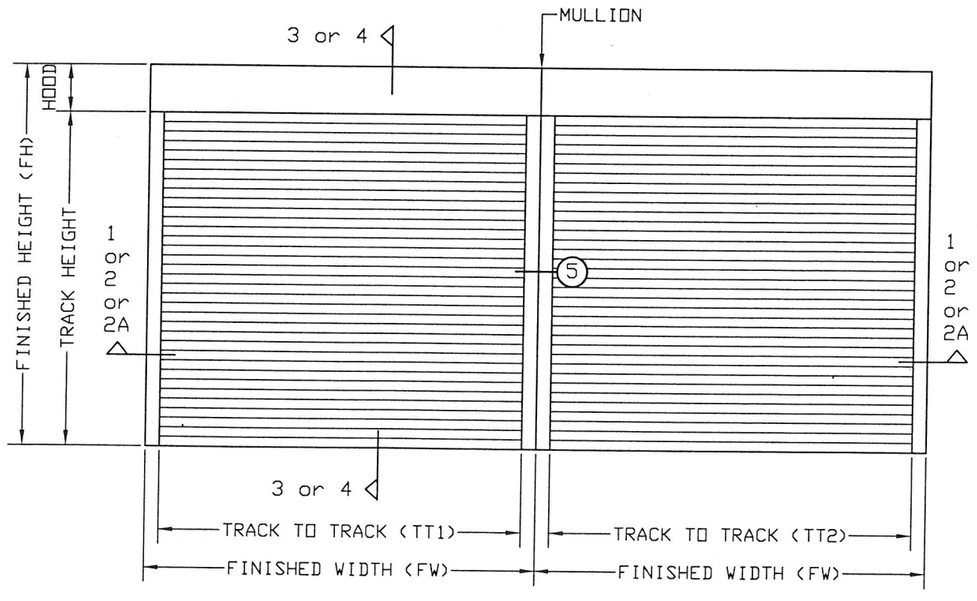
TYPICAL SINGLE UNIT ELEVATION



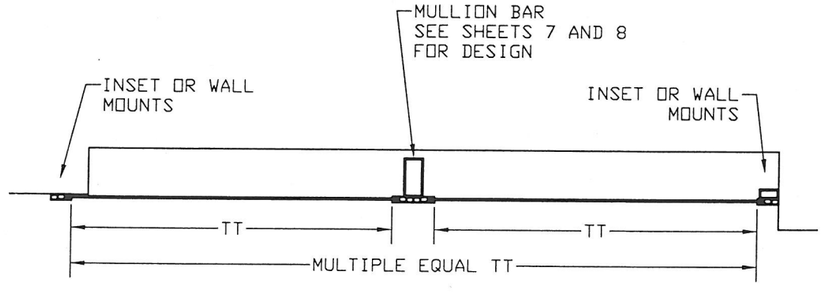




TYPICAL MULTIPLE UNITS ELEVATION



TT1 = TT2



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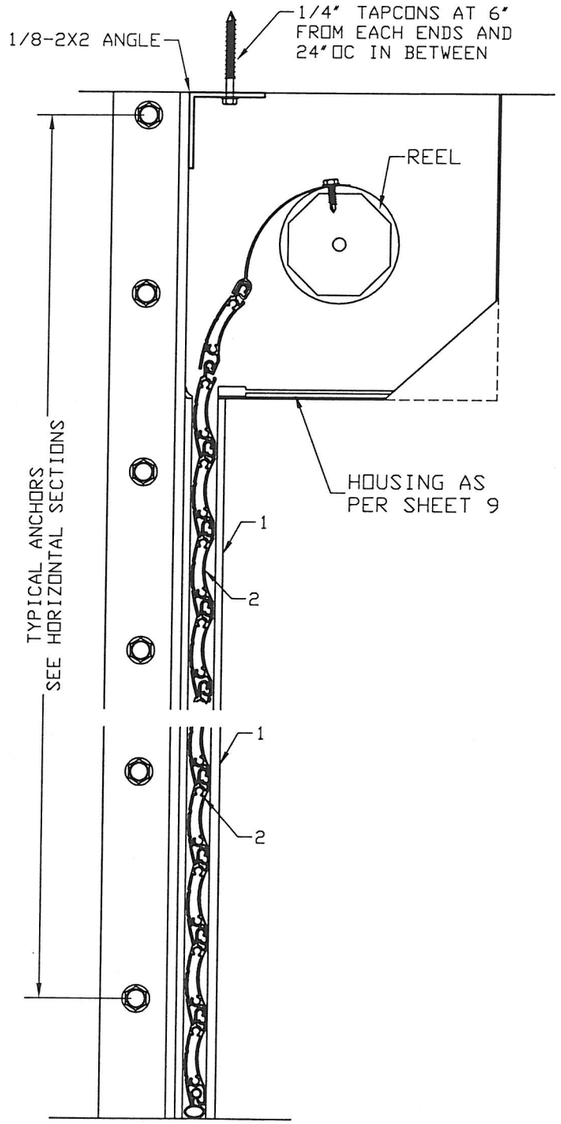
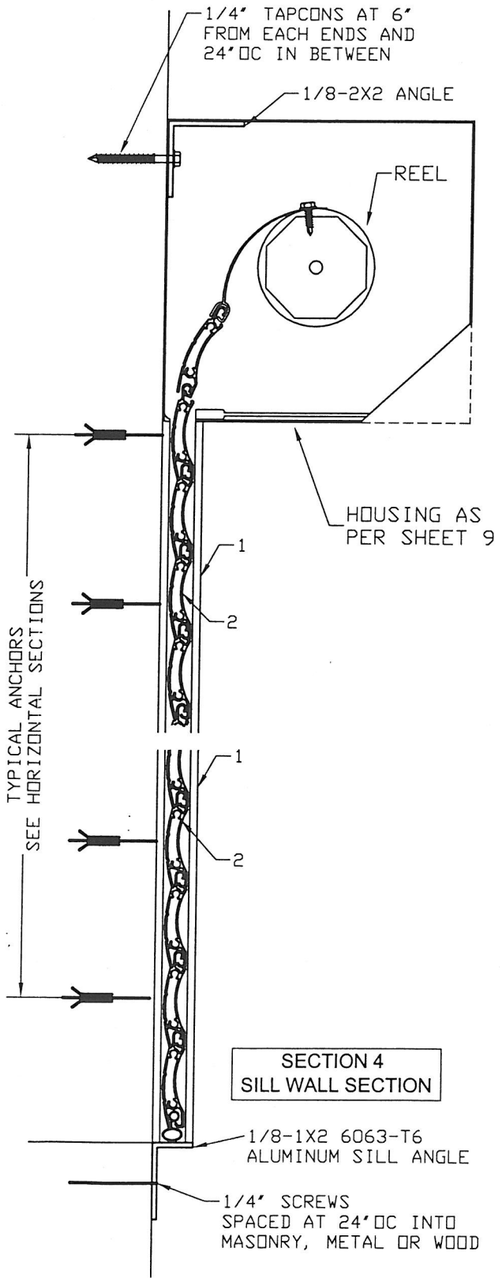
TYPICAL VERTICAL SECTIONS

SECTION 3
HEADER CEILING SECTION



SECTION 3
SILL FLOOR SECTION

SECTION 4
HEADER WALL SECTION



SECTION 4
SILL WALL SECTION

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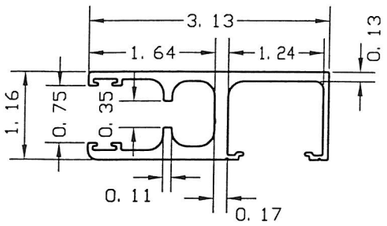
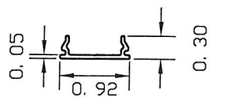
3 of 9

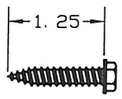
PRODUCT COMPONENTS



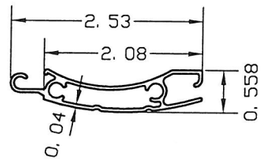
1- HD LARGE BOX TRACK
ALTERNATE TRACK
6005-T5 ALUMINUM



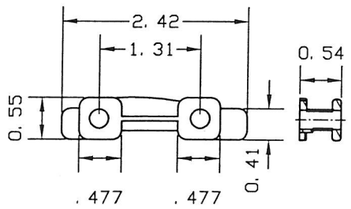
1A- TRACK SNAP COVER
THIS PART IS OPTIONAL
RIC-002 - 6063-T5



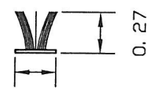
3- RETAINER SCREW
#14X1-1/4 HH SMS
18-8 STAINLESS STEEL



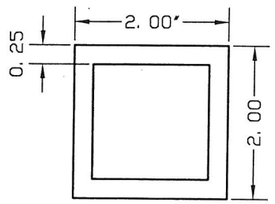
2- 53mm SLAT
6063-T6 ALUMINUM



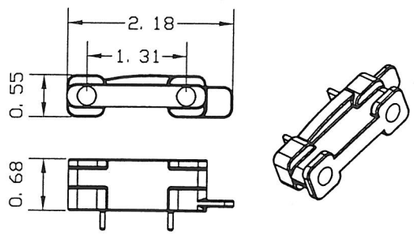
4- SLAT RETAINER
NYLON 66



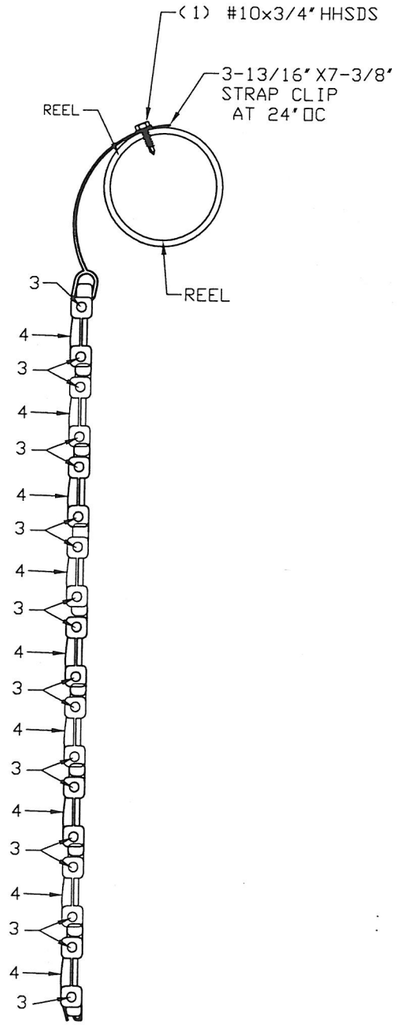
5- PILE WEATHER
STRIPPING
POLYPROPYLENE



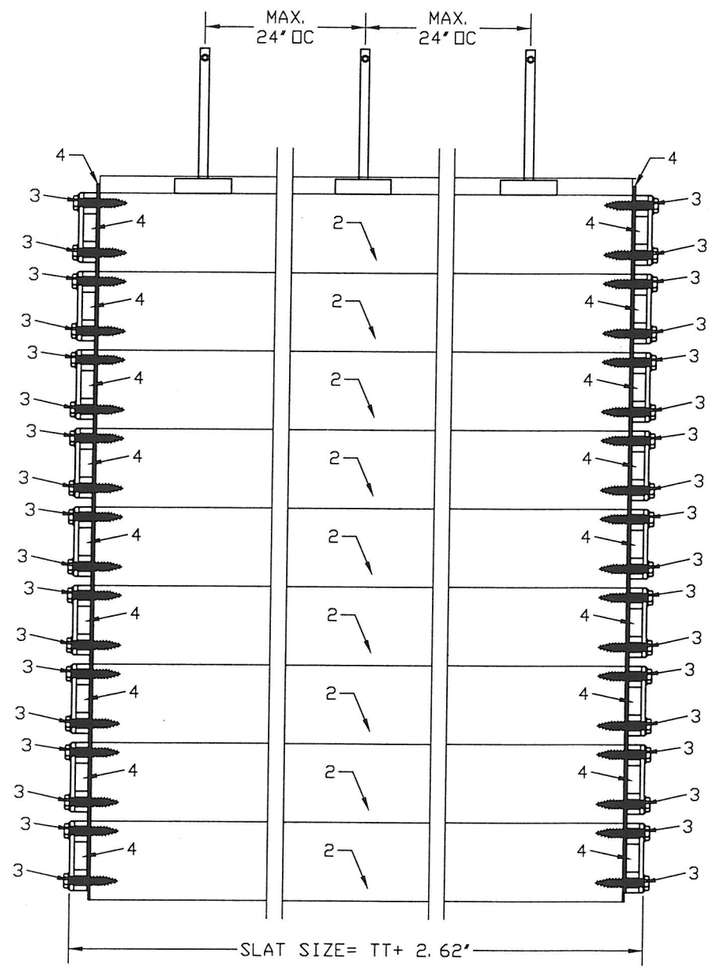
6- 1/4-2x2
ALUMINUM TUBE
6063-T6 ALUMINUM

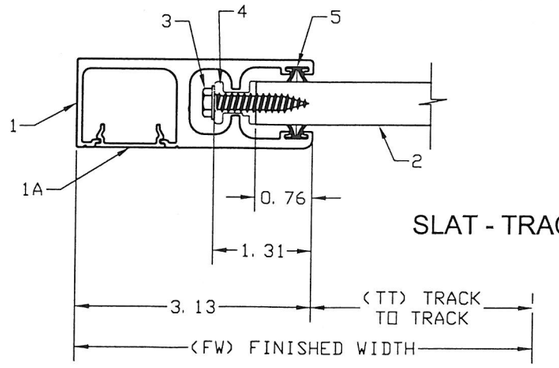


4A- ALTERNATE
SLAT RETAINER
NYLON 66



SLAT END RETENTION LAY-OUT





SLAT - TRACK DETAIL

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DRAFTING:
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REVISIONS:

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Design by: PPMF

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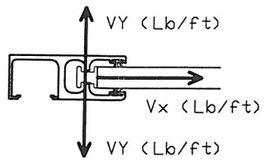
SHEET
4 of 9

TABLE 2

SPACING ON CENTER FUNCTION OF MOUNT TYPE, PRESSURE AND TRACK TO TRACK (TT)

TT	Pd	REACTIONS LB/FT		WALL MOUNT							INSET MOUNT							ALTERNATE INSET MOUNT					
in	Psf	Vy	Vx	A	B	C	D	E	E1	G	A	B	C	D	E	E1	F	A	B	C	D	E	E1
264	40	440	3933	–	–	–	–	–	–	4	–	–	–	–	–	–	–	–	4	5	–	6	6
	65	715	5304	–	–	–	–	–	–	3	–	–	–	–	–	–	–	–	–	3	–	6	6
	70	770	5390	–	–	–	–	–	–	3	–	–	–	–	–	–	–	–	–	3	–	6	6
222	40	370	2517	–	–	4	–	5	5	6	–	–	–	–	–	–	6	5	6	6	5	6	6
	68	629	3874	–	–	–	–	–	–	4	–	–	–	–	–	–	–	–	4	4	–	6	6
	70	648	3947	–	–	–	–	–	–	4	–	–	–	–	–	–	–	–	4	4	–	6	6
180	40	300	1598	4	4	6	–	6	6	6	–	–	–	–	6	5	6	6	6	6	6	6	6
	70	525	2901	–	–	3	–	5	4	6	–	–	–	–	–	–	6	4	5	6	4	6	6
	90	675	3536	–	–	3	–	–	4	5	–	–	–	–	–	–	–	–	4	5	–	6	6
150	40	250	933	6	6	6	4	6	6	6	–	4	4	–	6	6	6	6	6	6	6	6	6
	70	438	1915	–	–	5	–	6	6	6	–	–	–	–	–	4	6	6	6	6	6	6	6
	90	563	2427	–	–	4	–	6	5	6	–	–	–	–	–	–	6	5	6	6	4	6	6
	110	688	2874	–	–	3	–	5	4	6	–	–	–	–	–	–	6	4	5	5	4	6	6
120	40	200	636	6	6	6	6	6	6	6	5	5	6	4	6	6	6	6	6	6	6	6	6
	70	350	1366	5	5	6	–	6	6	6	–	–	3	–	6	6	6	6	6	6	6	6	6
	90	450	1774	4	4	5	–	6	6	6	–	–	–	–	5	4	6	6	6	6	6	6	6
	110	550	2151	–	–	4	–	6	6	6	–	–	–	–	–	–	6	5	6	6	5	6	6
	150	750	2887	–	–	3	–	5	4	6	–	–	–	–	–	–	6	4	5	5	–	6	6



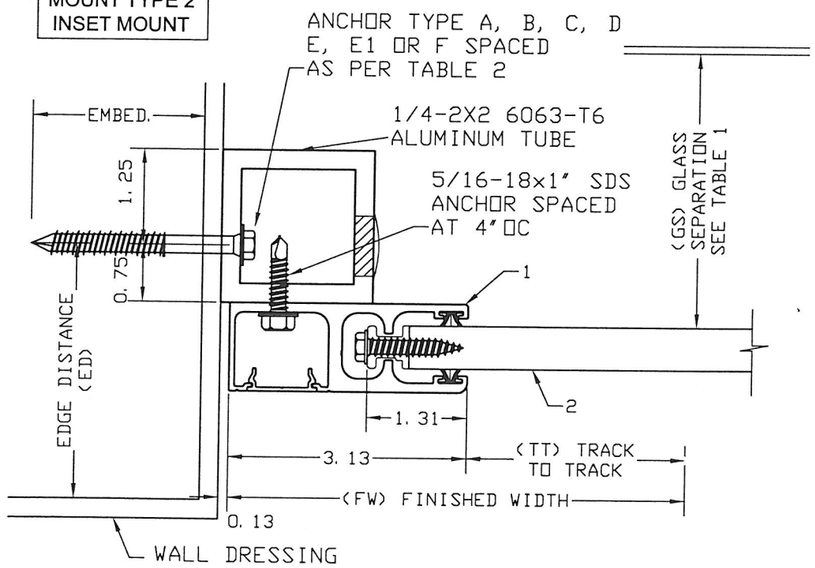
CONTRACTOR TO VERIFY ADEQUACY OF STRUCTURE FOR MAXIMUM IMPOSED LOADS VY AND Vx

ANCHOR SCHEDULE:

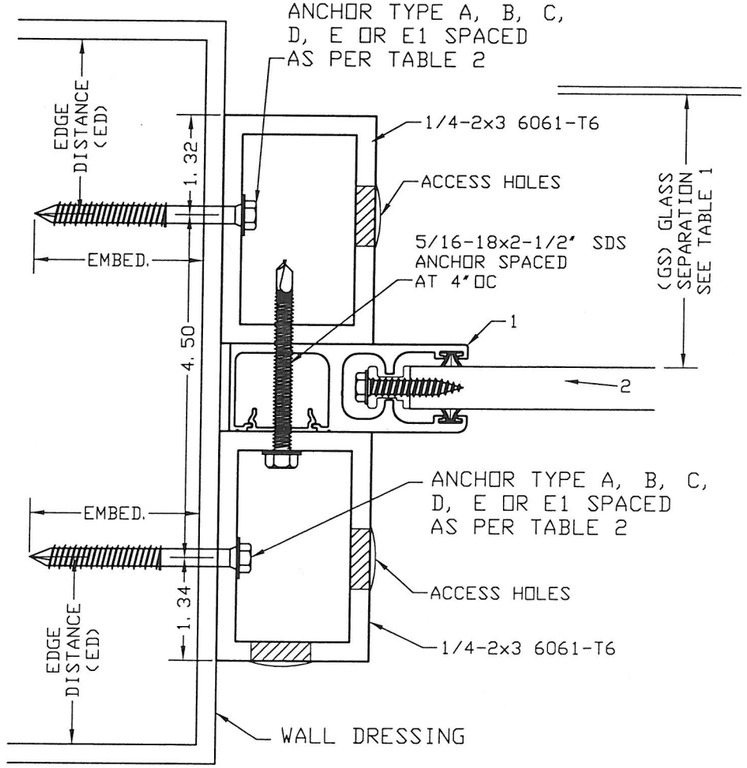
ANCHOR	DESCRIPTION	MATERIAL	EMBEDMENT	EDGE DISTANCE	MINIMUM SPACING
A	5/16" ITW TAPCONS	MIN. 2899 psi CONCRETE	2 1/4"	3 1/8"	4"
B	5/16" ITW TAPCONS	GROUT FILLED C-90 BLOCK	2 1/4"	4"	4"
C	5/16"-18X1" GRADE 5 SELF DRILLING SCREWS	MIN. 1/4" 6063-T6 ALUM. OR A36 3/16" STEEL		1/2" 3/8"	3"
D	5/16" ITW TAPCONS	WOOD WITH G>=. 55	2 1/4"	1-1/4"	4"
E	3/8" POWERS WEDGE BOLT	MIN. 3000 psI CONCRETE	3 1/2"	4-1/2"	5"
E1	3/8" POWERS WEDGE BOLT	MIN. 3000 psI CONCRETE	3 1/2"	4-1/2"	4"
F	3/4" POWERS WEDGE BOLT	MIN. 5000 psI CONCRETE	6"	9"	6"
G	3/8"-16X1" GRADE 5 SELF DRILLING SCREWS	MIN. 3/8" 6005-T5 ALUM. OR A36 5/16" STEEL		3/4" 5/8"	3"

ANCHORS TYPE E, E1 AND F CAN BE MANUFACTURED IN CARBON OR STAINLESS STEEL

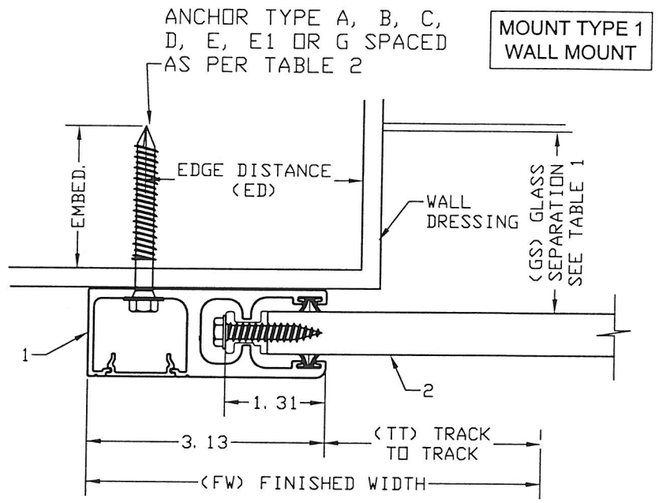
MOUNT TYPE 2
INSET MOUNT



MOUNT TYPE 3
ALTERNATE
INSET MOUNT



TYPICAL HORIZONTAL SECTIONS



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REVISIONS:

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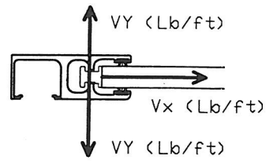
5 of 9

TABLE 4
SPACING ON CENTER FUNCTION OF MOUNT TYPE, PRESSURE AND TRACK TO TRACK (TT)

TT	Pd	REACTIONS LB/FT		WALL MOUNT			INSET MOUNT			ALTERNATE INSET MOUNT		
in	Psf	Vy	Vx	H	I	J	H	I	J	H	I	J
264	40	440	3933	–	–	3	–	–	3	4	4	6
264	65	715	5304	–	–	–	–	–	–	3	–	6
264	70	770	5390	–	–	–	–	–	–	3	–	6
222	40	370	2517	3	–	6	–	–	5	5	5	6
222	68	629	3874	–	–	4	–	–	3	–	–	6
222	70	648	3947	–	–	4	–	–	3	–	–	6
180	40	300	1598	6	–	6	–	–	6	6	6	6
180	70	525	2901	3	–	5	–	–	4	4	4	6
180	90	675	3536	–	–	4	–	–	3	–	–	6
150	40	250	933	6	–	6	4	–	6	6	6	6
150	70	438	1915	4	–	6	–	–	6	6	5	6
150	90	563	2427	3	–	6	–	–	4	5	4	6
150	110	688	2874	3	–	5	–	–	4	4	–	6
120	40	200	636	6	–	6	6	5	6	6	6	6
120	70	350	1366	6	–	6	3	–	6	6	6	6
120	90	450	1774	5	–	6	–	–	6	6	5	6
120	110	550	2151	4	–	6	–	–	5	5	4	6
120	150	750	2887	3	–	5	–	–	3	4	–	6

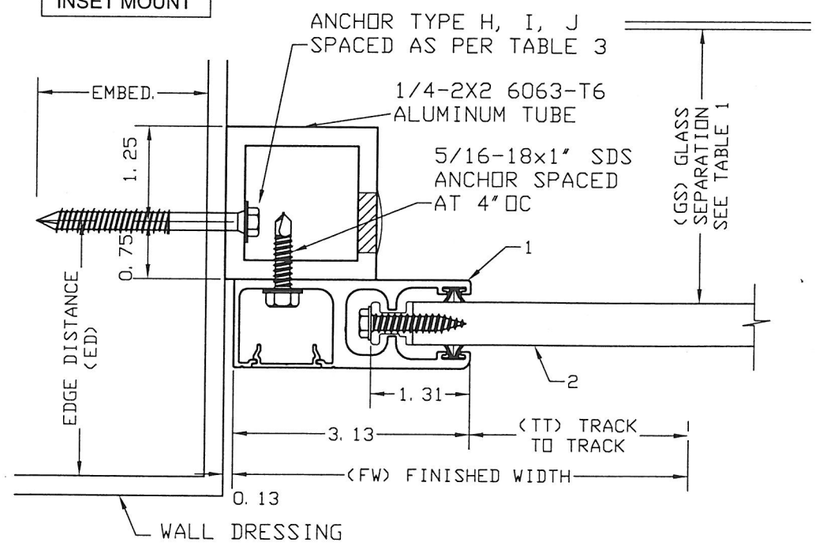


CONTRACTOR TO VERIFY ADEQUACY OF STRUCTURE FOR MAXIMUM IMPOSED LOADS VY AND Vx

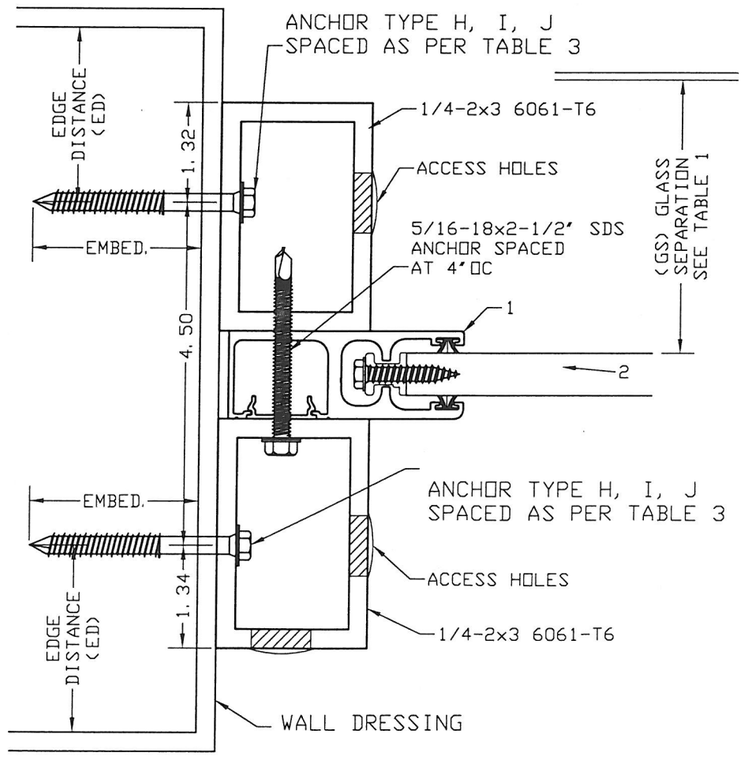
ANCHOR SCHEDULE:

ANCHOR	DESCRIPTION	MATERIAL	EMBEDMENT	EDGE DISTANCE	MINIMUM SPACING
H	5/16"-18" SS SHEET METAL SCREWS	MIN. 1/4" 6063-T6 ALUM. OR A36 3/16" STEEL		1/2" 3/8"	3"
I	5/16" LAG SCREWS HOT-DIP GALV	WOOD WITH G>=.55	2 1/4"	1-1/4"	4"
J	3/8"-16" SS SHEET METAL SCREWS	MIN. 3/8" 6005-T5 ALUM. OR A36 5/16" STEEL		3/4" 5/8"	3"

MOUNT TYPE 2
INSET MOUNT

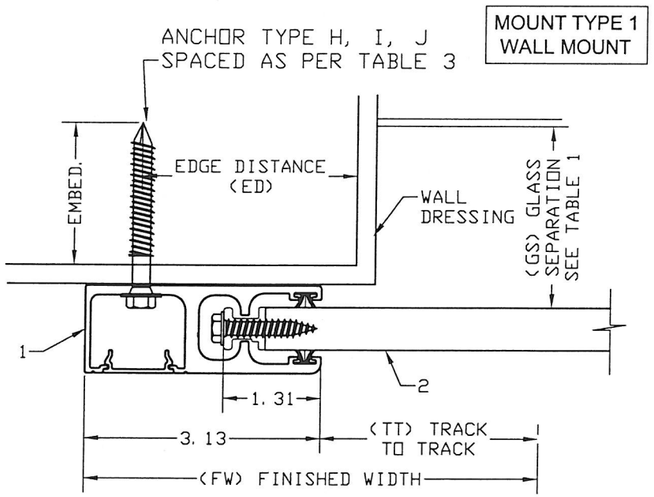


MOUNT TYPE 3
ALTERNATE
INSET MOUNT



TYPICAL HORIZONTAL SECTIONS

MOUNT TYPE 1
WALL MOUNT



MANUFACTURER:
RolSafe
12801 COMMONWEALTH DRIVE - SUITE 2
FORT MYERS, FL. 33913
Phone: (239) 225-2487
Fax: (239) 561-0780

PRODUCT:
53 mm Herculean
IMPACT ROLLING WALL
LARGE & SMALL MISSILE
IMPACT RATED

Engineering:
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CR 11234
6971 W. Sunrise Blvd. 104
Plantation, Fl. 33313
ENGCO@AOL.COM

STATE OF TEXAS
PEDRO FIGUEIREDO
102937
LICENSED
PROFESSIONAL ENGINEER
NOV 04 2009

Engineer Seal
Pedro De Figueiredo
TEXAS - PE 102937

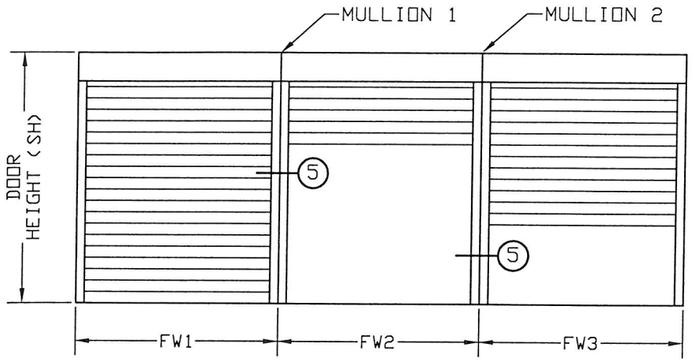
DRAFTING:
PK DRAFTING & MORE

REVISIONS:

Date: 09/26/2009
Scale: NA
Design by: PPMF

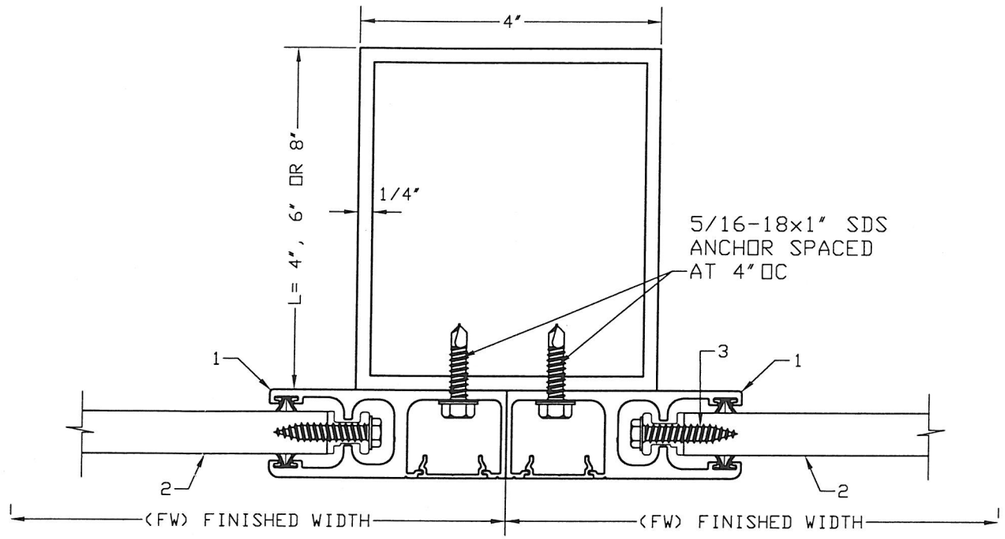
Drawing Number
09-214

EQUALLY SPACED MULLIONS SELECTION



APPLICABLE ONLY FOR FW1=FW2=FW3
MULLION 1: TM1= (FW1+FW2) / 2
MULLION 2: TM2= (FW2+FW3) / 2
TM: TRIBUTARY MODULE

DETAIL 5
4X MULLION SECTION

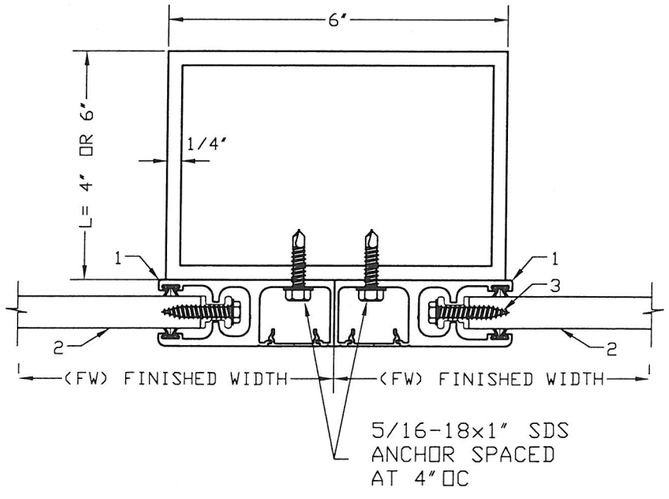


MULLION BARS SELECTION TABLES (PSF)

DOOR MODULE	MULLION TYPE & MAX. HEIGHT														
	1/4-4x8			1/4-4x6			1/4-4x4			1/4-6x6			1/4-6x4		
	144	132	120	120	108	96	96	84	72	120	108	96	96	84	72
264	37	44	54	31	43	55	23	35	55	43	55	61	32	48	65
222	44	53	64	37	52	66	27	41	66	51	65	70	38	57	70
180	54	65	79	46	64	81	34	51	81	63	70	70	47	70	70
150	65	78	95	56	77	97	41	61	97	76	96	108	56	84	110
120	82	98	119	70	96	122	51	77	122	95	120	135	70	106	143

NOTES:
1- MULLIONS WERE DESIGNED BY RATIONAL ANALYSIS BASED ON THE ALUMINUM DESIGN MANUAL 2005 ED..
2- DEFLECTION CRITERIA: MAXIMUM SPAN /180
3- VALUES ABOVE IS APPLICABLE ONLY FOR EQUAL MODULES FW1=FW2=FW3.
4- UNEQUAL MODULES ARE TO BE DESIGNED BY RATIONAL ANALYSIS IN A CASE BY CASE BASIS.

DETAIL 5
6X MULLION SECTION



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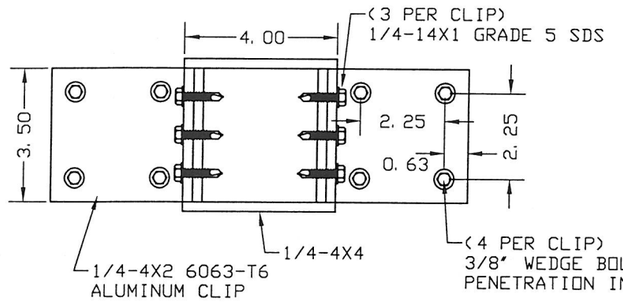
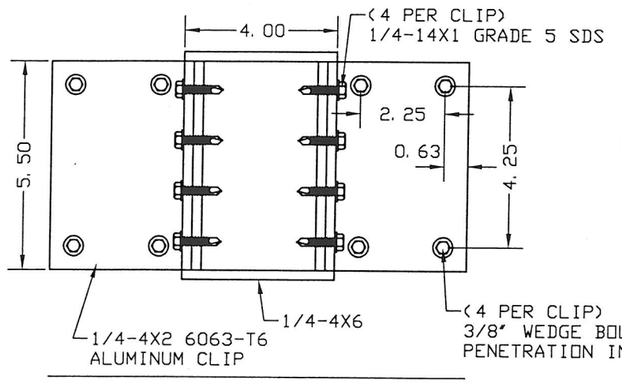
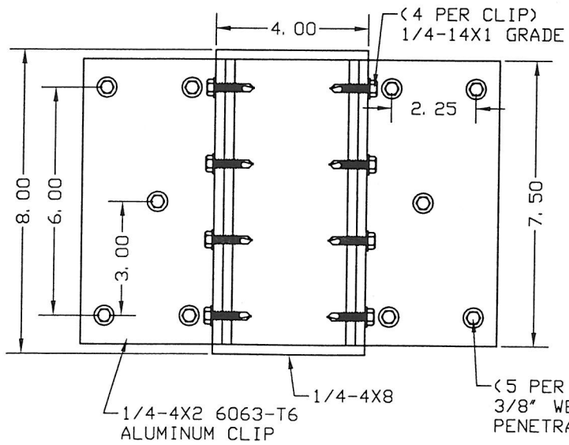
EQUALLY SPACED MULLIONS WALL AND INSET CONNECTIONS



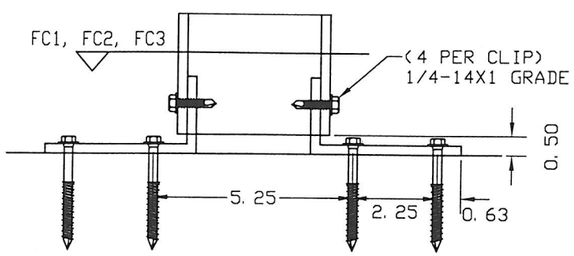
FC1
FLOOR/CEILING
MOUNT



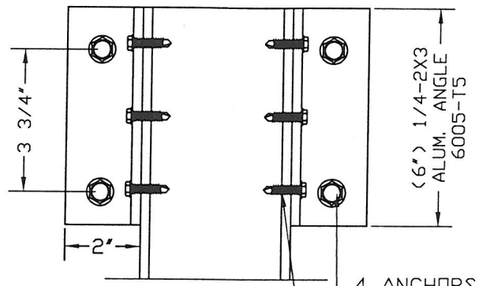
FC2
FLOOR/CEILING
MOUNT

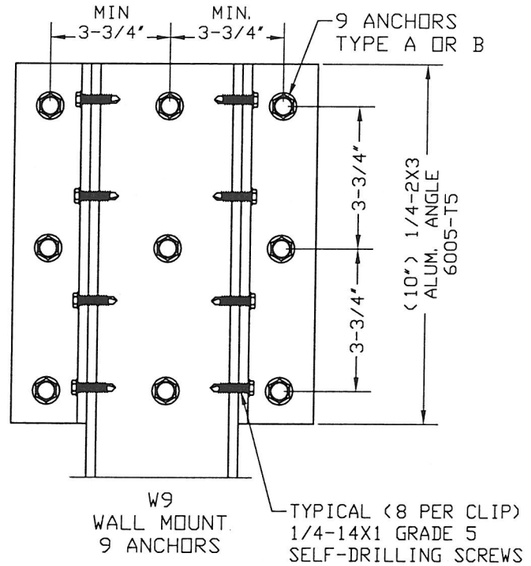


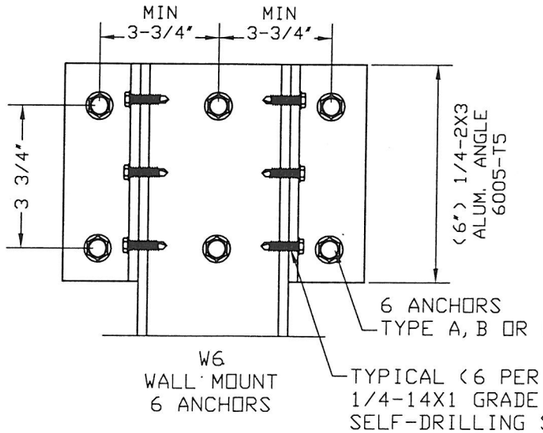
FC3
FLOOR/CEILING
MOUNT



NOTE: ANGLE CLIP TO BE PLACED INSIDE TUBE







WALL MOUNT ANCHOR SELECTION

ANCHOR TYPE	MULLION TYPE				
	4X4	4X6	4X8	6X6	6X4
A	W6	W9	W9	W9	W6
B	W4	W6	W9	W6	W6
E	W4	W6	W6	W6	W6

ANCHOR SCHEDULE:

ANCHOR	DESCRIPTION	MATERIAL	EMBEDMENT	EDGE DISTANCE
A	5/16" ITW TAPCONS	MIN. 2899 psi CONCRETE	2 1/4"	3 1/8"
B	5/16" ITW TAPCONS	GROUT FILLED C-90 BLOCK	2 1/4"	4"
E	3/8" POWERS WEDGE BOLT STAINLESS OR CARBON STEEL	MIN. 3000 psi CONCRETE	2 1/2"	4-1/2"

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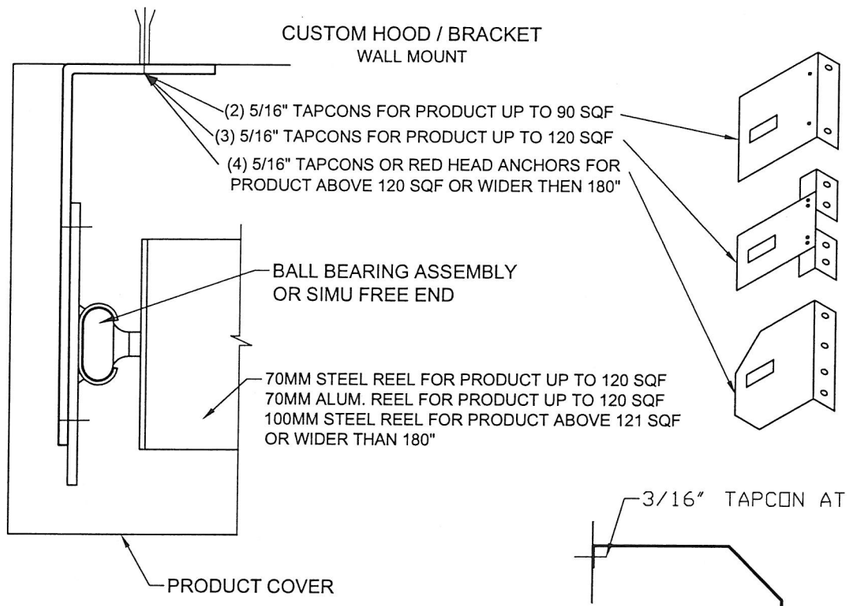
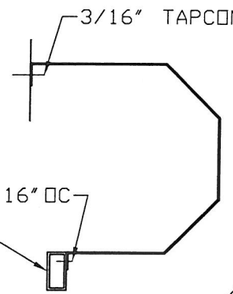
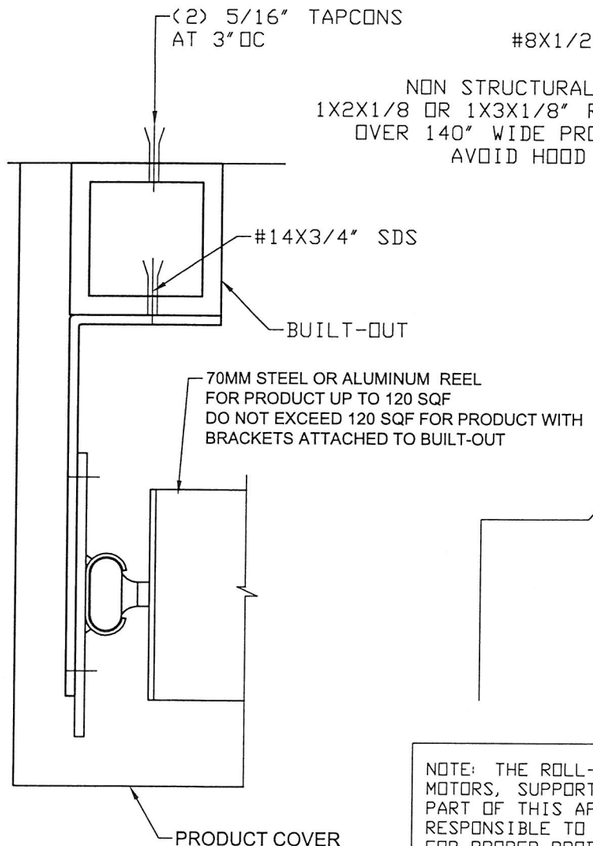
HOUSING ASSEMBLY

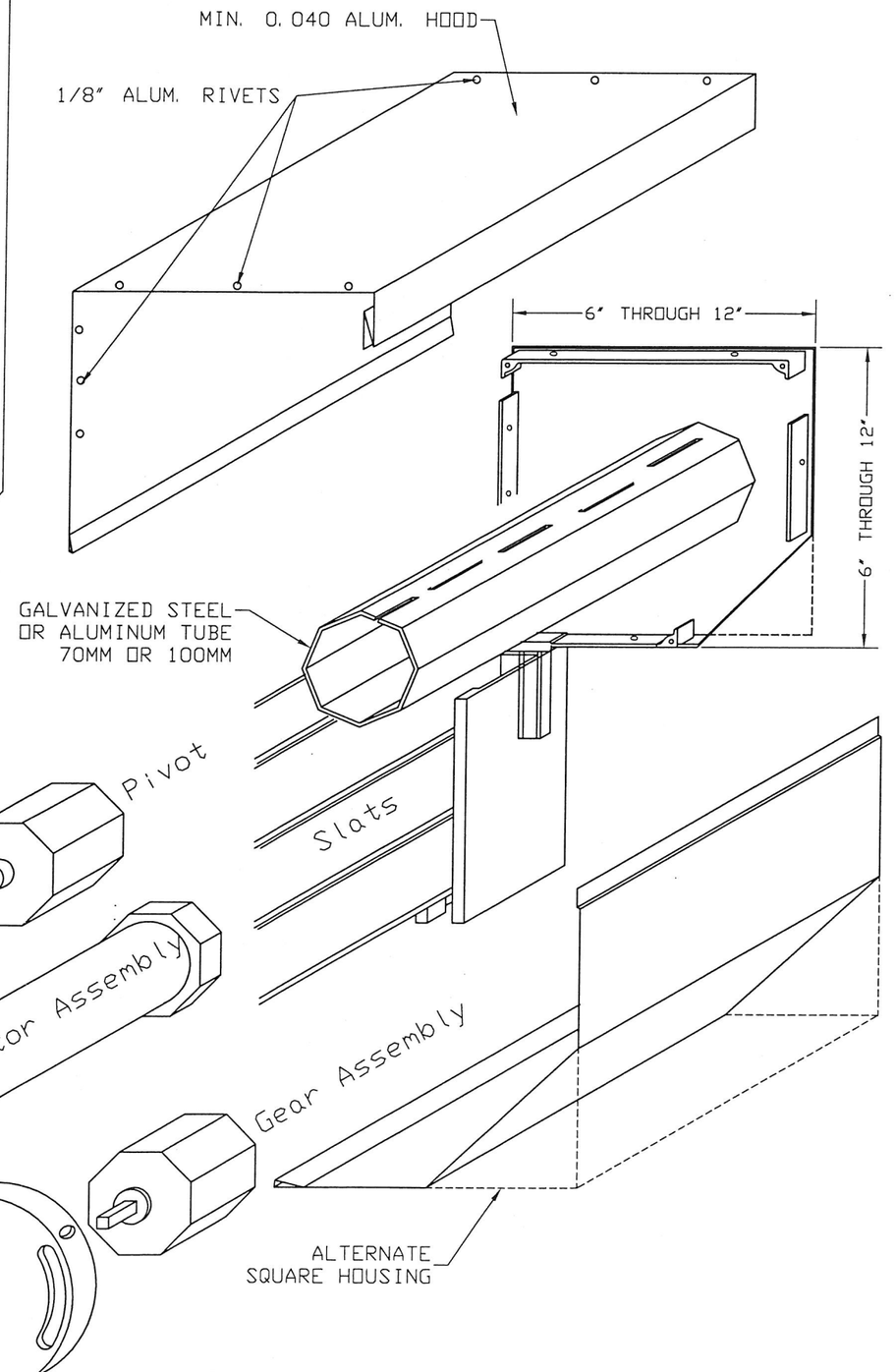
CUSTOM HOOD / BRACKET
WALL MOUNT







STD. HOOD / END CAP
WALL MOUNT



NOTE: THE ROLL-UP MECHANISM (GEARS, MOTORS, SUPPORTING END PLATES) ARE NOT PART OF THIS APPROVAL. MANUFACTURER IS RESPONSIBLE TO SPECIFY THESE COMPONENTS FOR PROPER PRODUCT OPERATION.

MANUFACTURER:
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