GENERAL NOTES:

1. ASSA/40mm & 60mm BERTHA ROLL-UP SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR CODE COMPLIANCE WITH THE 2006 EDITIONS OF THE INTERNATIONAL BUILDING CODE, (I.B.C.) AND INTERNATIONAL RESIDENTIAL CODE, (I.R.C.) WITH THE 2006 TEXAS REVISIONS, EFFECTIVE JANUARY 1, 2008.
ROLL UP SHUTTER SHALL BE INSTALLED AT SEAWARD AND INLAND AREAS, AS DEFINED BY THE TEXAS DEPARTMENT OF INSURANCE.
DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1609 OF THE INTERNATIONAL BUILDING CODE, FOR A BASIC WIND SPEED AS REQUIRED BY THE JURISDICTION WHERE SHUTTER WILL BE INSTALLED, AND FOR A DIRECTIONALITY FACTOR Kd = 0.85, IN ACCORDANCE WITH ASCE 7-05 STANDARD.

   ROLL UP SHUTTER ADEQUACY FOR IMPACT AND CYCLIC RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTIONS 1609.1.2 AND R301.1.3 OF THE ABOVE MENTIONED CODES RESPECTIVELY, AS PER FENESTRATION TESTING LAB REPORTS #2749, 2751 & 2760 AND ATL REPORT # 0619.01-02 PER FLORIDA BUILDING CODE PROTOCOLS TAS-201, 202 AND 203.

2. ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ASSOCIATION 6063-T6 ALLOY & TEMPER (SEE COMPONENTS SHEET).

3. ALL SCREWS & BOLTS INSTALLED AT SEAWARD AREAS TO BE STAINLESS STEEL 304 OR 316 AISI SERIES AND MEET ASTM A167, OR HOT DIPPED GALVANIZED(AFTER FABRICATION) CARBON STEEL AS PER ASTM A123 OR ASTM A153, OR HOT DIPPED GALVANIZED OR GALVANNEALED(PRIOR TO FABRICATION) AND MEET ASTM A653 WITH 50 ksi YIELD STRENGTH AND 90 ksi TENSILE STRENGTH, PER 2006 TEXAS REVISIONS TO SECTION 1716.1.1 OF THE 2006 I.B.C. AND SECTION R325.1.1 OF THE 2006 I.R.C.

4. ALL SCREWS & BOLTS INSTALLED AT INLAND I AREAS TO BE STAINLESS STEEL 304 OR 316 AISI SERIES AND MEET ASTM A167, OR HOT DIPPED GALVANIZED(AFTER FABRICATION) CARBON STEEL AS PER ASTM A123 OR ASTM A153, OR HOT DIPPED GALVANIZED OR GALVANNEALED(PRIOR TO FABRICATION) AND MEET ASTM A653; HOT DIP GALVANIZED OR ELECTRO GALVANIZED PER ASTM A641, MECHANICALLY DEPOSITED ZINC COATINGS PER ASTM B695 OR ELECTRO DEPOSITED ZINC COATINGS PER ASTM B633, PER THE 2006 TEXAS REVISIONS TO SECTION 1716.1.2 OF THE 2006 I.B.C. AND TO SECTION R325.1.2 OF THE 2006 I.R.C.

5. STORM BARS AT FLOOR AND CEILING MOUNTING INSTALLATIONS MAY BE REMOVABLE AT NON HURRICANE CONDITIONS. HOWEVER, EACH STORM BAR SHALL BEAR A PERMANENT LABEL IN A VISIBLE PLACE WITH A WARNING NOTE INSTRUCTING THE TENANT OR OWNER THAT STORM BARS MUST BE INSTALLED WITH CORRESPONDING HARDWARE DURING PERIODS OF HURRICANE WARNING AND THAT ROLL UP SHUTTERS WILL NOT OFFER HURRICANE PROTECTION UNLESS ALL STORM BAR ARE INSTALLED AS DIRECTED.

6. REMOVABLE STORM BARS SHALL BE STORED IN A CONSPICUOUS PLACE WITH EASY AND IMMEDIATE ACCESS SO THAT THEY CAN BE REACHED AND INSTALLED ANY TIME (HURRICANE CONDITIONS OR NOT) SLATS ARE ROLLED DOWN. THE EFFECT OF THE SLATS ROLLED DOWN WITHOUT STORM BARS IS; THOSE SLATS WILL SLIP OUT OF TRACK DUE TO THE DEFLECTION CAUSED BY WIND FORCES.

7. ANCHORS TO WALL FOR SIDE RAILS & BOX CONNECTION SHALL BE AS FOLLOWS (UNLESS OTHERWISE NOTED):
   (A) TO EXISTING POURED CONCRETE: (Min. f'c=3192 psi)
   - 1/4"ø TAPCON ANCHORS, AS MANUFACTURED BY ITW BUILDEX.

   NOTES:
   A.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO POURED CONCRETE IS 1 3/4".
   NO EMBEDMENT INTO STUCCO SHALL BE CONSIDERED AS PART OF THE REQUIRED EMBEDMENT.

   A.2) MINIMUM EDGE DISTANCE OF TAPCON ANCHORS INTO CONCRETE BLOCK SHALL BE 2 1/2".

   A.3) IN CASE THAT PRECAST STONE, PRECAST CONCRETE PANELS, OR PAVERS BE FOUND ON THE EXISTING WALL OR FLOOR, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES A.1 ABOVE.

   (B) TO EXISTING CONCRETE ASTM C-90 BLOCK WALL:
   - 1/4"ø TAPCON ANCHORS AS MANUFACTURED BY ITW BUILDEX.

   NOTES:
   B.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO CONCRETE BLOCK UNIT SHALL BE 1 1/4".
   NO EMBEDMENT INTO STUCCO SHALL BE CONSIDERED AS PART OF THE REQUIRED EMBEDMENT.

   B.2) MINIMUM EDGE DISTANCE OF TAPCON ANCHORS INTO CONCRETE BLOCK SHALL BE 2 1/2".

   B.3) IN CASE THAT PRECAST STONE OR PRECAST CONCRETE PANELS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS.

   (C) TO EXISTING WOOD FRAME BUILDING: SOUTHERN PINE #2 W/ G = 0.55 MIN.

   NOTES:
   -1/4"ø LAG SCREWS PER N.D.S. 2005.

   C.1) MINIMUM THREADED PENETRATION OF LAG SCREWS, INTO THE WOOD FRAME UNIT SHALL BE 1 1/2".
   NO THREADED PENETRATION INTO STUCCO SHALL BE CONSIDERED AS PART OF THE REQUIRED THREADED PENETRATION.

   C.2) MINIMUM EDGE DISTANCE OF LAG SCREWS INTO WOOD SHALL BE 2".

   C.3) IN CASE THAT PRECAST STONE, PRECAST CONCRETE OR BRICK PANELS, VENEER OR PAVERS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN SUBSTRATE BEHIND SUCH PANELS.
   MINIMUM THREADED PENETRATION SHALL BE AS INDICATED ON NOTE C.1 ABOVE.

8. ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.

9. ANCHORS REQUIRED FOR STORM BARS, HEADER & MULLIONS CONNECTIONS SHALL BE AS SPECIFIED ON APPLICABLE SECTIONS SHOWN ON SHEETS 5, 5A, 5B, 6 & 7 OF 14 RESPECTIVELY.
   TAPCON ANCHORS AS MANUFACTURED BY ITW BUILDEX, POWER BOLT & CALK-IN ANCHORS TO BE AS MANUFACTURER BY POWERS FASTENERS, INC. AND KWIK BOLT TZ EXPANSION ANCHORS TO BE AS MANUFACTURED HILTI, INC.
   MINIMUM EDGE DISTANCE AND SPACING FOR ABOVE MENTIONED ANCHORS SHALL BE AS INDICATED BELOW OR AS SHOWN ON CORRESPONDING DETAILS FOR EACH SHUTTER COMPONENT INSTALLATION IN THIS DRAWING, WHICHEVER IS LARGER (MORE CRITICAL).

ANCHOR	SPACING	EDGE DISTANCE	MINIMUM EMBEDMENT POURED CONCRETE	MINIMUM EMBEDMENT CONCRETE BLOCK
-1/4"ø TAPCON	3"	3"	1 3/4" (Min. f'c=3192 psi)	1 1/4" (ASTM C-90)
-1/4"ø CALK-IN	2 1/2"	3"	7/8" (Min. f'c=3000 psi)	-
-3/8"ø CALK-IN	3 3/4"	4 1/2"	1 1/4" (Min. f'c=3000 psi)	-
-3/8"ø POWER BOLT	3 3/4"	4 1/2"	1 3/4" (Min. f'c=3000 psi)	1 1/4" (ASTM C-90)
-3/8"ø KWIK BOLT TZ	2 1/2"	3 5/8"	2" (Min. f'c=3000 psi)	-
-3/8"ø KWIK BOLT TZ	5"	2 1/2"	2" (Min. f'c=3000 psi)	-
-1/2"ø KWIK BOLT TZ	2 3/8"	3 1/2"	3 1/4" (Min. f'c=3000 psi)	-

10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE SHUTTER IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE. THIS SHUTTER SHALL ONLY BE ATTACHED TO CONCRETE, BLOCK OR WOOD FRAME BUILDINGS.

11. THE INSTALLATION CONTRACTOR IS TO SEAL/CAULK ALL SHUTTER COMPONENT EDGES WHICH REMAIN IN CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/RAIN INTRUSION. CAULK AND SEAL SHUTTER TRACKS ALL AROUND FULL LENGTH.

12. ROLL-UP MECHANISM NOT PART OF THIS APPROVAL, BUT SHALL BE CERTIFIED BY AN INDEPENDENT TESTING AGENCY.

13. ASSA/40mm & 60mm BERTHA ROLL-UP INSTALLATION SHALL COMPLY WITH SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.

14. (a) THIS 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 INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.E.D. PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.

   (c) THIS P.E.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.

   (d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A PROFESSIONAL ENGINEER OR REGISTERED 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.

15. PRODUCT MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT PRODUCT IN ACCORDANCE WITH TEXAS DEPARMENT OF INSURANCE REQUIREMENTS. ONE LABEL SHALL BE PLACED FOR EVERY OPENING.

STATE OF TEXAS
WALTER A. TILLIT
4/1/13
68031
LICENSED
PROFESSIONAL ENGINEER

TEXAS DEPARTMENT OF INSURANCE – 2006

WALTER A. TILLIT Jr. P.E.
PROFESSIONAL ENGINEER
6355 N.W. 36 STREET, STE. 305
VIRGINIA GARDENS, FL 33166
PHONE (305) 871-1530 FAX (305) 871-1531
TEXAS LIC. # 90691
FIRM REGISTRATION # F-13790

ASSA/40mm & 60mm BERTHA ROLL-UP

DRAWN BY: A.G.

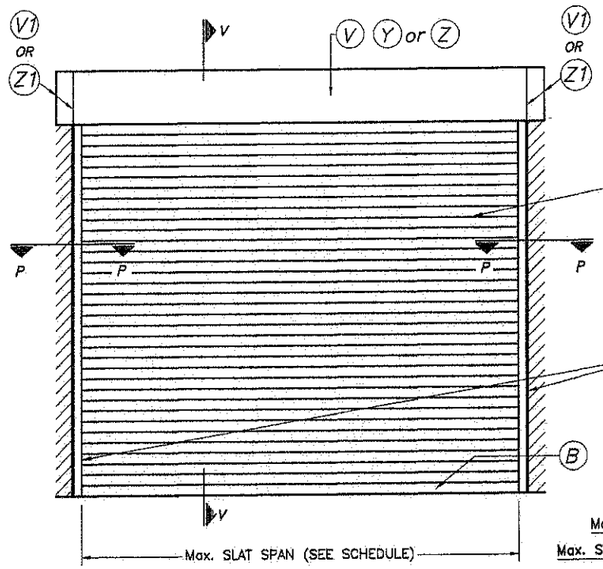
EASTERN METAL SUPPLY, INC
4268 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407
PH: (800) 432-2204

EASTERN METAL SUPPLY, INC
9400 TELGE ROAD
HOUSTON, TX. 77095
PH: (800) 996-6061

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 02-557	03/27/13	3	-	-
2	-	-	4	-	-

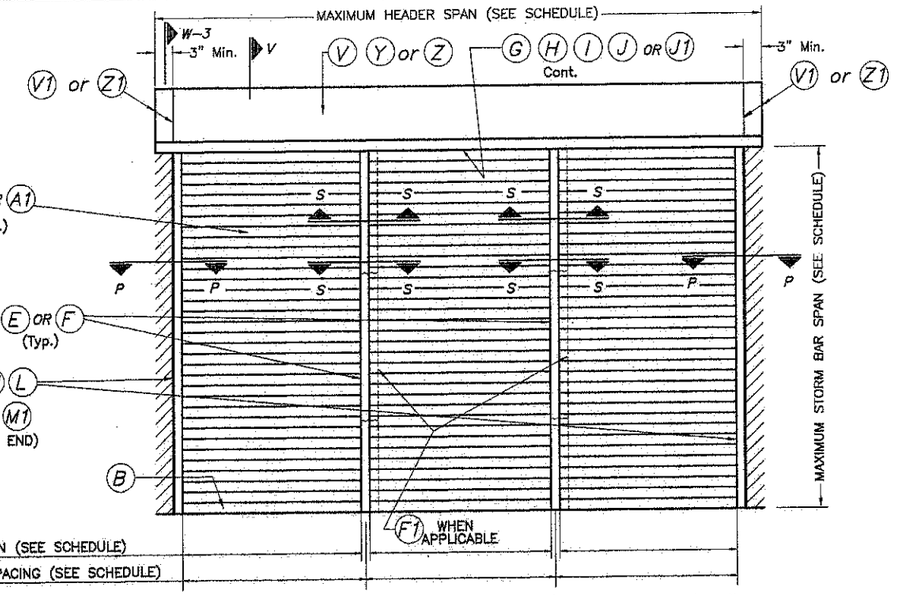
03/27/13 DATE

13-029 DRAWING No



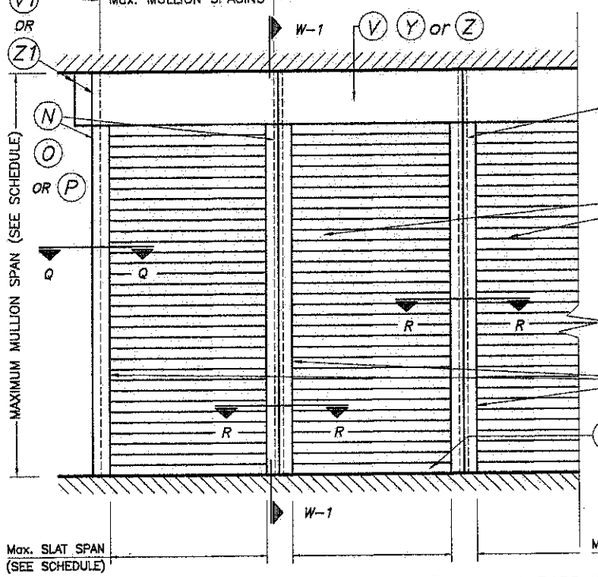
TYPICAL SINGLE UNIT ELEVATION (NO STORM BARS REQUIRED)

NOTE: SEE SHEET 2 & 3 OF 14 FOR COMPONENTS NOMENCLATURE.



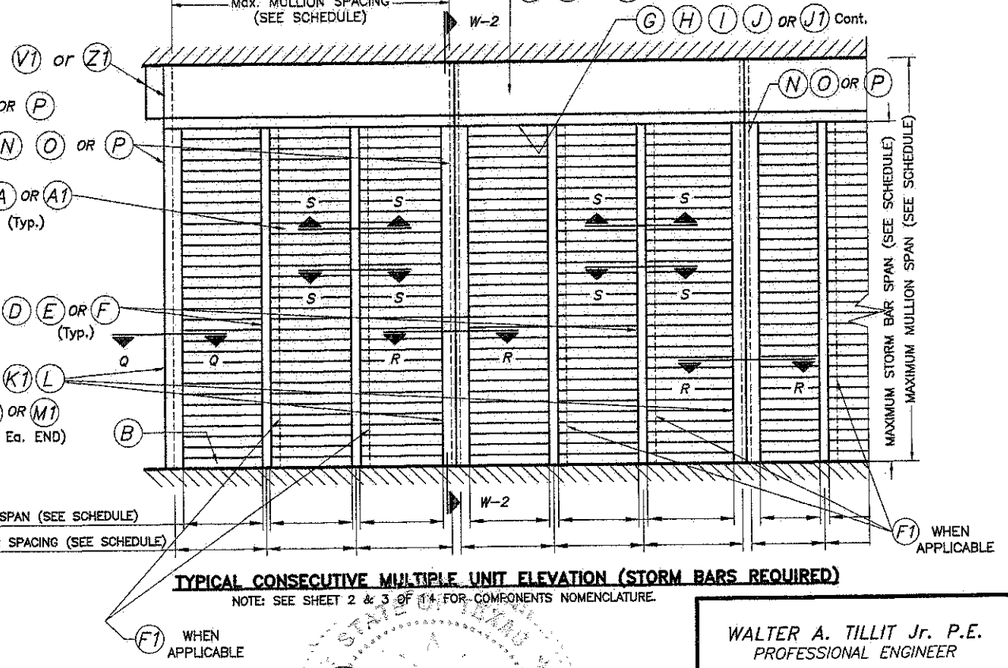
TYPICAL MULTIPLE UNIT ELEVATION (STORM BARS REQUIRED)

NOTE: SEE SHEET 2 & 3 OF 14 FOR COMPONENTS NOMENCLATURE.



TYPICAL CONSECUTIVE SINGLE UNIT ELEVATION (NO STORM BARS REQUIRED)

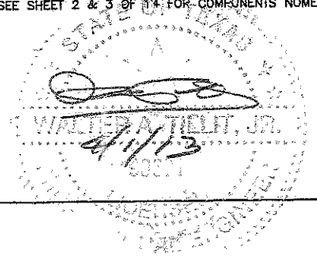
NOTE: SEE SHEET 2 & 3 OF 14 FOR COMPONENTS NOMENCLATURE.



TYPICAL CONSECUTIVE MULTIPLE UNIT ELEVATION (STORM BARS REQUIRED)

NOTE: SEE SHEET 2 & 3 OF 14 FOR COMPONENTS NOMENCLATURE.

NOTE:
SEE SECTIONS ON
SHEETS 4 THRU 7.



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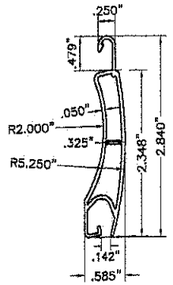
DATE

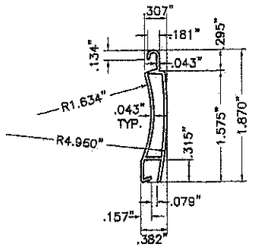
13-029
DRAWING No

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 02-557	03/27/13	3	–	–
2	–	–	4	–	–



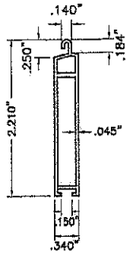
(A) TYPE 1 SLAT:

60 mm EXTRUDED ALUMINUM SLAT
6063-T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



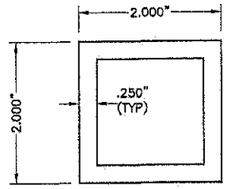
(A1) TYPE 2 SLAT:

40 mm EXTRUDED ALUMINUM SLAT
6063-T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



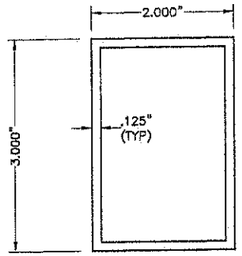
(B) BOTTOM SLAT:

EXTRUDED ALUMINUM BOTTOM SLAT
6063-T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



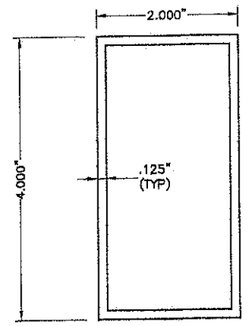
(C) TYPE 1 STORM BAR:

2" EXTRUDED STORM BAR
6063-T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



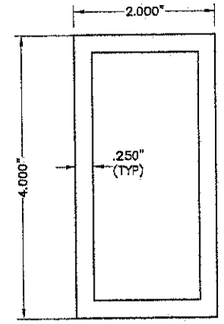
(D) TYPE 2 STORM BAR:

3" EXTRUDED STORM BAR
6063-T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



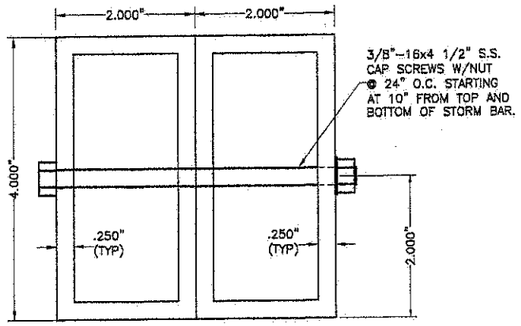
(E) TYPE 3 STORM BAR:

4" EXTRUDED STORM BAR
6063-T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



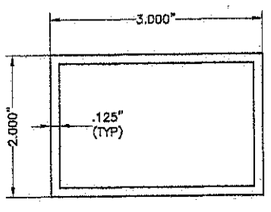
(F) TYPE 4 STORM BAR:

4" HEAVY EXTRUDED STORM BAR
6063-T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



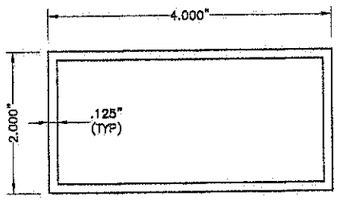
(F1) TYPE 5 STORM BAR:

4" HEAVY EXTRUDED STORM BAR
6063-T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



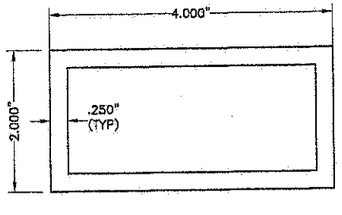
(G) HEADER TYPE 1:

6063-T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



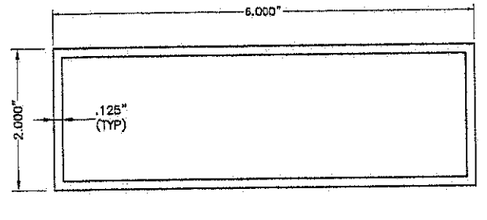
(H) HEADER TYPE 2:

6063-T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



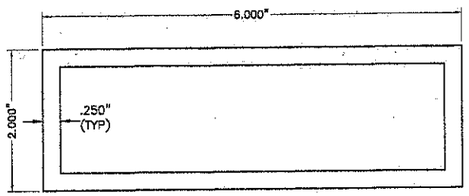
(I) HEADER TYPE 3:

6063-T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



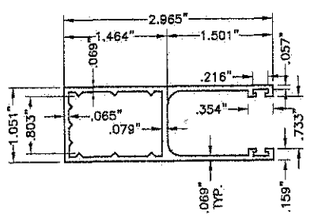
(J) HEADER TYPE 4:

6063-T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



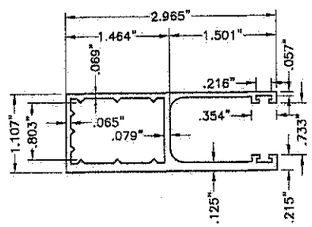
(J1) HEADER TYPE 5:

6063-T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



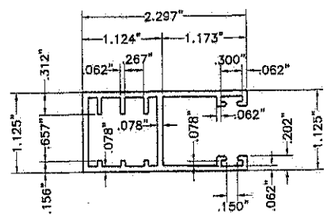
(K) TYPE 1 SIDE RAIL: FOR (A)

6063-T6 Alum. ALLOY
SCALE: 1/2" = 1"



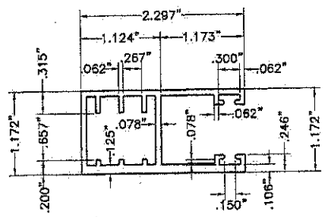
(K1) TYPE 2 SIDE RAIL: FOR (A)

6063-T6 Alum. ALLOY
SCALE: 1/2" = 1"



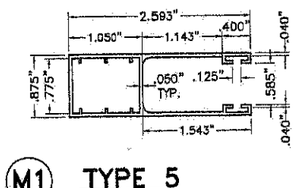
(L) TYPE 3 SIDE RAIL: FOR (A)

6063-T6 Alum. ALLOY
SCALE: 1/2" = 1"



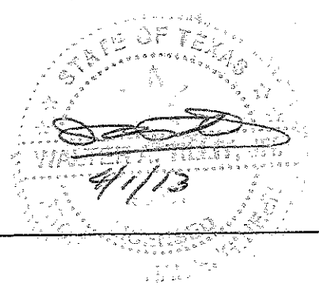
(M) TYPE 4 SIDE RAIL: FOR (A)

6063-T6 Alum. ALLOY
SCALE: 1/2" = 1"



(M1) TYPE 5 SIDE RAIL: FOR (A1)

6063-T6 Alum. ALLOY
SCALE: 1/2" = 1"



TEXAS DEPARTMENT OF INSURANCE - 2006

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ASSA/40mm & 60mm BERTHA ROLL-UP

DRAWN BY: A.G.

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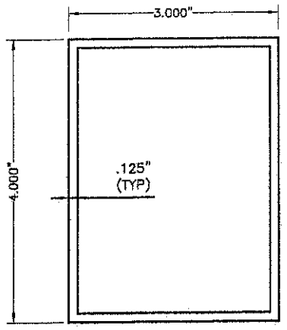
HOUSTON, TX. 77095
PH: (800) 996-6061

03/27/13
DATE

13-029
DRAWING No

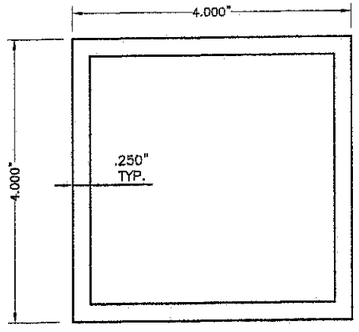
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 02-557	03/27/13	3	-	-
2	-	-	4	-	-

SHEET 2 OF 14



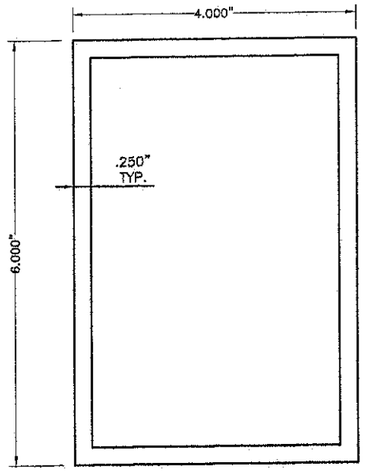
(N) TYPE 1 MULLION:

4" EXTRUDED MULLION
6063–T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



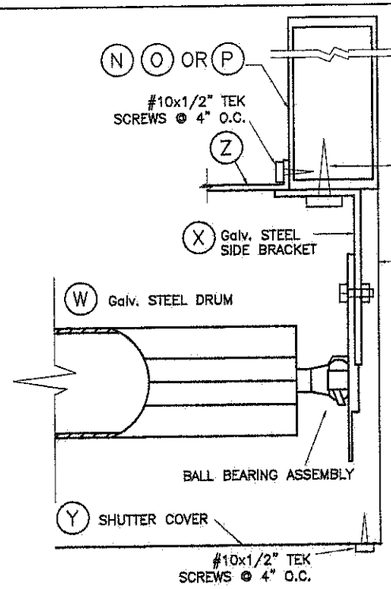
(O) TYPE 2 MULLION:

4" EXTRUDED MULLION
6063–T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"

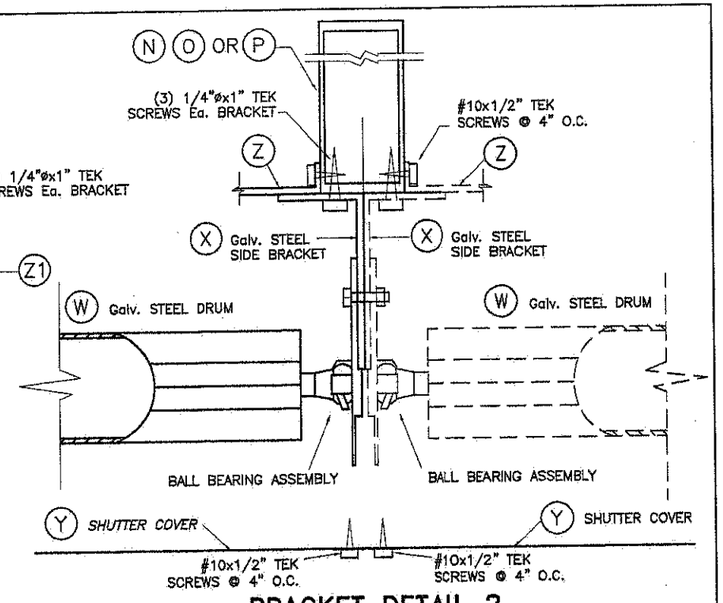


(P) TYPE 3 MULLION:

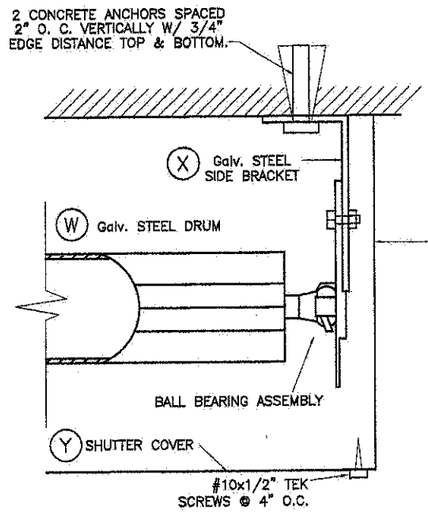
6" EXTRUDED MULLION
6063–T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



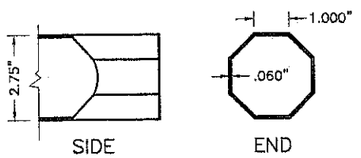
BRACKET DETAIL 1A



BRACKET DETAIL 2

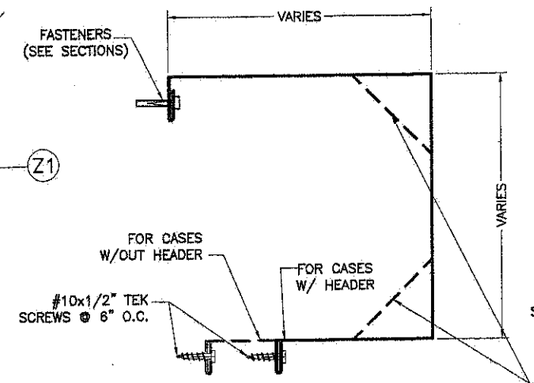


BRACKET DETAIL 1



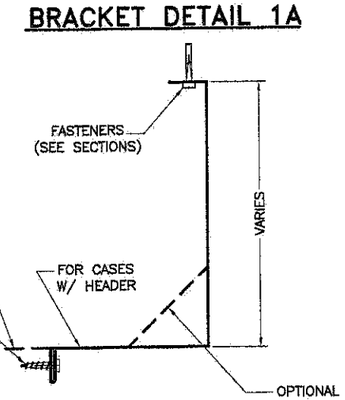
(W) DRUM *

SCALE: 1/4" = 1"
1010 ELITE ROLLED STEEL F. E.
P. O. 1 Z 200 DESIGNATION
Ftu= 410 NW/MM2. % OF STRETCH
MINIMAL ON TEST. BAR OF 80 MM: 24 %
G–90 GALVANIZED COATING Thk.: .060"



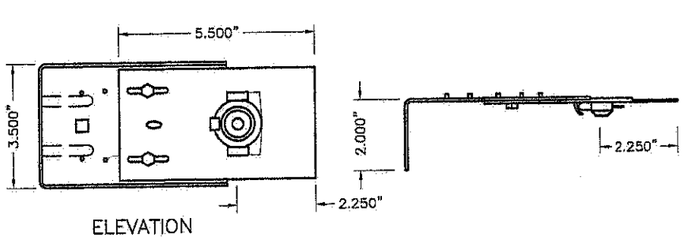
(Y) WALL HOUSING *

SCALE: 3/16" = 1"
3105–H14 ALUMINUM ALLOY
THICKNESS: .032"



(Z) WALL HOUSING *

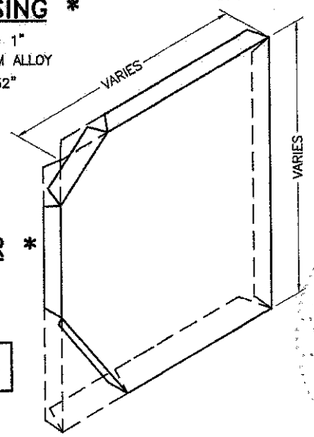
SCALE: 3/16" = 1"
3105–H14 ALUMINUM ALLOY
THICKNESS: .032"



ELEVATION

(X) SIDE BRACKET *

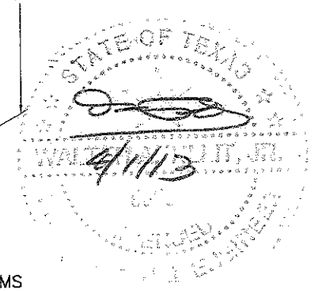
SCALE: 1/4" = 1"
1010 ELITE ROLLED STEEL F. E.
P. O. 1 Z 200 DESIGNATION
Ftu= 410 NW/MM2. % OF STRETCH
MINIMAL ON TEST. BAR OF 80 MM: 24 %
G–90 GALVANIZED COATING Thk.: .060"



(Z1) SHUTTER SIDE COVER *

SCALE: 3/16" = 1"
3105–H14 ALUMINUM ALLOY
THICKNESS: .032"

* SEE NOTE 12 ON SHEET 1 OF 14



SEE SHEET 3A FOR ALTERNATE ROLL–UP SHUTTER LIFTING MECHANISMS

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TEXAS LIC. # 90691
FIRM REGISTRATION # F–13790

ASSA/40mm & 60mm BERTHA ROLL–UP

DRAWN BY: A.G.

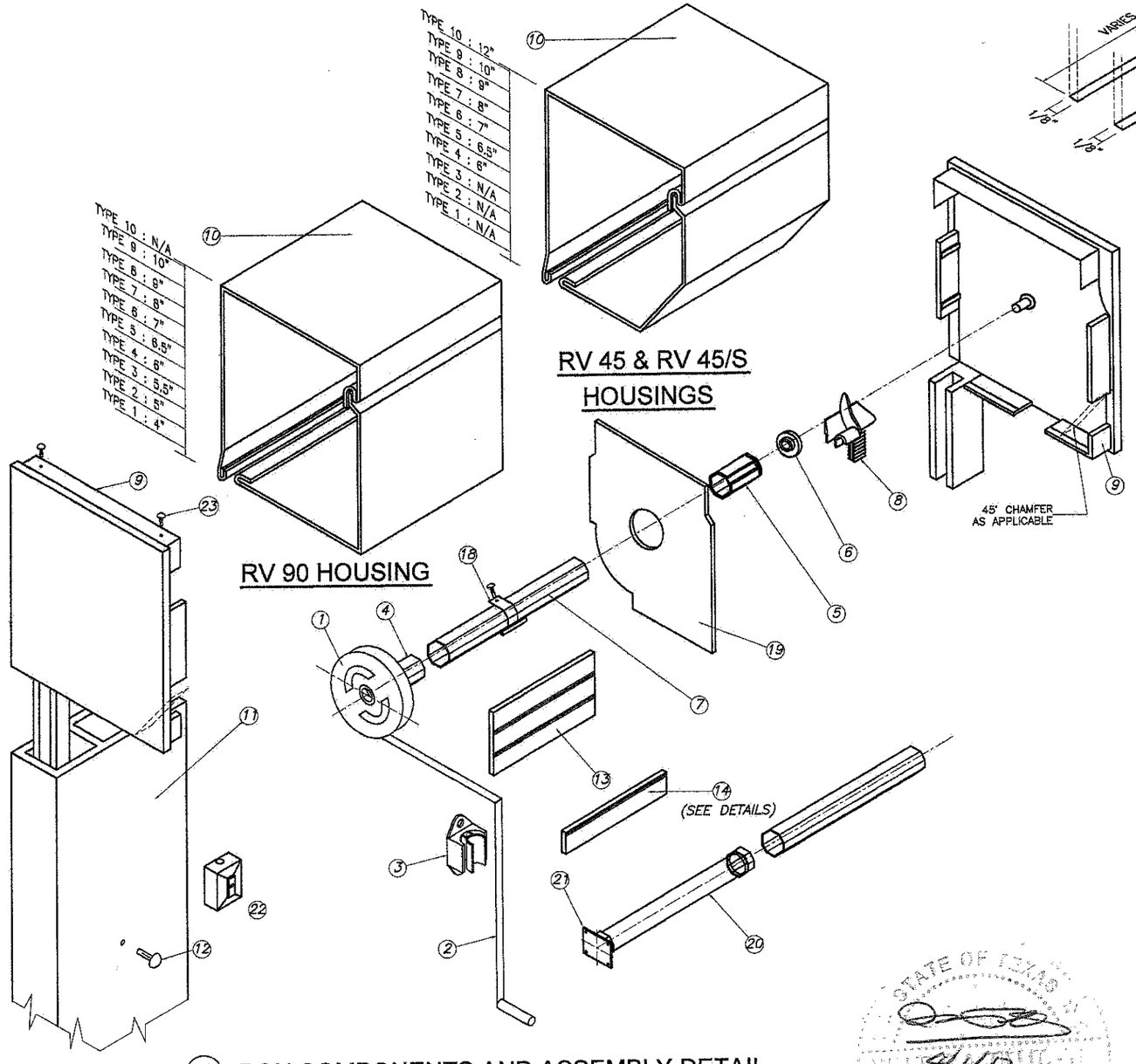
EASTERN METAL SUPPLY, INC
4268 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407
PH: (800) 432–2204

EASTERN METAL SUPPLY, INC
9400 TELGE ROAD
HOUSTON, TX. 77095
PH: (800) 996–6061

03/27/13
DATE

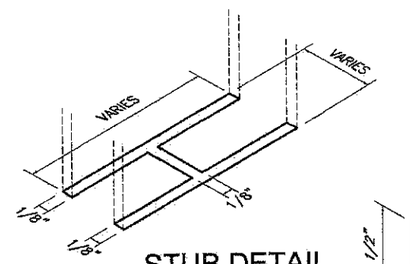
13–029
DRAWING No

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 02–557	03/27/13	3	–	–
2	–	–	4	–	–

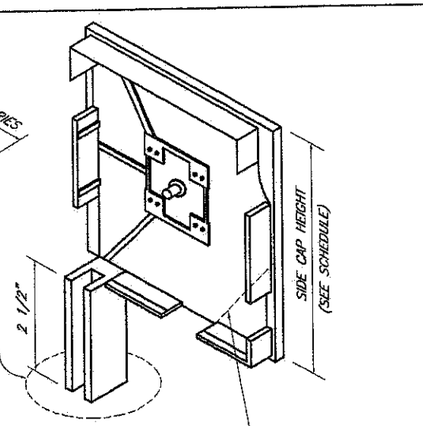


(V) BOX COMPONENTS AND ASSEMBLY DETAIL
END CAP SYSTEM

SEE SHEET 3 FOR ALTERNATE ROLL-UP SHUTTER LIFTING MECHANISMS
(SEE NOTE 12 ON SHEET 1 OF 14)



STUB DETAIL
(N. T. S.)



(V1) SIDE CAPS:

COMPONENTS FOR GEAR OPERATED SYSTEM

① – GEAR
② – UNIVERSAL & CRANK
③ – CRANK HOLDER(OPTIONAL)
④ – GEAR INSERT(GEAR TO AXLE CONNECTOR)
⑤ – IDLER INSERT
⑥ – BALL BEARING
⑦ – OCTAGONAL AXLE *
⑧ – ENTRY GUIDES
⑨ – SIDE/END CAP *
⑩ – HOUSING(FRONT & BOTTOM), 0.040" THICK
⑪ – SIDE RAIL
⑫ – PLUG–BUTTOMS
⑬ – ALUMINUM SLATS
⑭ – BASE SLAT
⑮ – PLASTIC STOPS(OPTIONAL)
⑯ – SIDE LOCKS(OPTIONAL)
⑰ – STAPLES(OPTIONAL)
⑱ – SPRINGLOCK HANGER
⑲ – SAFETY PLATES

ADDITIONAL COMPONENTS FOR MOTORIZED OPERATED SYSTEM

⑳ – TUBULAR MOTOR
㉑ – MOTOR BRACKET
㉒ – SWITCH

FASTENERS

㉓ – 3/16" ALUMINUM POP RIVETS(6 REQ'D EA. SIDE CAP) : 2 @ TOP, 2 @ REAR, 2@ BOTTOM

* SHALL BE CAPABLE TO SUSTAIN SLAT'S WEIGHT AND ASSURE LIFTING MECHANISM (SEE NOTE 12/1)

STATE OF TEXAS
9/11/13

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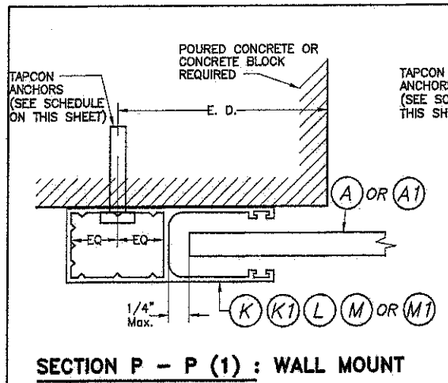
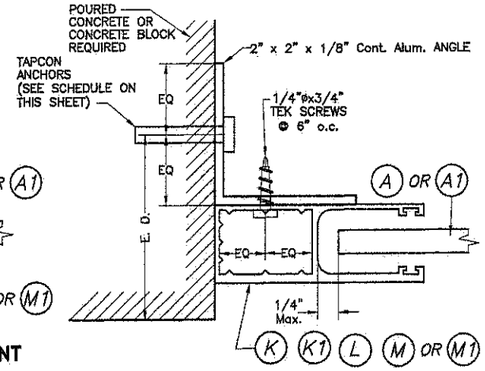
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 02-557	03/27/13	3	–	–
2	–	–	4	–	–

DRAWN BY: A.G.
03/27/13 DATE
13-029 DRAWING No
SHEET 3A OF 14



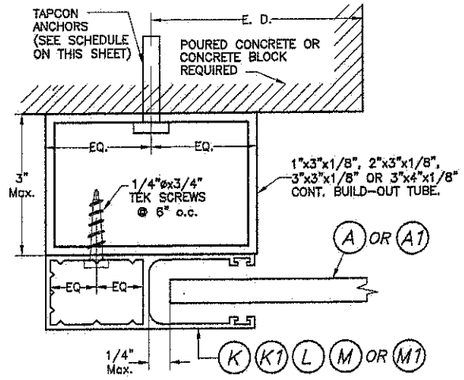
SECTION P – P (1) : WALL MOUNT

SCALE: 1/2" = 1"



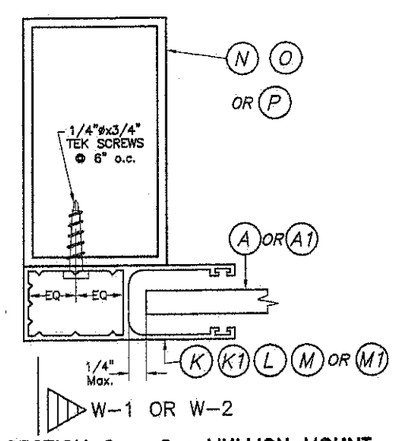
SECTION P – P (2) : SIDE WALL MOUNT

SCALE: 1/2" = 1"



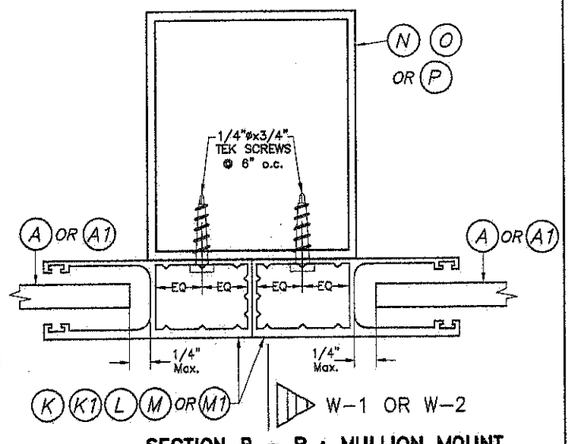
SECTION P – P (3) : BUILD-OUT MOUNT

SCALE: 1/2" = 1"



SECTION Q – Q : MULLION MOUNT (FACE MOUNT)

SCALE: 1/2" = 1"



SECTION R – R : MULLION MOUNT (FACE MOUNT)

SCALE: 1/2" = 1"

SIDE RAIL ANCHOR SCHEDULE MAXIMUM DESIGN PRESSURE RATING "W" (p. s. f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING(in) * FOR SIDE RAILS (K), (K1), (L) & (M) CONNECTION TO POURED CONCRETE OR CONCRETE BLOCK WALL

(USE MAXIMUM VALUES BETWEEN POSITIVE AND NEGATIVE LOAD)

MAXIMUM DESIGN LOAD "W" (p.s.f.)	SIDE RAIL (K)			SIDE RAIL (K1)			SIDE RAIL (L)			SIDE RAIL (M)		
	WALL MOUNT	INSIDE MOUNT	BUILD-OUT MOUNT	WALL MOUNT	INSIDE MOUNT	BUILD-OUT MOUNT	WALL MOUNT	INSIDE MOUNT	BUILD-OUT MOUNT	WALL MOUNT	INSIDE MOUNT	BUILD-OUT MOUNT
80 OR LESS	6"	3 1/2"	6"	6"	3 1/2"	6"	6"	4"	6"	6"	4"	6"
	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"
>80 TO 150	3"	–	5"	3"	–	5"	4"	3"	6"	4"	3"	6"
	6"	5 1/2"	6"	6"	5 1/2"	6"	6"	6"	6"	6"	6"	6"
>150 TO 195	3"	–	4 1/2"	3"	–	4 1/2"	3 1/2"	–	5 1/2"	3 1/2"	–	5 1/2"
	6"	5"	6"	6"	5"	6"	6"	6"	6"	6"	6"	6"

SIDE RAIL ANCHOR SCHEDULE MAXIMUM DESIGN PRESSURE RATING "W" (p. s. f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING(in) * FOR SIDE RAIL (M1) CONNECTION TO POURED CONCRETE OR CONCRETE BLOCK WALL

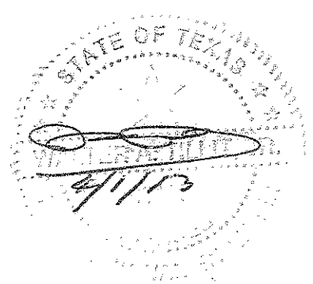
(USE MAXIMUM VALUES BETWEEN POSITIVE AND NEGATIVE LOAD)

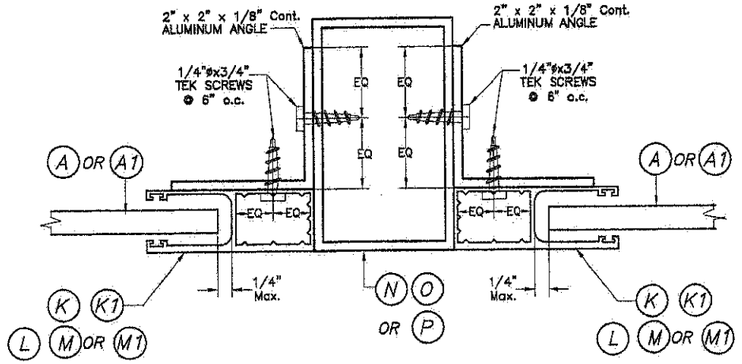
MAXIMUM DESIGN LOAD "W" (p.s.f.)	SIDE RAIL (M1)		
	WALL MOUNT	INSIDE MOUNT	BUILD-OUT MOUNT
80.0 OR LESS	6"	6"	6"
	6"	6"	6"
>80.0 TO 100.0	6"	6"	6"
	6"	6"	6"

SUBSTRATE LEGEND
CONCRETE BLOCK
POURED CONCRETE

* MAXIMUM ANCHOR SPACING (in.) AT SIDE RAILS VERSUS EDGE DISTANCE = E. D.

MAXIMUM SIDE RAILS ANCHOR SPACINGS SHOWN ON THIS SHEET ARE VALID FOR 3" EDGE DISTANCE.





SECTION R – R : MULLION MOUNT (INSIDE MOUNT)

SCALE: 1/2" = 1"

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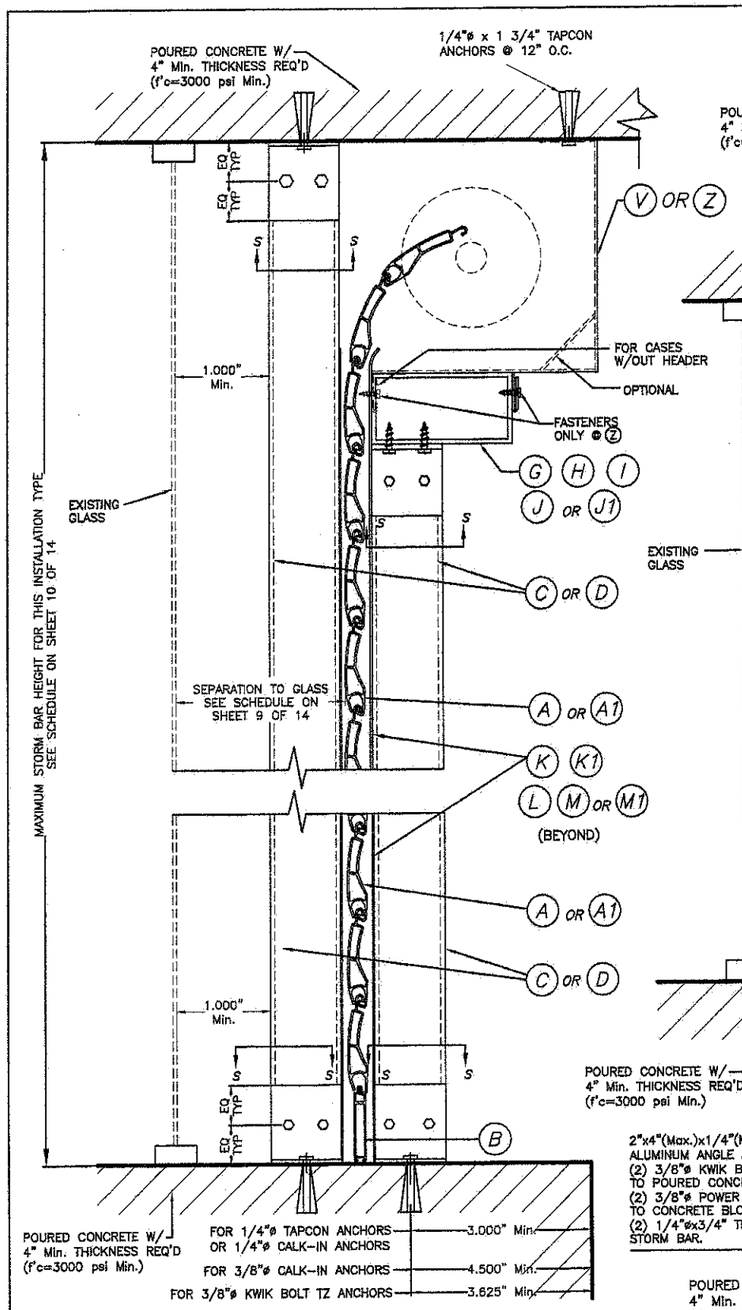
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 02-557	03/27/13	3	–	–
2	–	–	4	–	–

DRAWN BY: A.G.
03/27/13 DATE
13-029 DRAWING No
SHEET 4 OF 14

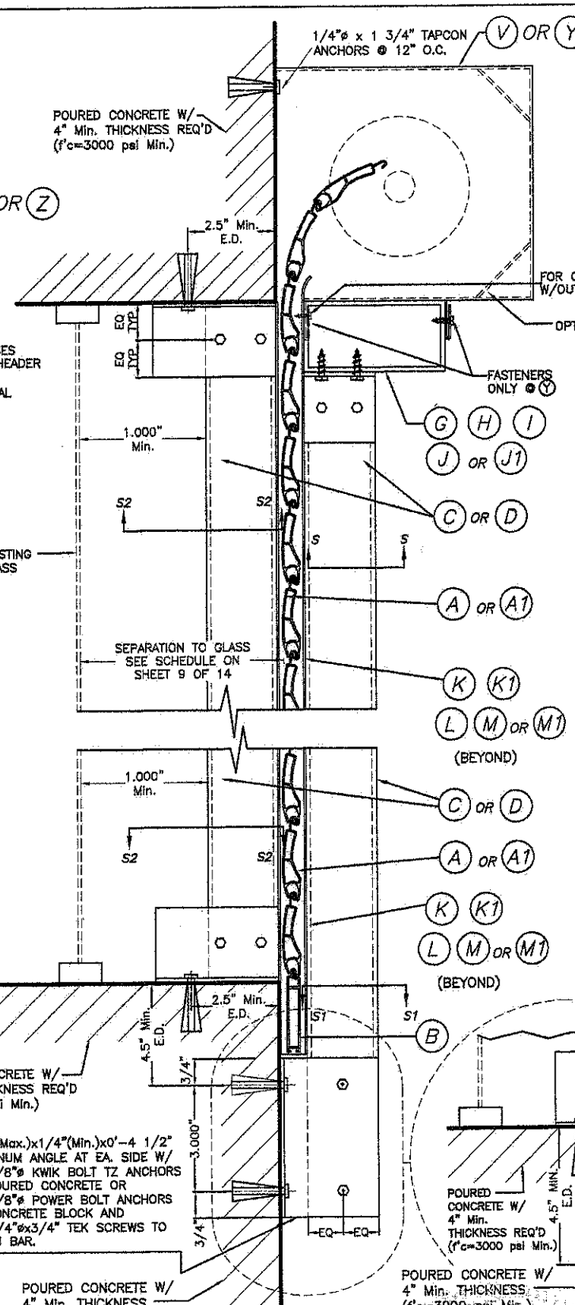


CEILING & FLOOR MOUNTING: SECTION V-V (2) INSTALLATION W/ FIXED OR REMOVABLE STORM BARS W/CONCRETE ANCHORS

(SEE SECTION "S" FOR ANCHOR TYPE REQUIREMENT)

SCALE : N.T.S.

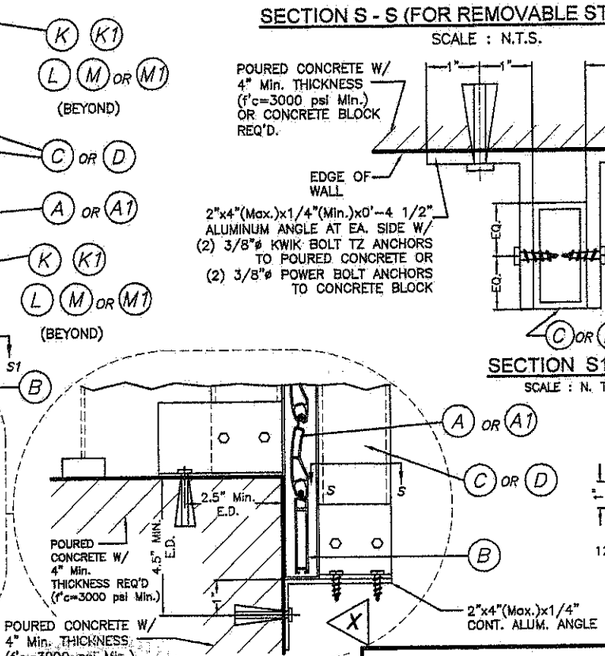
SINGLE SPAN SECTIONS AND DETAILS ARE SIMILAR TO ABOVE SHOWN WITHOUT STORM BAR & HEADERS.



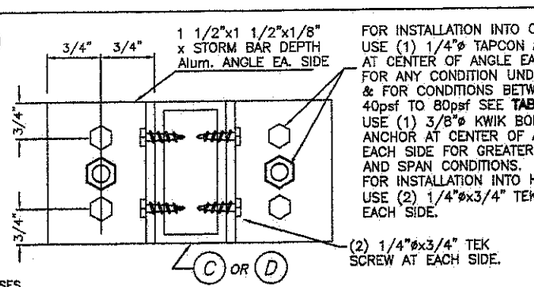
WALL MOUNTING INSTALLATION: SECTION V-V (1) W/ FIXED STORM BARS W/CONCRETE ANCHORS

SCALE : N.T.S.

SECTION V - V

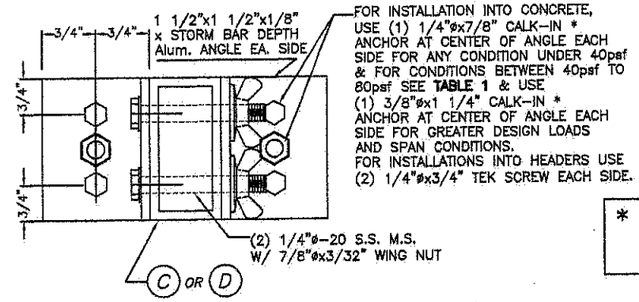


OPTIONAL STORM BAR CONNECTION



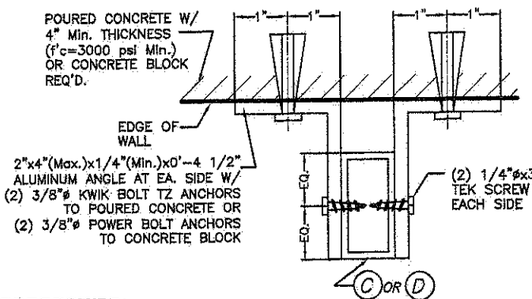
SECTION S - S (FOR FIXED STORM BAR)

SCALE : N.T.S.



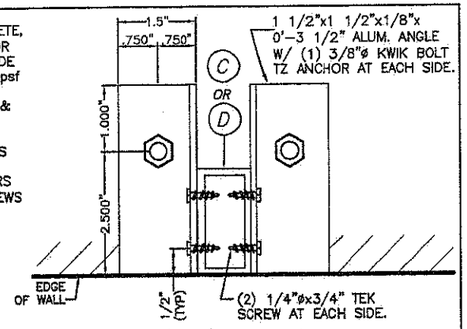
SECTION S - S (FOR REMOVABLE STORM BAR)

SCALE : N.T.S.



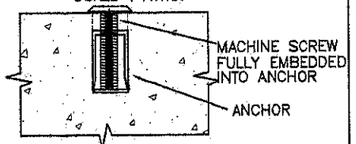
SECTION S1 - S1

SCALE : N. T. S.



SECTION S2 - S2

SCALE : N.T.S.



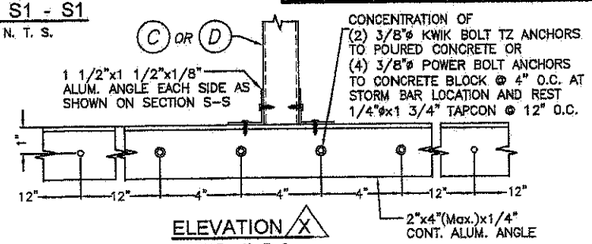
DETAIL A

SCALE : N.T.S.

* 1/4" ø-20 OR 3/8" ø-16 MACHINE SCREWS USED JOINTLY W/ 1/4" ø x 7/8" OR 3/8" ø x 1 1/4" CALK-IN ANCHORS RESPECTIVELY SHALL BE LEFT TOGETHER W/ ANCHORS AT THE TIME STORM BARS ARE REMOVED. (SEE DET. A).

TABLE1

DESIGN LOAD "W" (p.s.f.)	MAX. SLAT SPAN	"L" MAX. STORM BAR HEIGHT
40.0	3'-0"	8'-0"
	4'-0"	7'-2"
	5'-0"	5'-9"
50.0	3'-0"	7'-7"
	4'-0"	5'-9"
	5'-0"	4'-7"
60.0	3'-0"	6'-4"
	4'-0"	4'-9"
	5'-0"	3'-10"
70.0	3'-0"	5'-5"
	4'-0"	4'-1"
	5'-0"	3'-3"
80.0	3'-0"	4'-9"
	4'-0"	3'-7"
	5'-0"	2'-10"



ELEVATION X

SCALE : N. T. S.

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FIRM REGISTRATION # F-13790

WALTER A. TILLIT JR. 4/1/13

ASSA/40mm & 60mm BERTHA ROLL-UP

DRAWN BY: A.G.

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03/27/13 DATE

13-029 DRAWING No

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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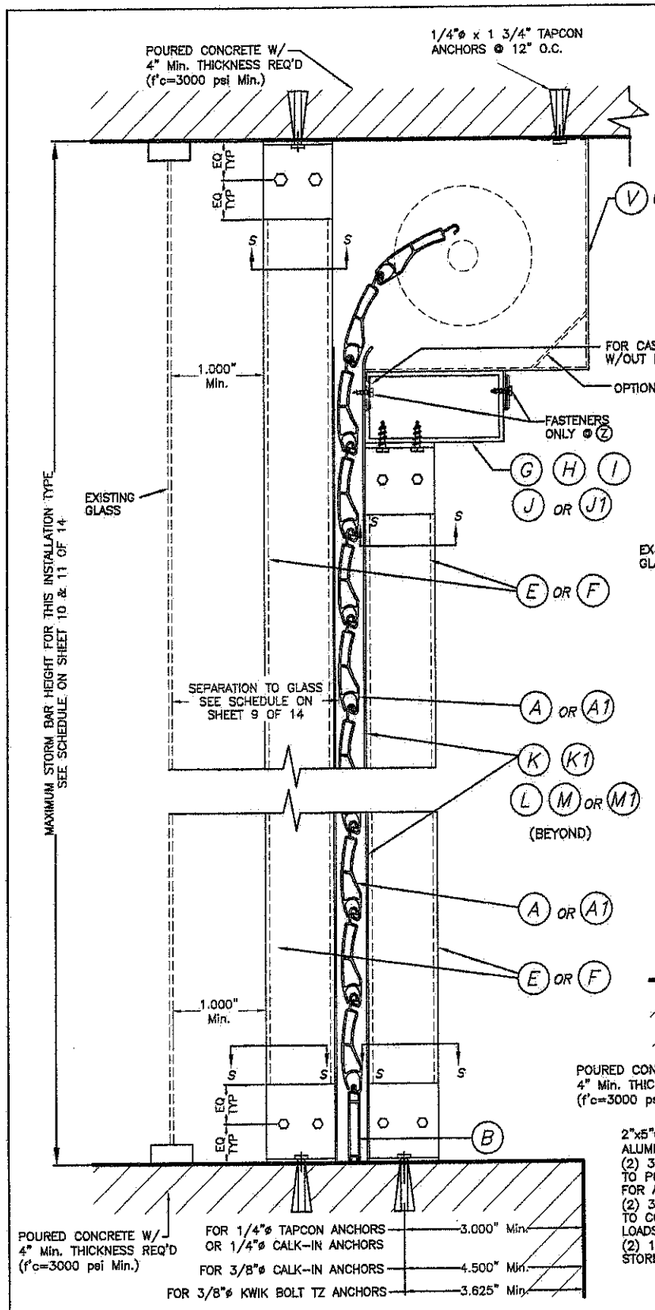
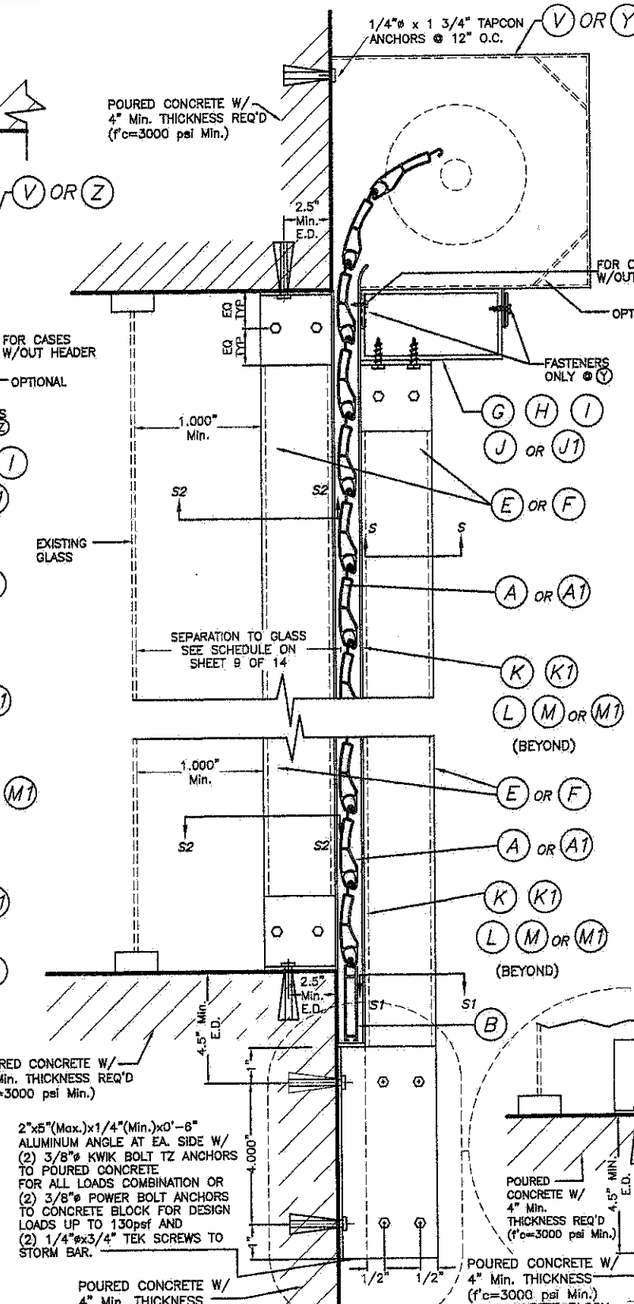


CEILING & FLOOR MOUNTING: SECTION V-V (2) INSTALLATION W/ FIXED OR REMOVABLE STORM BARS W/CONCRETE ANCHORS

(SEE SECTION "S" FOR ANCHOR TYPE REQUIREMENT)

SCALE : N.T.S.

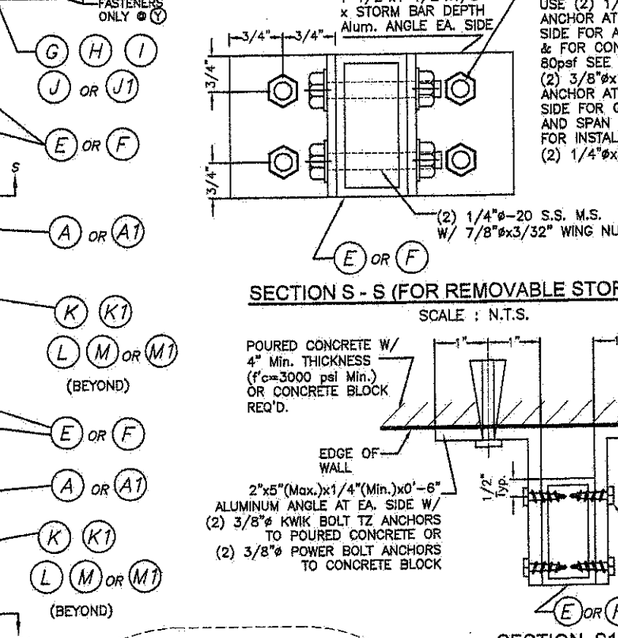
SINGLE SPAN SECTIONS AND DETAILS ARE SIMILAR TO ABOVE SHOWN WITHOUT STORM BAR & HEADERS.



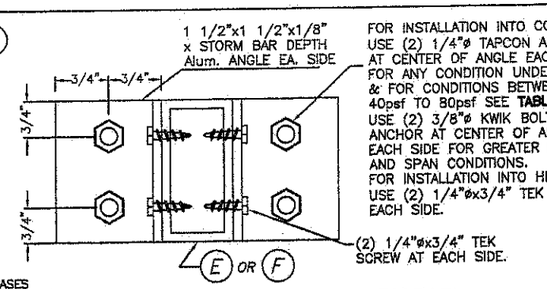
WALL MOUNTING INSTALLATION: SECTION V-V (1) W/ FIXED STORM BARS W/CONCRETE ANCHORS

SCALE : N.T.S.

SECTION V - V

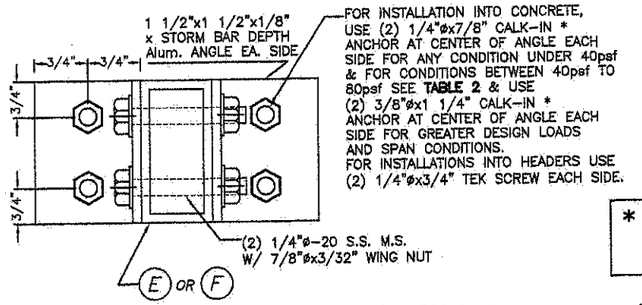


OPTIONAL STORM BAR CONNECTION



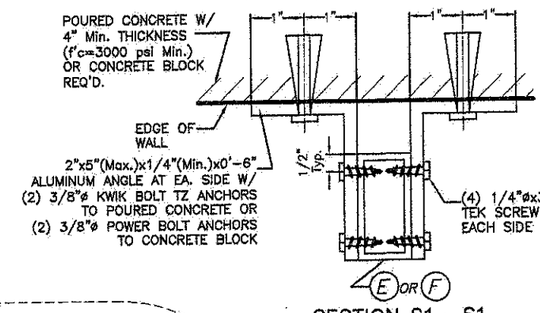
SECTION S - S (FOR FIXED STORM BAR)

SCALE : N.T.S.



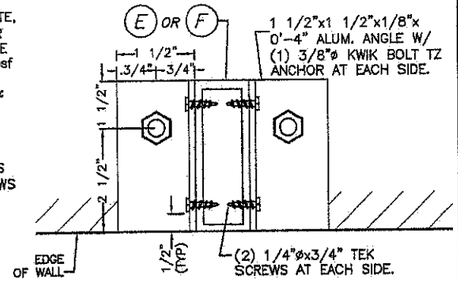
SECTION S - S (FOR REMOVABLE STORM BAR)

SCALE : N.T.S.



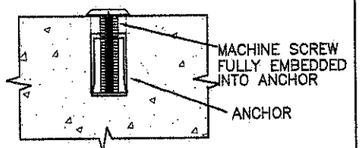
SECTION S1 - S1

SCALE : N. T. S.



SECTION S2 - S2

SCALE : N.T.S.



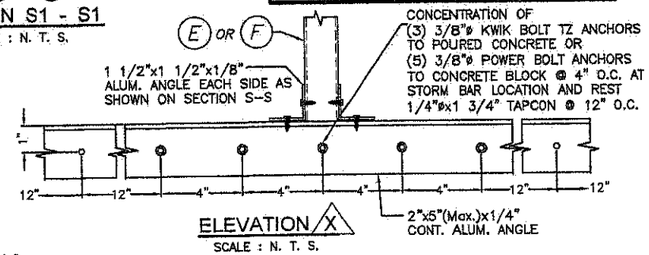
DETAIL A

SCALE : N.T.S.

* 1/4" ø-20 OR 3/8" ø-16 MACHINE SCREWS USED JOINTLY W/ 1/4" ø x 7/8" OR 3/8" ø x 1 1/4" CALK-IN ANCHORS RESPECTIVELY SHALL BE LEFT TOGETHER W/ ANCHORS AT THE TIME STORM BARS ARE REMOVED. (SEE DET. A).

TABLE 2

DESIGN LOAD "W" (p.s.f.)	MAX. SLAT SPAN	"L" MAX. STORM BAR HEIGHT
40.0	3'-0"	11'-10"
	4'-0"	11'-0"
	5'-0"	12'-5"
50.0	3'-0"	13'-4"
	4'-0"	12'-5"
	5'-0"	11'-2"
60.0	3'-0"	12'-9"
	4'-0"	11'-6"
	5'-0"	9'-2"
70.0	3'-0"	12'-3"
	4'-0"	9'-10"
	5'-0"	7'-10"
80.0	3'-0"	11'-6"
	4'-0"	8'-7"
	5'-0"	6'-11"



ELEVATION X

SCALE : N. T. S.

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FIRM REGISTRATION # F-13790

ASSA/40mm & 60mm BERTHA ROLL-UP

DRAWN BY: A.G.

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EASTERN METAL SUPPLY, INC
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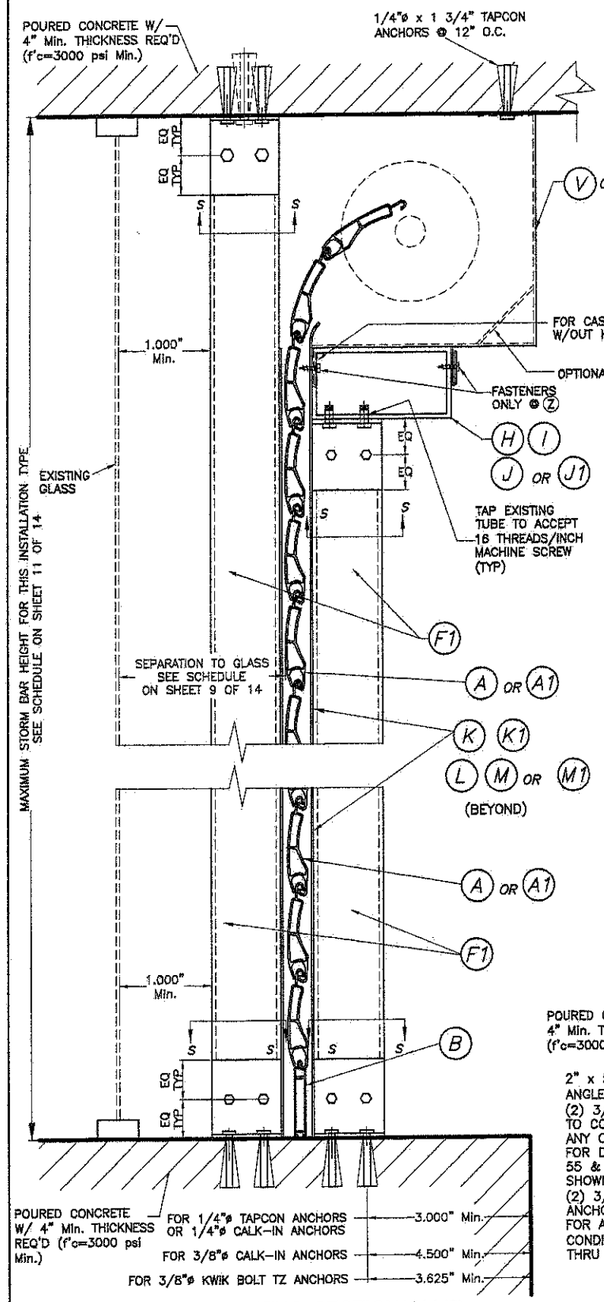
HOUSTON, TX. 77095
PH: (800) 996-6061

03/27/13 DATE

13-029 DRAWING No

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 02-557	03/27/13	3	–	–
2	–	–	4	–	–

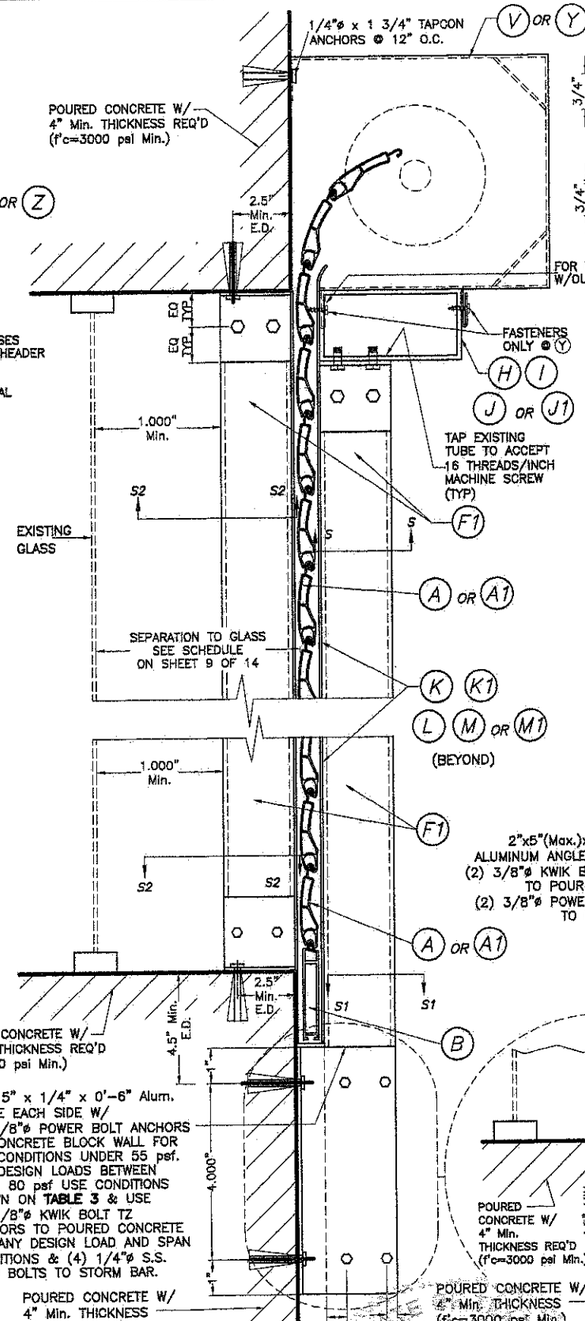


CEILING & FLOOR MOUNTING: SECTION V-V (2) INSTALLATION W/ FIXED OR REMOVABLE STORM BARS W/CONCRETE ANCHORS

(SEE SECTION "S" FOR ANCHOR TYPE REQUIREMENT)

SCALE : N.T.S.

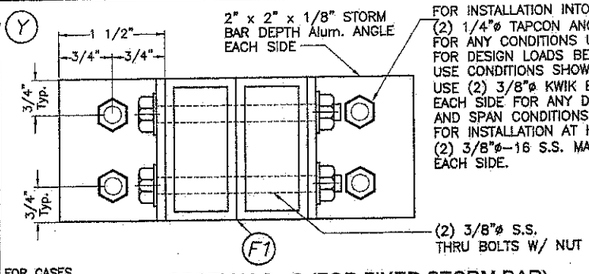
SINGLE SPAN SECTIONS AND DETAILS ARE SIMILAR TO ABOVE SHOWN WITHOUT STORM BAR & HEADERS.



WALL MOUNTING INSTALLATION: SECTION V-V(1) W/ FIXED STORM BARS W/CONCRETE ANCHORS

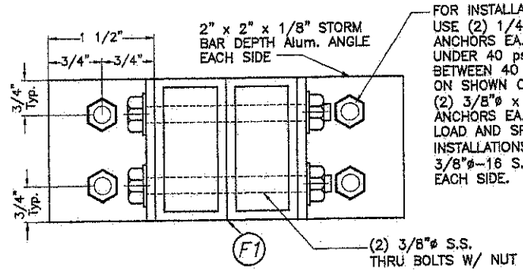
SCALE : N.T.S.

SECTION V - V



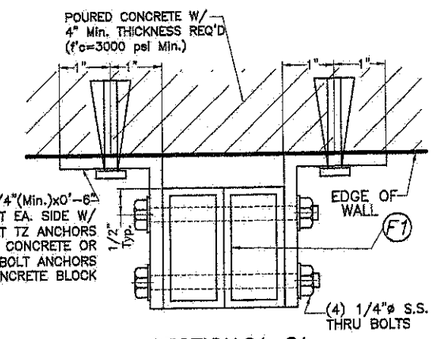
SECTION S - S (FOR FIXED STORM BAR)

SCALE : N.T.S.



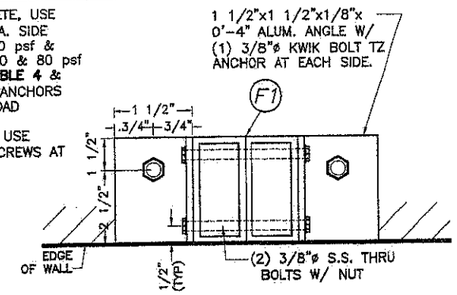
SECTION S - S (FOR REMOVABLE STORM BAR)

SCALE : N.T.S.



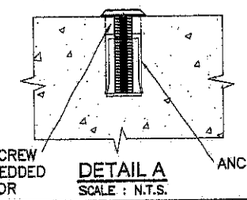
SECTION S1 - S1

SCALE : N.T.S.



SECTION S2 - S2

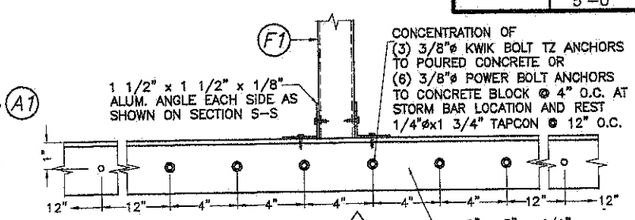
SCALE : N.T.S.



DETAIL A

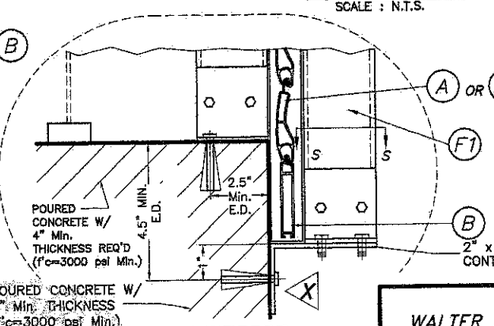
SCALE : N.T.S.

* 1/4" ø-20 OR 3/8" ø-16 MACHINE SCREWS USED JOINTLY W/ 1/4" ø x 7/8" OR 3/8" ø x 1 1/4" CALK-IN ANCHORS RESPECTIVELY SHALL BE LEFT TOGETHER W/ ANCHORS AT THE TIME STORM BARS ARE REMOVED. (SEE DET. A).



ELEVATION X

SCALE : N. T. S.



OPTIONAL STORM BAR CONNECTION

SCALE : N.T.S.

TABLE 3

DESIGN LOAD "W" (p.s.f.)	MAX. SLAT SPAN	"L" MAX. STORM BAR HEIGHT
55.0	3'-0"	12'-9"
	4'-0"	11'-10"
	5'-0"	11'-2"
	5'-11"	10'-8"
70.0	3'-0"	12'-3"
	4'-0"	11'-5"
	5'-0"	10'-6"
	5'-8"	9'-3"
80.0	3'-0"	11'-10"
	4'-0"	11'-0"
	5'-0"	9'-2"
	5'-6"	8'-4"

TABLE 4

DESIGN LOAD "W" (p.s.f.)	MAX. SLAT SPAN	"L" MAX. STORM BAR HEIGHT
40.0	3'-0"	14'-1"
	4'-0"	13'-1"
	5'-0"	12'-5"
	6'-0"	11'-6"
50.0	3'-0"	13'-4"
	4'-0"	12'-5"
	5'-0"	11'-0"
60.0	3'-0"	12'-9"
	4'-0"	11'-6"
	5'-0"	9'-2"
70.0	3'-0"	12'-3"
	4'-0"	9'-10"
	5'-0"	7'-10"
80.0	3'-0"	11'-6"
	4'-0"	8'-7"
	5'-0"	6'-10"

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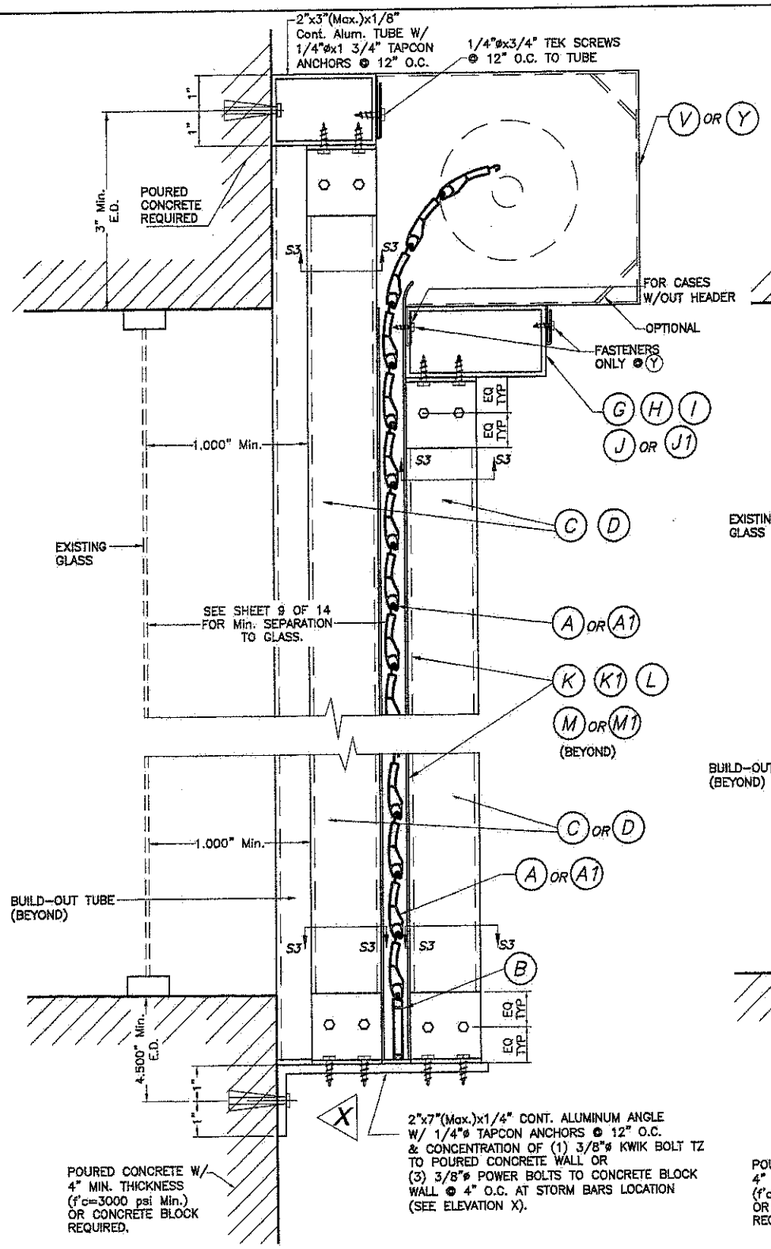
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 02-557	03/27/13	3	–	–
2	–	–	4	–	–

03/27/13 DATE

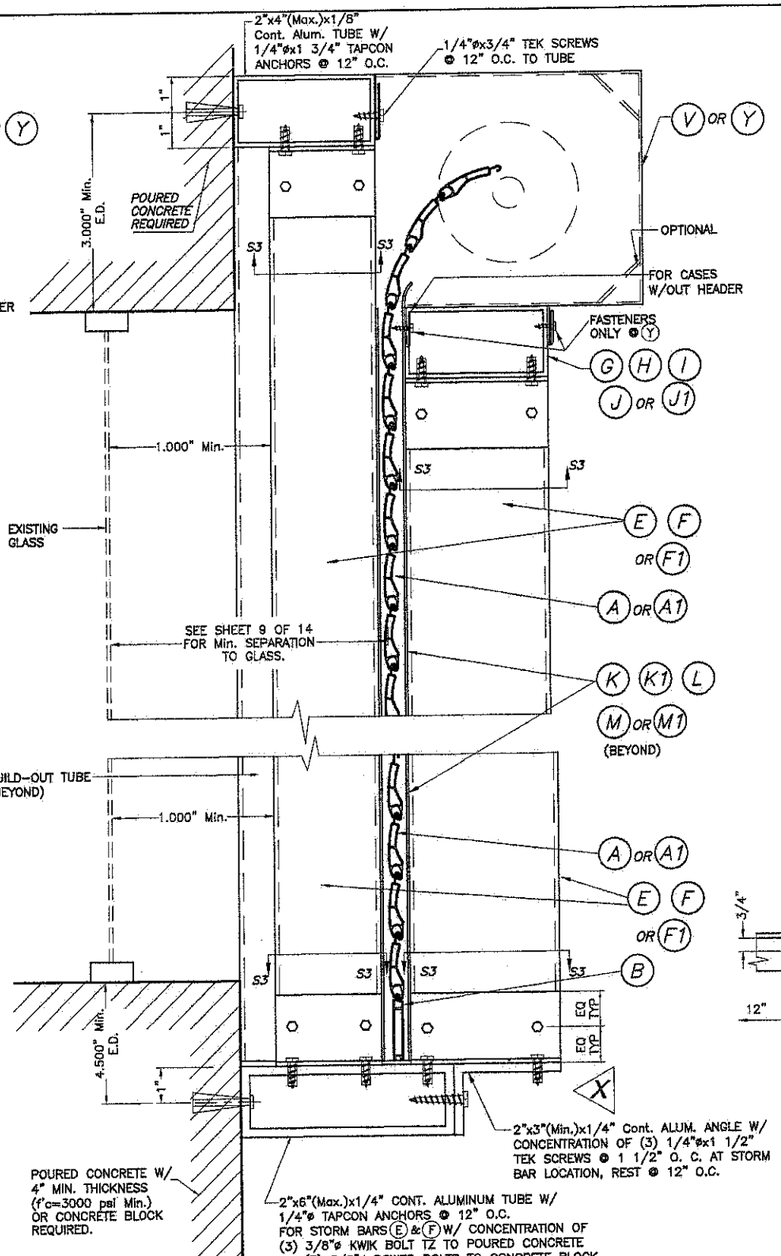
13-029 DRAWING No

SHEET 5B OF 14

WALTER A. TILLIT
STATE OF FLORIDA
4/11/13



CASE I



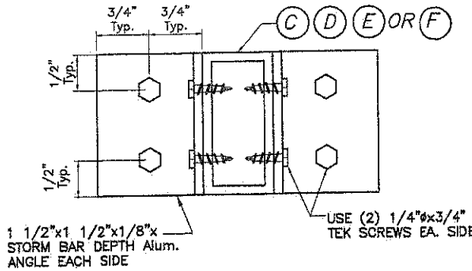
CASE II

FIXED STORM BAR CONNECTION AT BUILD-OUT

INSTALLATIONS W/SHEET METAL SCREWS OR MACHINE SCREWS

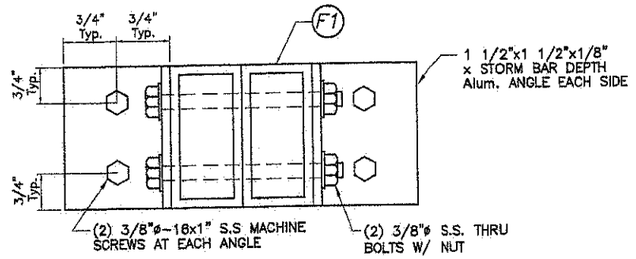
SCALE : N.T.S.

NOTE:
SINGLE SPAN SECTIONS AND DETAILS ARE SIMILAR TO ABOVE SHOWN WITHOUT STORM BAR & HEADERS.



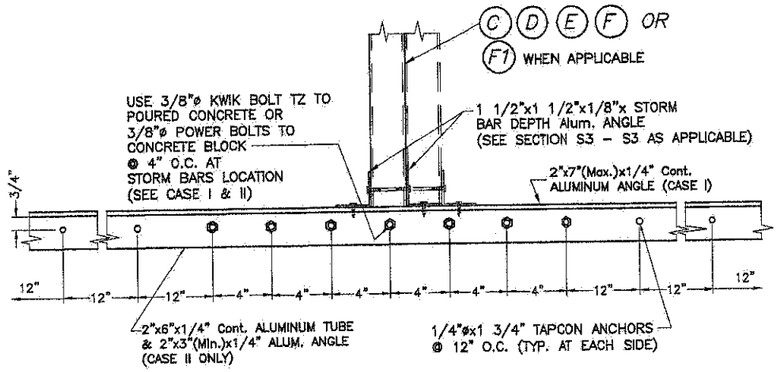
SECTION S3 - S3

SCALE : N.T.S.



SECTION S3 - S3

SCALE : N.T.S.



ELEVATION X

SCALE : N.T.S.

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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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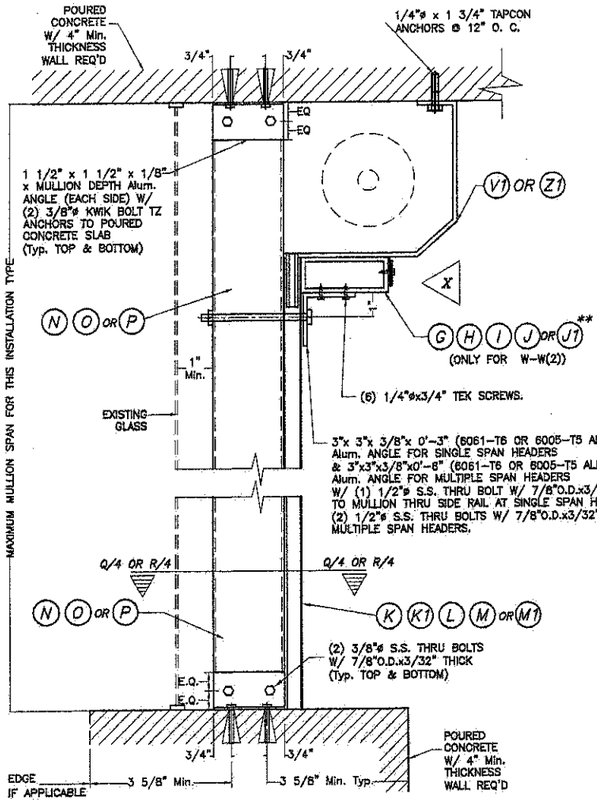
2	–	–	4	–	–

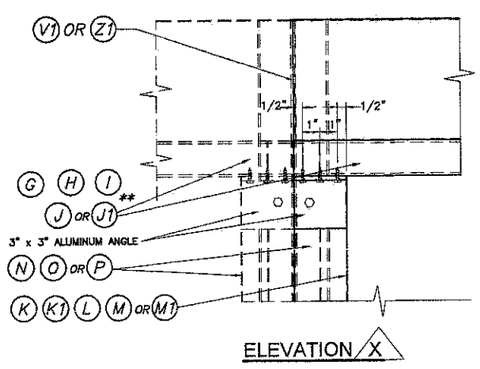


FLOOR/CEILING MOUNTING : SECTION W-W (1), W/O HEADER SECTION W-W (2), W/HEADER

SCALE : 1/8" = 1"

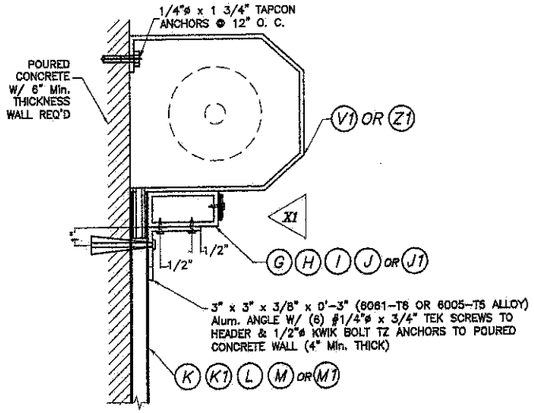
**** NOTE:**

USE (J1) HEADER ONLY FOR SINGLE SPAN INSTALLATIONS, IF MULTIPLE SPANS ARE NEEDED, THEN USE DOUBLE MULLIONS W/3" GAP IN BETWEEN THEM SELVES FOR EACH INDIVIDUAL SPAN.



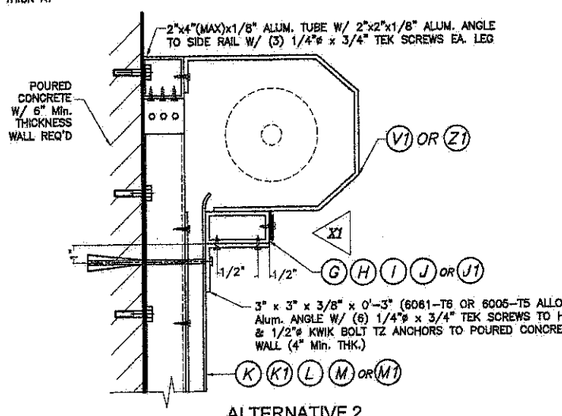
ELEVATION X

SCALE : 1/8" = 1"



ALTERNATIVE 1 WALL MOUNTING : SECTION W-W (3)

SCALE : 1/8" = 1"

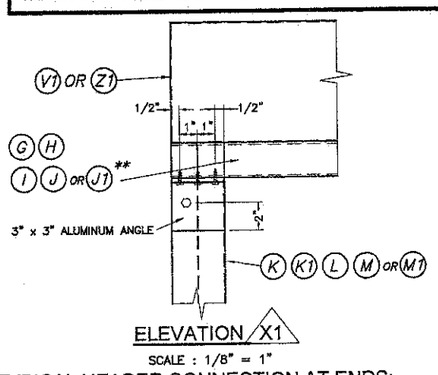


ALTERNATIVE 2 WALL MOUNTING : SECTION W-W(3)

SCALE : 1/8" = 1"

NOTE:

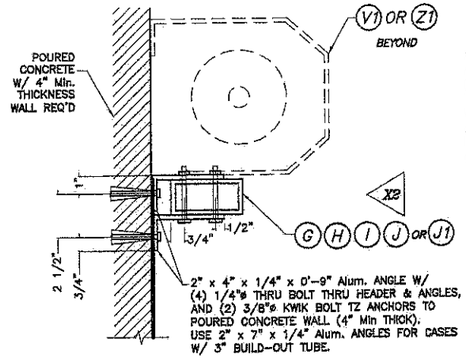
INSTALLATION DETAILS SHOWN ON ALTERNATIVES 1 & 2 ARE VALID FOR STORM BAR HEIGHTS AND SINGLE HEADER SPAN CONDITIONS FOR DESIGN LOADS UP TO 120 psf.



ELEVATION X1

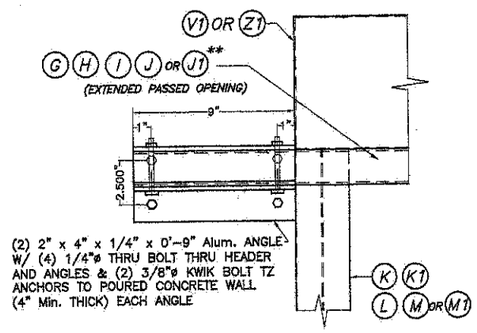
SCALE : 1/8" = 1"

TYPICAL HEADER CONNECTION AT ENDS: SECTION W-W



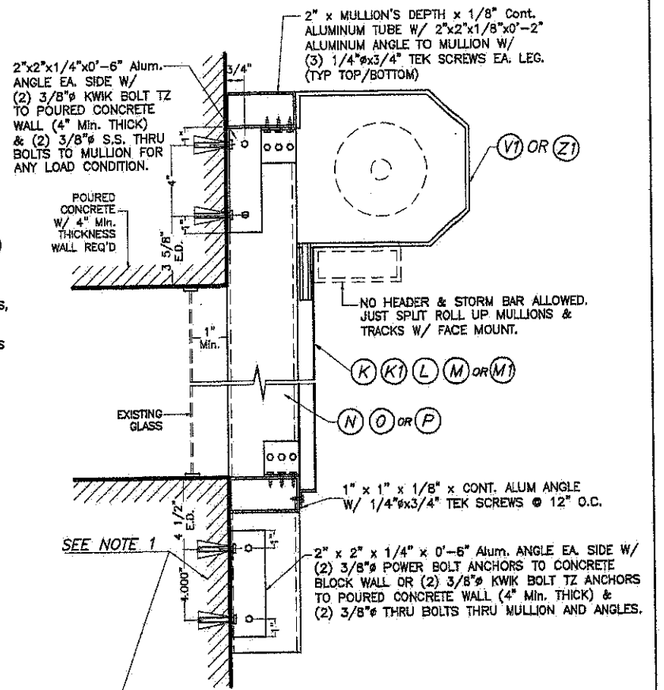
ALTERNATIVE 3 WALL MOUNTING : SECTION W-W(3)

SCALE : 1/8" = 1"



ELEVATION X2

SCALE : 1/8" = 1"

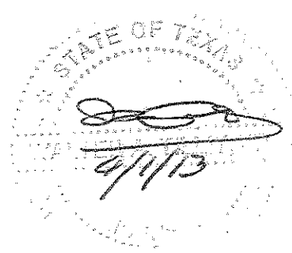


NOTE 1:

EXISTING WALL MAY BE POURED CONCRETE OR CONCRETE BLOCK FOR DESIGN LOADS UP TO 60.0 psf W/ 9'-0" Max. MULLION HEIGHT AND 5'-0" Max. MULLION SPACING. SHALL BE 4" Min. THICK POURED CONCRETE FOR GREATER LOADS.

WALL MOUNTING : MULLION CONNECTION AT TOP & BOTTOM : SECTION W-W (1)

SCALE : 1/8" = 1"



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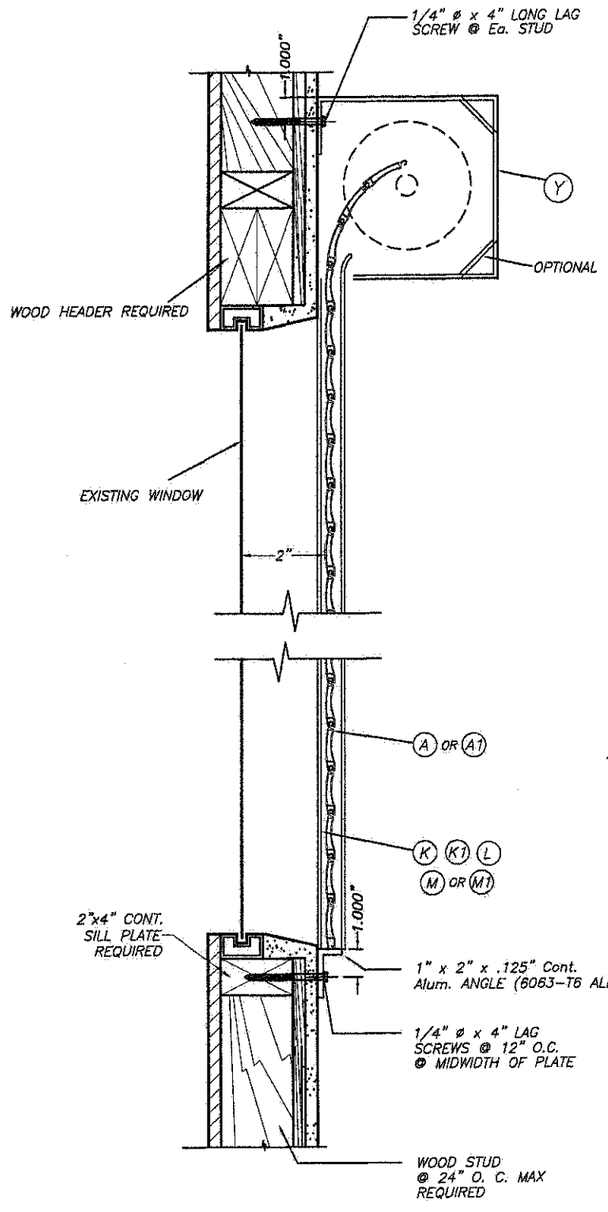
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 02-557	03/27/13	3	–	–
2	–	–	4	–	–

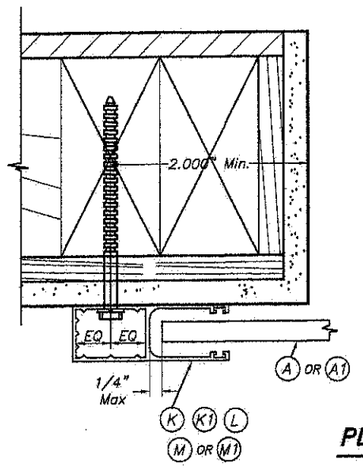
03/27/13 DATE

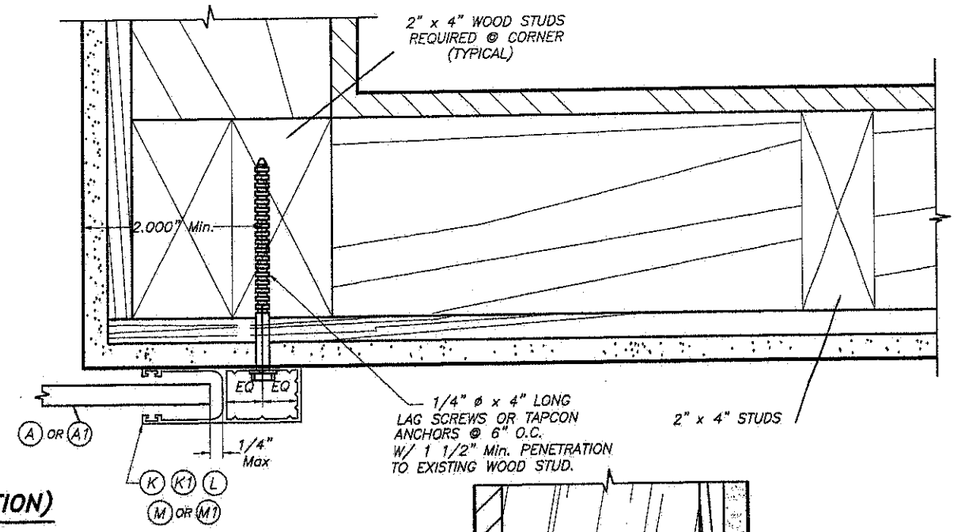
13-029 DRAWING No



WALL MOUNTING INSTALLATION
SINGLE SPAN CONDITION

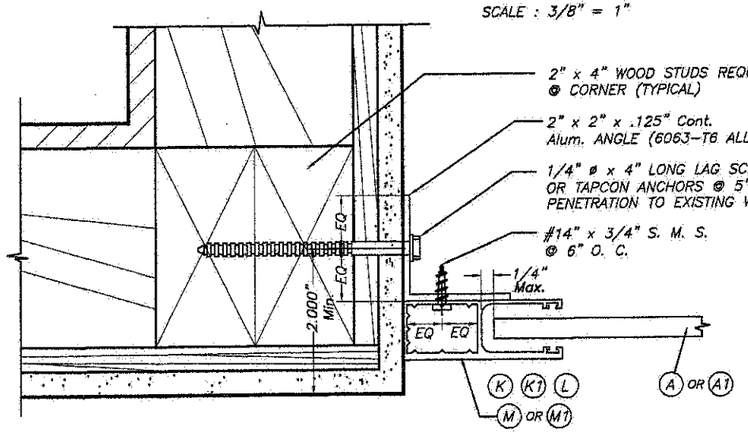
N. T. S.





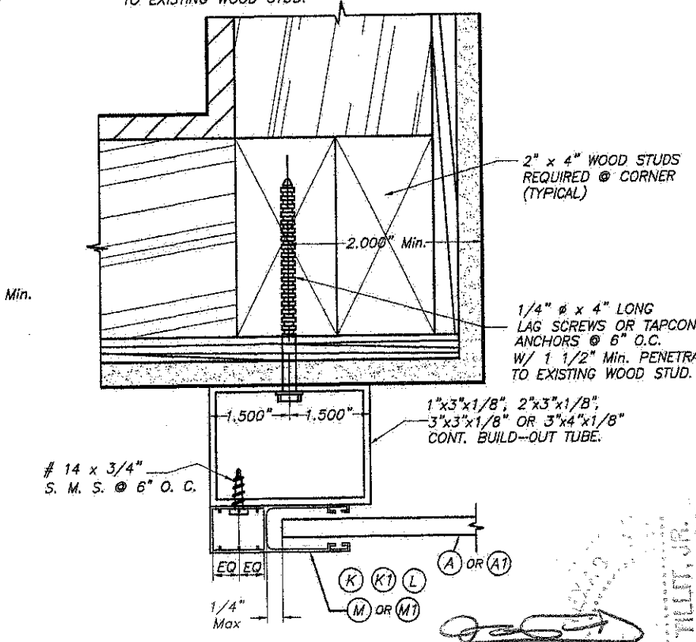
PLAN A (SECTION)
WALL MOUNT

SCALE : 3/8" = 1"



PLAN B (SECTION)
INSIDE MOUNT

SCALE : 3/8" = 1"



PLAN C (SECTION)
BUILD-OUT

SCALE : 3/8" = 1"

NOTES:

1. INSTALLATIONS ARE ONLY VALID FOR BUILDINGS WITH DESIGN LOADS UP TO 70.0 psf.
2. FOR NEW FRAME CONSTRUCTION: WOOD MEMBER TO BE SOUTHERN PINE No. 2 W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.
3. MINIMUM PENETRATION OF LAG SCREWS INTO WOOD MEMBER TO BE 1 1/2".

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6355 N.W. 36 STREET, STE. 305
VIRGINIA GARDENS, FL 33166
PHONE (305) 871-1530 FAX (305) 871-1531
TEXAS LIC. # 90691
FIRM REGISTRATION # F-13790

ASSA/40mm & 60mm BERTHA ROLL-UP

DRAWN BY: A.G.

EASTERN METAL SUPPLY, INC
4268 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407
PH: (800) 432-2204

EASTERN METAL SUPPLY, INC
9400 TELGE ROAD
HOUSTON, TX. 77095
PH: (800) 996-6061

03/27/13 DATE

13-029 DRAWING No

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 02-557	03/27/13	3	--	--
2	--	--	4	--	--

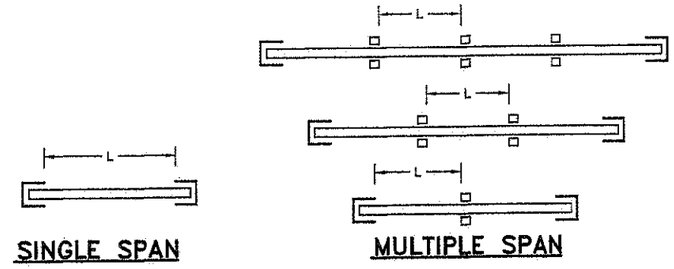
SHEET 8 OF 14

4/4/13

SLAT PERFORMANCE CHART MAXIMUM DESIGN PRESSURE RATING "W" (psf) AND CORRESPONDING MAXIMUM SLAT SPAN "L" FOR TYPE 1 & 2 SLAT

(USE MAXIMUM VALUES BETWEEN POSITIVE AND NEGATIVE LOAD)

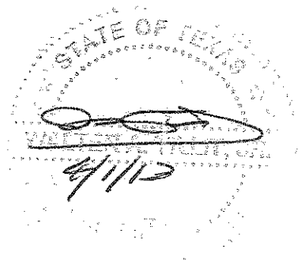
SLAT TYPE	(A)		(A1)	
Max. DESIGN LOAD "W" (p.s.f.)	MAXIMUM SLAT SPAN	MINIMUM SEPARATION TO GLASS	MAXIMUM SLAT SPAN	MINIMUM SEPARATION TO GLASS
	SINGLE & MULTIPLE UNIT *	SINGLE & MULTIPLE UNIT *	SINGLE & MULTIPLE UNIT *	SINGLE & MULTIPLE UNIT *
25.0	7'-8"	1"	5'-2"	1"
30.0	7'-4"	1"	5'-1"	1"
35.0	7'-0"	1"	4'-10"	1"
40.0	6'-8"	1"	4'-6"	1"
45.0	6'-6"	1"	4'-3"	1"
50.0	6'-3"	1"	4'-0"	1"
55.0	6'-1"	1"	3'-10"	1"
60.0	6'-0"	1"	3'-8"	1"
65.0	5'-10"	1"	3'-6"	1"
70.0	5'-9'	1"	3'-5"	1"
75.0	5'-7"	1"	3'-3"	1"
80.0	5'-6"	1"	3'-2"	1"
85.0	5'-5"	1"	3'-1"	1"
90.0	5'-4"	1"	3'-0"	1"
95.0	5'-3"	1"	2'-11"	1"
100.0	5'-2"	1"	2'-10"	1"
105.0	5'-1"	1"	–	–
110.0	5'-0"	1"	–	–
115.0	4'-11"	1"	–	–
120.0	4'-10"	1"	–	–
125.0	4'-9"	1"	–	–
130.0	4'-7"	1"	–	–
135.0	4'-6"	1"	–	–
140.0	4'-5"	1"	–	–
145.0	4'-4"	1"	–	–
150.0	4'-4"	1"	–	–
155.0	4'-3"	1"	–	–
160.0	4'-2"	1"	–	–
165.0	4'-1"	1"	–	–
170.0	4'-0"	1"	–	–
175.0	4'-0"	1"	–	–
180.0	3'-11"	1"	–	–
185.0	3'-10"	1"	–	–
190.0	3'-10"	1"	–	–
195.0	3'-9"	1"	–	–



SINGLE SPAN MULTIPLE SPAN

SPAN LAYOUT

* MINIMUM SEPARATION TO GLASS FOR SINGLE AND MULTIPLE UNITS SHALL BE MEASURED FROM BACK OF SLAT TO GLASS.



TEXAS DEPARTMENT OF INSURANCE – 2006

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03/27/13 DATE

13-029 DRAWING No

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 02-557	03/27/13	3	–	–
2	–	–	4	–	–

STORM BAR LOADING CHART

MAXIMUM DESIGN PRESSURE RATING "W" (p. s. f.) AND CORRESPONDING MAXIMUM SPAN "L" FOR A GIVEN TYPE OF STORM BAR AND STORM BAR SPACING.

(USE MAXIMUM VALUES BETWEEN POSITIVE AND NEGATIVE LOAD)

MAX. SPAN FOR STORM BARS W/REGULAR CONCRETE ANCHORS

MAXIMUM DESIGN LOAD "W" (p.s.f.)	TYPE 1 STORM BAR 2" x 2" x 1/4" (C) * STORM BAR SPACING					TYPE 2 STORM BAR 2" x 3" x 1/8" (D) * STORM BAR SPACING					TYPE 3 STORM BAR 2" x 4" x 1/8" (E) * STORM BAR SPACING				
	≤ 3'-0"	3' TO 4'	4' TO 5'	5' TO 6'	6' TO 6.5'	≤ 3'-0"	3' TO 4'	4' TO 5'	5' TO 6'	6' TO 6.5'	≤ 3'-0"	3' TO 4'	4' TO 5'	5' TO 6'	6' TO 6.5'
40 OR LESS	7'-7"	7'-1"	6'-9"	6'-2"	5'-11"	8'-0"	7'-9"	6'-11"	6'-4"	6'-1"	10'-0"	9'-6"	8'-6"	7'-9"	7'-5"
45	7'-5"	6'-11"	6'-4"	5'-10"	5'-7"	8'-0"	7'-4"	6'-7"	6'-0"	5'-9"	9'-11"	8'-11"	8'-0"	7'-4"	7'-0"
50	7'-3"	6'-9"	6'-0"	5'-6"	5'-4"	8'-0"	7'-0"	6'-3"	5'-8"	5'-6"	9'-8"	8'-6"	7'-7"	6'-11"	6'-8"
55	7'-0"	6'-5"	5'-9"	5'-3"	—	7'-8"	6'-8"	5'-6"	5'-6"	—	9'-4"	8'-1"	7'-3"	6'-7"	—
60	6'-11"	6'-2"	5'-6"	5'-0"	—	7'-4"	5'-4"	5'-8"	5'-2"	—	8'-11"	7'-9"	6'-11"	6'-4"	—
65	6'-9"	5'-11"	5'-4"	4'-10"	—	7'-1"	6'-1"	5'-5"	5'-0"	—	8'-7"	7'-5"	6'-8"	6'-1"	—
70	6'-7"	5'-8"	5'-1"	4'-8"	—	6'-10"	5'-11"	5'-3"	4'-10"	—	8'-3"	7'-2"	6'-5"	5'-10"	—
75	6'-4"	5'-6"	4'-11"	4'-6"	—	6'-7"	5'-8"	5'-1"	4'-8"	—	8'-0"	6'-11"	6'-2"	5'-8"	—
80	6'-2"	5'-4"	4'-9"	4'-4"	—	6'-4"	5'-6"	4'-11"	4'-6"	—	7'-9"	6'-9"	6'-0"	5'-6"	—
85	6'-0"	5'-2"	4'-8"	4'-3"	—	6'-2"	5'-4"	4'-9"	4'-4"	—	7'-6"	6'-6"	5'-10"	5'-4"	—
90	5'-10"	5'-0"	4'-6"	4'-1"	—	6'-0"	5'-2"	4'-8"	4'-3"	—	7'-4"	6'-4"	5'-8"	5'-2"	—
95	5'-8"	4'-11"	4'-5"	4'-0"	—	5'-10"	5'-1"	4'-6"	4'-1"	—	7'-1"	6'-2"	5'-6"	5'-0"	—
100	5'-6"	4'-9"	4'-3"	3'-11"	—	5'-8"	4'-11"	4'-5"	4'-0"	—	6'-11"	6'-0"	5'-4"	4'-11"	—
105	5'-5"	4'-8"	4'-2"	3'-10"	—	5'-7"	4'-10"	4'-4"	3'-11"	—	6'-9"	5'-10"	5'-3"	4'-9"	—
110	5'-3"	4'-7"	4'-1"	—	—	5'-5"	4'-8"	4'-2"	—	—	6'-7"	5'-9"	5'-1"	—	—
115	5'-2"	4'-5"	4'-0"	—	—	5'-4"	4'-7"	4'-1"	—	—	6'-6"	5'-7"	5'-0"	—	—
120	5'-0"	4'-4"	3'-11"	—	—	5'-2"	4'-6"	4'-0"	—	—	6'-4"	5'-6"	4'-11"	—	—
125	4'-11"	4'-3"	3'-10"	—	—	5'-1"	4'-5"	3'-11"	—	—	6'-2"	5'-4"	4'-10"	—	—
130	4'-10"	4'-2"	3'-9"	—	—	5'-0"	4'-4"	3'-10"	—	—	6'-1"	5'-3"	4'-9"	—	—
135	4'-9"	4'-1"	3'-8"	—	—	4'-11"	4'-3"	3'-9"	—	—	6'-0"	5'-2"	4'-7"	—	—
140	4'-8"	4'-0"	3'-7"	—	—	4'-10"	4'-2"	3'-9"	—	—	5'-10"	5'-1"	4'-6"	—	—
145	4'-7"	4'-0"	3'-7"	—	—	4'-9"	4'-1"	3'-8"	—	—	5'-9"	5'-0"	4'-6"	—	—
150	4'-6"	3'-11"	3'-6"	—	—	4'-8"	4'-0"	3'-7"	—	—	5'-8"	4'-11"	4'-5"	—	—
155	4'-5"	3'-10"	3'-5"	—	—	4'-7"	3'-11"	3'-6"	—	—	5'-7"	4'-10	4'-4"	—	—
160	4'-4"	3'-9"	3'-4"	—	—	4'-6"	3'-11"	3'-6"	—	—	5'-6"	4'-9"	4'-3"	—	—
165	4'-3"	3'-9"	3'-4"	—	—	4'-5"	3'-10"	3'-5"	—	—	5'-5"	4'-8"	4'-2"	—	—
170	4'-3"	3'-8"	—	—	—	4'-4"	3'-9"	—	—	—	5'-4"	4'-7"	—	—	—
175	4'-2"	3'-7"	—	—	—	4'-4"	3'-9"	—	—	—	5'-3"	4'-6"	—	—	—
180	4'-1"	3'-7"	—	—	—	4'-3"	3'-8"	—	—	—	5'-2"	4'-6"	—	—	—
185	4'-1"	3'-6"	—	—	—	4'-2"	3'-7"	—	—	—	5'-1"	4'-5"	—	—	—
190	4'-0"	3'-6"	—	—	—	4'-1"	3'-7"	—	—	—	5'-0"	4'-4"	—	—	—
195	3'-11"	3'-5"	—	—	—	4'-1"	3'-6"	—	—	—	5'-0"	4'-4"	—	—	—

* STORM BAR SPACING SHALL BE SUCH THAT MAXIMUM SLAT SPAN SHALL NOT BE EXCEEDED.

4/11/13

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2	--	--	4	--	--

03/27/13 DATE

13-029 DRAWING No

STORM BAR LOADING CHART

MAXIMUM DESIGN PRESSURE RATING "W" (p. s. f.) AND CORRESPONDING MAXIMUM SPAN "L" FOR A GIVEN TYPE OF STORM BAR AND STORM BAR SPACING.

(USE MAXIMUM VALUES BETWEEN POSITIVE AND NEGATIVE LOAD)

MAX. SPAN FOR STORM BARS W/REGULAR CONCRETE ANCHORS

MAXIMUM DESIGN LOAD "W" (p.s.f.)	TYPE 4 STORM BAR 2" x 4" x .250" (F)					TYPE 5 STORM BAR (2) 2" x 4" x .250" (F1)				
	* STORM BAR SPACING					* STORM BAR SPACING				
	≤ 3'-0"	3' TO 4'	4' TO 5'	5' TO 6'	6' TO 6.5'	≤ 3'-0"	3' TO 4'	4' TO 5'	5' TO 6'	6' TO 6.5'
40 OR LESS	11'-10"	11'-0"	10'-5"	9'-11"	9'-9"	14'-1"	13'-1"	12'-5"	11'-10"	11'-7"
45	11'-6"	10'-8"	10'-1"	9'-8"	9'-4"	13'-8"	12'-9"	12'-0"	11'-6"	11'-3"
50	11'-2"	10'-5"	9'-10"	9'-2"	8'-10"	13'-4"	12'-5"	11'-9"	11'-2"	11'-0"
55	10'-11"	10'-2"	9'-7"	8'-9"	—	13'-0"	12'-1"	11'-5"	10'-11"	—
60	10'-8"	9'-11"	9'-2"	8'-5"	—	12'-9"	11'-10"	11'-2"	10'-8"	—
65	10'-6"	9'-9"	8'-10"	8'-1"	—	12'-6"	11'-7"	11'-0"	10'-6"	—
70	10'-4"	9'-6"	8'-6"	7'-9"	—	12'-3"	11'-5"	10'-9"	10'-4"	—
75	10'-1"	9'-2"	8'-3"	7'-6"	—	12'-0"	11'-2"	10'-7"	10'-1"	—
80	9'-11"	8'-11"	7'-11"	7'-3"	—	11'-10"	11'-0"	10'-5"	9'-11"	—
85	9'-10"	8'-7"	7'-9"	7'-0"	—	11'-8"	10'-10"	10'-3"	9'-10"	—
90	9'-8"	8'-5"	7'-6"	6'-10"	—	11'-6"	10'-8"	10'-1"	9'-8"	—
95	9'-5"	8'-2"	7'-4"	6'-8"	—	11'-4"	10'-7"	10'-0"	9'-5"	—
100	9'-2"	7'-11"	7'-1"	6'-6"	—	11'-2"	10'-5"	9'-10"	9'-2"	—
105	8'-11"	7'-9"	6'-11"	6'-4"	—	11'-1"	10'-4"	9'-9"	8'-11"	—
110	8'-9"	7'-7"	6'-9"	—	—	10'-11"	10'-2"	9'-7"	—	—
115	8'-7"	7'-5"	6'-8"	—	—	10'-10"	10'-1"	9'-4"	—	—
120	8'-5"	7'-3"	6'-6"	—	—	10'-8"	9'-11"	9'-2"	—	—
125	8'-3"	7'-1"	6'-4"	—	—	10'-7"	9'-10"	9'-0"	—	—
130	8'-1"	7'-0"	6'-3"	—	—	10'-6"	9'-9"	8'-10"	—	—
135	7'-11"	6'-10"	6'-1"	—	—	10'-5"	9'-8"	8'-8"	—	—
140	7'-9"	6'-9"	6'-0"	—	—	10'-4"	9'-6"	8'-6"	—	—
145	7'-7"	6'-7"	5'-11"	—	—	10'-2"	9'-4"	8'-4"	—	—
150	7'-6"	6'-6"	5'-10"	—	—	10'-1"	9'-2"	8'-2"	—	—
155	7'-4"	6'-5"	5'-9"	—	—	10'-0"	9'-0"	8'-1"	—	—
160	7'-3"	6'-3"	5'-7"	—	—	9'-11"	8'-11"	7'-11"	—	—
165	7'-2"	6'-2"	5'-6"	—	—	9'-11"	8'-9"	7'-10"	—	—
170	7'-0"	6'-1"	—	—	—	9'-10"	8'-7"	—	—	—
175	6'-11"	6'-0"	—	—	—	9'-9"	8'-6"	—	—	—
180	6'-10"	5'-11"	—	—	—	9'-8"	8'-4"	—	—	—
185	6'-9"	5'-10"	—	—	—	9'-6"	8'-3"	—	—	—
190	6'-8"	5'-9"	—	—	—	9'-5"	8'-2"	—	—	—
195	6'-7"	5'-8"	—	—	—	9'-3"	8'-0"	—	—	—

* STORM BAR SPACING SHALL BE SUCH THAT MAXIMUM SLAT SPAN SHALL NOT BE EXCEEDED.

9/3/13

TEXAS DEPARTMENT OF INSURANCE – 2006

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2	–	–	4	–	–

03/27/13 DATE

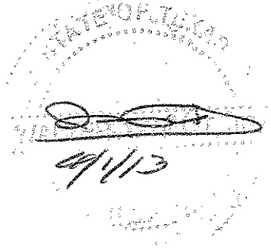
13-029 DRAWING No

SHEET 11 OF 14

HEADER LOADING CHART MAXIMUM DESIGN PRESSURE RATING "W" (psf) AND CORRESPONDING MAXIMUM SPAN "L" FOR A GIVEN TYPE OF HEADER.

(USE MAXIMUM VALUES BETWEEN POSITIVE AND NEGATIVE LOAD)

MAXIMUM DESIGN LOAD "W" (p.s.f.)	TYPE 1 HEADER (G) 2" x 3" x 1/8"		TYPE 2 HEADER (H) 2" x 4" x 1/8"			TYPE 3 HEADER (I) 2" x 4" x 1/4"					TYPE 4 HEADER (J) 2" x 6" x 1/8"					TYPE 5 HEADER (J1) 2" x 6" x 1/4"				
	STORM BAR HEIGHT		STORM BAR HEIGHT			STORM BAR HEIGHT					STORM BAR HEIGHT					STORM BAR HEIGHT				
	⩽ 5'-0"	5' TO 7'	⩽ 5'-0"	5' TO 8'	8' TO 10'	⩽ 6'-0"	6' TO 8'	8' TO 10'	10' TO 12'	12' TO 14'	⩽ 6'-0"	6' TO 8'	8' TO 10'	10' TO 12'	12' TO 14'	⩽ 6'-0"	6' TO 8'	8' TO 10'	10' TO 12'	12' TO 14'
40.0 OR LESS	9'-11"	8'-4"	12'-2"	9'-8"	8'-8"	14'-10"	12'-10"	11'-6"	10'-6"	9'-9"	15'-1"	13'-1"	11'-8"	10'-8"	9'-11"	19'-4"	17'-3"	15'-5"	14'-1"	13'-0"
45.0	9'-4"	7'-11"	11'-6"	9'-1"	8'-2"	14'-0"	12'-2"	10'-10"	9'-11"	9'-2"	14'-3"	12'-4"	11'-0"	10'-1"	9'-4"	18'-9"	16'-3"	14'-6"	13'-3"	12'-3"
50.0	8'-10"	7'-6"	10'-11"	8'-8"	7'-9"	13'-4"	11'-6"	10'-4"	9'-5"	8'-8"	13'-6"	11'-8"	10'-6"	9'-7"	8'-10"	17'-9"	15'-5"	13'-9"	12'-7"	11'-8"
55.0	8'-5"	7'-2"	10'-5"	8'-3"	7'-4"	12'-8"	11'-0"	9'-10"	9'-0"	8'-4"	12'-11"	11'-2"	10'-0"	9'-1"	8'-5"	17'-0"	14'-8"	13'-2"	12'-0"	11'-1"
60.0	8'-1"	6'-10"	10'-0"	7'-11"	7'-1"	12'-2"	10'-6"	9'-5"	9'-7"	7'-11"	12'-4"	10'-8"	9'-7"	8'-9"	8'-1"	16'-3"	14'-1"	12'-7"	11'-6"	10'-8"
65.0	7'-9"	6'-7"	9'-7"	7'-7"	6'-9"	11'-8"	10'-1"	9'-0"	8'-3"	7'-8"	11'-10"	10'-3"	9'-2"	8'-5"	7'-9"	15'-7"	13'-6"	12'-1"	11'-0"	10'-3"
70.0	7'-6"	6'-4"	9'-3"	7'-4"	6'-6"	11'-3"	9'-9"	8'-8"	7'-11"	7'-4"	11'-5"	9'-11"	8'-10"	8'-1"	7'-6"	15'-0"	13'-0"	11'-8"	10'-8"	9'-10"
75.0	7'-3"	6'-1"	8'-11"	7'-1"	6'-4"	10'-10"	9'-5"	8'-5"	7'-8"	7'-1"	11'-0"	9'-7"	8'-7"	7'-10"	7'-3"	14'-6"	12'-7"	11'-3"	10'-3"	9'-6"
80.0	7'-0"	5'-11"	8'-8"	6'-10"	6'-1"	10'-6"	9'-1"	8'-2"	7'-5"	6'-11"	10'-8"	9'-3"	8'-3"	7'-7"	7'-0"	14'-1"	12'-2"	10'-11"	9'-11"	9'-2"
85.0	6'-9"	5'-9"	8'-5"	6'-7"	5'-11"	10'-2"	8'-10"	7'-11"	7'-3"	6'-8"	10'-4"	9'-0"	8'-0"	7'-4"	6'-9"	13'-8"	11'-10"	10'-7"	9'-8"	8'-11"
90.0	6'-7"	5'-7"	8'-2"	6'-5"	5'-9"	9'-11"	8'-7"	7'-8"	7'-0"	6'-6"	10'-1"	8'-9"	7'-10"	7'-1"	6'-7"	13'-3"	11'-6"	10'-3"	9'-5"	8'-8"
95.0	6'-5"	5'-5"	7'-11"	6'-3"	5'-7"	9'-8"	8'-4"	7'-6"	6'-10"	6'-4"	9'-10"	8'-6"	7'-7"	6'-11"	6'-5"	12'-11"	11'-2"	10'-0"	9'-2"	8'-5"
100.0	6'-3"	5'-3"	7'-9"	6'-1"	5'-6"	9'-5"	8'-2"	7'-3"	6'-8"	6'-2"	9'-7"	8'-3"	7'-5"	6'-9"	6'-3"	12'-7"	10'-11"	9'-9"	8'-11"	8'-3"
105.0	6'-1"	5'-2"	7'-6"	6'-0"	5'-4"	9'-2"	7'-11"	7'-1"	6'-6"	6'-0"	9'-4"	8'-1"	7'-3"	6'-7"	6'-1"	12'-3"	10'-8"	9'-6"	8'-8"	8'-0"
110.0	6'-0"	5'-1"	7'-4"	5'-10"	5'-2"	9'-0"	7'-9"	6'-11"	6'-4"	5'-10"	9'-1"	7'-11"	7'-1"	6'-5"	6'-0"	12'-0"	10'-5"	9'-3"	8'-6"	7'-10"
115.0	5'-10"	4'-11"	7'-2"	5'-8"	5'-1"	8'-9"	7'-7"	6'-9"	6'-2"	5'-9"	8'-11"	7'-9"	6'-11"	6'-4"	5'-10"	11'-9"	10'-2"	9'-1"	8'-4"	7'-8"
120.0	5'-9"	4'-10"	7'-1"	5'-7"	5'-0"	8'-7"	7'-5"	6'-8"	6'-1"	5'-7"	8'-9"	7'-7"	6'-9"	6'-2"	5'-9"	11'-6"	9'-11"	8'-11"	8'-1"	7'-6"
125.0	5'-7"	4'-9"	6'-11"	5'-6"	4'-11"	8'-5"	7'-3"	6'-6"	5'-11"	5'-6"	8'-7"	7'-5"	6'-7"	6'-1"	5'-7"	11'-3"	9'-9"	8'-9"	7'-11"	7'-4"
130.0	5'-6"	4'-8"	6'-9"	5'-4	4'-9"	8'-3"	7'-2"	6'-5"	5'-10"	5'-5"	8'-5"	7'-3"	6'-6"	5'-11"	5'-6"	11'-0"	9'-7"	8'-7"	7'-10"	7'-3"
135.0	5'-5"	4'-7"	6'-8"	5'-3"	4'-8"	8'-1"	7'-0"	6'-3"	5'-9"	5'-4"	8'-3"	7'-1"	6'-4"	5'-10"	5'-5"	10'-10"	9'-5"	8'-5"	7'-8"	7'-1"



TEXAS DEPARTMENT OF INSURANCE – 2006

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TEXAS LIC. # 90691
FIRM REGISTRATION # F-13790

ASSA/40mm & 60mm BERTHA ROLL-UP

DRAWN BY: A.G.

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WEST PALM BEACH, FL 33407
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EASTERN METAL SUPPLY, INC
9400 TELGE ROAD
HOUSTON, TX. 77095
PH: (800) 996-6061

03/27/13
DATE

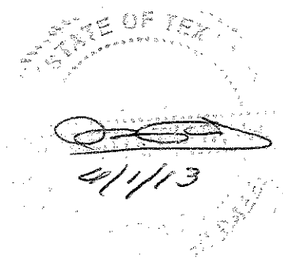
13-029
DRAWING No

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 02-557	03/27/13	3	–	–
2	–	–	4	–	–

HEADER LOADING CHART MAXIMUM DESIGN PRESSURE RATING "W" (psf) AND CORRESPONDING MAXIMUM SPAN "L" FOR A GIVEN TYPE OF HEADER.

(USE MAXIMUM VALUES BETWEEN POSITIVE AND NEGATIVE LOAD)

MAXIMUM DESIGN LOAD "W" (p.s.f.)	TYPE 1 HEADER (G) 2" x 3" x 1/8"		TYPE 2 HEADER (H) 2" x 4" x 1/8"			TYPE 3 HEADER (I) 2" x 4" x 1/4"					TYPE 4 HEADER (J) 2" x 6" x 1/8"					TYPE 5 HEADER (J1) 2" x 6" x 1/4"				
	STORM BAR HEIGHT		STORM BAR HEIGHT			STORM BAR HEIGHT					STORM BAR HEIGHT					STORM BAR HEIGHT				
	⩽ 5'-0"	5' TO 7'	⩽ 5'-0"	5' TO 8'	8' TO 10'	⩽ 6'-0"	6' TO 8'	8' TO 10'	10' TO 12'	12' TO 14'	⩽ 6'-0"	6' TO 8'	8' TO 10'	10' TO 12'	12' TO 14'	⩽ 6'-0"	6' TO 8'	8' TO 10'	10' TO 12'	12' TO 14'
140.0	5'-3"	4'-6"	6'-6"	5'-2"	4'-7"	7'-11"	6'-11"	6'-2"	5'-7"	5'-2"	8'-1"	7'-0"	6'-3"	5'-9"	5'-3"	10'-8"	9'-2"	8'-3"	7'-6"	6'-11"
145.0	5'-2"	4'-5"	6'-5"	5'-1"	4'-6"	7'-10"	6'-9"	6'-1"	5'-6"	5'-1"	7'-11"	6'-10"	6'-2"	5'-7"	5'-2"	10'-5"	9'-1"	8'-1"	7'-5"	6'-10"
150.0	5'-1"	4'-4"	6'-4"	5'-0"	4'-6"	7'-8"	6'-8"	5'-11"	5'-5"	5'-0"	7'-10"	6'-9"	6'-1"	5'-6"	5'-1"	10'-3"	8'-11"	7'-11"	7'-3"	6'-9"
155.0	5'-0"	4'-3"	6'-2"	4'-11"	4'-5"	7'-7"	6'-6"	5'-10"	5'-4"	4'-11"	7'-8"	6'-8"	5'-11"	5'-5"	5'-0"	10'-1"	8'-9"	7'-10"	7'-2"	6'-7"
160.0	4'-11"	4'-2"	6'-1"	4'-10"	4'-4"	7'-5"	6'-5"	5'-9"	5'-3"	4'-10"	7'-7"	6'-6"	5'-10"	5'-4"	4'-11"	9'-11"	8'-7"	7'-8"	7'-0"	6'-6"
165.0	4'-10"	4'-1"	6'-0"	4'-9"	4'-3"	7'-4"	6'-4"	5'-8"	5'-2"	4'-10"	7'-5"	6'-5"	5'-9"	5'-3"	4'-10"	9'-10"	8'-6"	7'-7"	6'-11"	6'-5"
170.0	4'-10"	4'-1"	5'-11"	4'-8"	4'-2"	7'-3"	6'-3"	5'-7"	5'-1"	4'-9"	7'-4"	6'-4"	5'-8"	5'-2"	4'-10"	9'-8"	8'-4"	7'-6"	6'-10"	6'-4"
175.0	4'-9"	4'-0"	5'-10"	4'-7"	4'-2"	7'-1"	6'-2"	5'-6"	5'-0"	4'-8"	7'-3"	6'-3"	5'-7"	5'-1"	4'-9"	9'-6"	8'-3"	7'-4"	6'-9"	6'-3"
180.0	4'-8"	3'-11"	5'-9"	4'-7"	4'-1"	7'-0"	6'-1"	5'-5"	4'-11"	4'-7"	7'-1"	6'-2"	5'-6"	5'-0"	4'-8"	9'-5"	8'-1"	7'-3"	6'-8"	6'-2"
185.0	4'-7"	3'-11"	5'-8"	4'-6"	4'-0"	6'-11"	6'-0"	5'-4"	4'-11"	4'-6"	7-'0"	6'-1"	5'-5"	5'-0"	4'-7"	9'-3"	8'-0"	7'-2"	6'-6"	6'-1"
190.0	4'-6"	3'-10"	5'-7"	4'-5"	4'-0"	6'-10"	5'-11"	5'-3"	4'-10"	4'-6"	6'-11"	6'-0"	5'-4"	4'-11"	4'-6"	9'-2"	7'-11"	7'-1"	6'-5"	6'-0"
195.0	4'-6"	3'-9"	5'-6"	4'-4"	3'-11"	6'-9"	5'-10"	5'-3"	4'-9"	4'-5"	6'-10"	5'-11"	5'-4"	4'-10"	4'-6"	9'-0"	7'-10"	7'-0"	6'-4"	5'-11"



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03/27/13
DATE

13-029
DRAWING No

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 02-557	03/27/13	3	--	--
2	--	--	4	--	--

MULLION LOADING CHART MAXIMUM DESIGN PRESSURE RATING "W" (psf) AND CORRESPONDING MAXIMUM SPAN "L"(Ft) FOR A GIVEN TYPE OF MULLION AND MULLION SPACING (Ft.).

(USE MAXIMUM VALUES BETWEEN POSITIVE AND NEGATIVE LOAD)

MAXIMUM DESIGN LOAD "W" (p.s.f.)	TYPE 1 MULLION (N) 3" x 4" x 1/8"				TYPE 2 MULLION (O) 4" x 4" x 1/4"				TYPE 3 MULLION (P) 4" x 6" x 1/4"					
	MULLION SPACING				MULLION SPACING				MULLION SPACING					
	≤ 4'-0"	4' TO 5'	5' TO 6'	6' TO 8'	≤ 4'-0"	4' TO 5'	5' TO 6'	6' TO 8'	≤ 4'-0"	4' TO 5'	5' TO 6'	6' TO 8'	8' TO 10'	10' TO 12'
40.0 OR LESS	9'-0"	8'-4"	7'-10"	8'-2"	11'-9"	10'-11"	10'-3"	10'-9"	16'-4"	15'-2"	14'-3"	14'-10"	13'-10"	13'-0"
45.0	8'-8"	8'-0"	7'-7"	7'-10"	11'-4"	10'-6"	9'-11"	10'-4"	15'-8"	14'-7"	13'-8"	14'-4"	13'-3"	12'-6"
50.0	8'-4"	7'-9"	7'-3"	7'-7"	10'-11"	10'-2"	9'-7"	10'-0"	15'-2"	14'-1"	13'-3"	13'-10"	12'-10"	12'-1"
55.0	8'-1"	7'-6"	7'-1"	7'-4"	10'-7"	9'-10"	9'-3"	9'-8"	14'-8"	13'-7"	12'-10"	13'-4"	12'-5"	11'-8"
60.0	7'-10"	7'-3"	6'-10"	7'-2"	10'-3"	9'-7"	9'-0"	9'-5"	14'-3"	13'-3"	12'-5"	13'-0"	12'-1"	11'-4"
65.0	7'-8"	7'-1"	6'-8"	7'-0"	10'-0"	9'-4"	8'-9"	9'-2"	13'-11"	12'-11"	12'-2"	12'-8"	11'-9"	11'-1"
70.0	7'-5"	6'-11"	6'-6"	6'-10"	9'-9"	9'-1"	8'-6"	8'-11"	13'-7"	12'-7"	11'-10"	12'-4"	11'-5"	10'-9"
75.0	7'-3"	6'-9"	6'-4"	6'-8"	9'-7"	8'-10"	8'-4"	8'-8"	13'-3"	12'-3"	11'-7"	12'-1"	11'-2"	10'-6"
80.0	7'-2"	6'-7"	6'-3"	6'-6"	9'-4"	8'-8"	8'-2"	8'-6"	12'-11"	12'-0"	11'-4"	11'-10"	10'-11"	10'-4"
85.0	7'-0"	6'-6"	6'-1"	6'-4"	9'-2"	8'-6"	8'-0"	8'-4"	12'-8"	11'-9"	11'-1"	11'-7"	10'-9"	10'-1"
90.0	6'-10"	6'-4"	6'-0"	6'-3"	9'-0"	8'-4"	7'-10"	8'-2"	12'-5"	11'-7"	10'-11"	11'-4"	10'-6"	9'-11"
95.0	6'-9"	6'-3"	5'-10"	6'-2"	8'-10"	8'-2"	7'-9"	8'-1"	12'-3"	11'-4"	10'-8"	11'-2"	10'-4"	9'-9"
100.0	6'-7"	6'-2"	5'-9"	6'-0"	8'-8"	8'-1"	7'-7"	7'-11"	12'-0"	11'-2"	10'-6"	10'-11"	10'-2"	9'-7"
105.0	6'-6"	6'-1"	5'-7"	5'-11"	8'-6"	7'-11"	7'-6"	7'-9"	11'-10"	11'-0"	10'-4"	10'-9"	—	—
110.0	6'-5"	5'-11"	5'-5"	5'-10"	8'-5"	7'-10"	7'-4"	7'-8"	11'-8"	10'-10"	10'-2"	10'-7"	—	—
115.0	6'-4"	5'-10"	5'-4"	5'-8"	8'-3"	7'-8"	7'-3"	7'-7"	11'-6"	10'-8"	10'-0"	10'-5"	—	—
120.0	6'-3"	5'-9"	5'-3"	5'-7"	8'-2"	7'-7"	7'-2"	7'-5"	11'-4"	10'-6"	9'-11"	10'-4"	—	—
125.0	6'-2"	5'-7"	5'-1"	5'-5"	8'-1"	7'-6"	7'-0"	7'-4"	11'-2"	10'-4"	9'-9"	10'-2"	—	—
130.0	6'-1"	5'-6"	5'-0"	5'-4"	7'-11"	7'-5"	6'-11"	7'-3"	11'-0"	10'-3"	9'-8"	10'-0"	—	—
135.0	6'-0"	5'-5"	4'-11"	5'-3"	7'-10"	7'-3"	6'-10"	7'-2"	10'-11"	10'-1"	9'-6"	9'-11"	—	—
140.0	5'-11"	5'-3"	4'-10"	5'-2"	7'-9"	7'-2"	6'-9"	7'-1"	10'-9"	10'-0"	9'-5"	9'-10"	—	—
145.0	5'-10"	5'-2"	4'-9"	5'-1"	7'-8"	7'-1"	6'-8"	7'-0"	10'-7"	9'-10"	9'-3"	9'-8"	—	—
150.0	5'-9"	5'-1"	4'-8"	5'-0"	7'-7"	7'-0"	6'-7"	6'-11"	10'-6"	9'-9"	9'-2"	9'-7"	—	—
155.0	5'-7"	5'-0"	4'-7"	4'-11"	7'-6"	7'-0"	6'-7"	6'-10"	10'-5"	9'-8"	9'-1"	9'-6"	—	—
160.0	5'-6"	4'-11"	4'-6"	4'-10"	7'-5"	6'-11"	6'-6"	6'-9"	10'-3"	9'-7"	9'-0"	9'-4"	—	—
165.0	5'-5"	4'-10"	4'-5"	4'-9"	7'-4"	6'-10"	6'-5"	6'-8"	10'-2"	9'-5"	8'-10"	9'-3"	—	—
170.0	5'-4"	4'-10"	4'-5"	4'-8"	7'-3"	6'-9"	6'-4"	6'-8"	10'-1"	9'-4"	8'-9"	9'-2"	—	—
175.0	5'-3"	4'-9"	4'-4"	4'-7"	7'-2"	6'-8"	6'-4"	6'-7"	10'-0"	9'-3"	8'-7"	9'-1"	—	—
180.0	5'-3"	4'-8"	4'-3"	4'-6"	7'-2"	6'-7"	6'-3"	6'-6"	9'-11"	9'-2"	8'-6"	9'-0"	—	—
185.0	5'-2"	4'-7"	4'-2"	4'-6"	7'-1"	6'-7"	6'-2"	6'-5"	9'-10"	9'-1"	8'-4"	8'-11"	—	—
190.0	5'-1"	4'-6"	4'-2"	4'-5"	7'-0"	6'-6"	6'-1"	6'-5"	9'-9"	9'-0"	8'-3"	8'-9"	—	—
195.0	5'-0"	4'-6"	4'-1"	4'-4"	6'-11"	6'-5"	6'-1"	6'-4"	9'-8"	8'-11"	8'-2"	8'-8"	—	—

NOTES : REFER TO ELEVATIONS ON SHEET 1A OF 14

1-. FOR MULLIONS INSTALLED W/O STORM BARS

A) MULLION SPACING SHALL BE SUCH THAT MAXIMUM SLAT SPAN SHALL NOT BE EXCEEDED

2-. FOR MULLIONS INSTALLED W/ STORM BARS & HEADERS

A) MULLION SPACING SHALL BE SUCH THAT MAXIMUM HEADER SPAN SHALL NOT BE EXCEEDED

B) STORM BAR SPACING SHALL BE SUCH THAT MAXIMUM SLAT SPAN SHALL NOT BE EXCEEDED

STATE OF TEXAS
WALTER A. TILLIT
4/11/13
LICENSED

TEXAS DEPARTMENT OF INSURANCE - 2006

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13-029 DRAWING No

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1	OLD 02-557	03/27/13	3	--	--
2	--	--	4	--	--