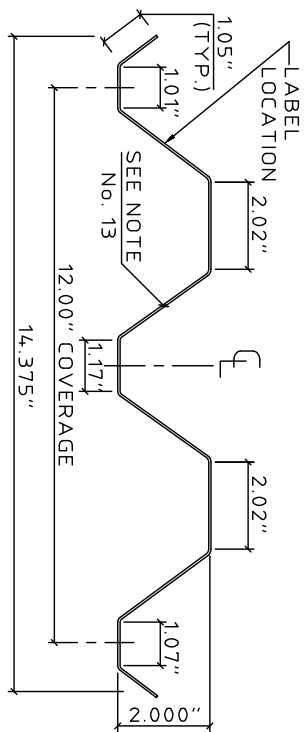
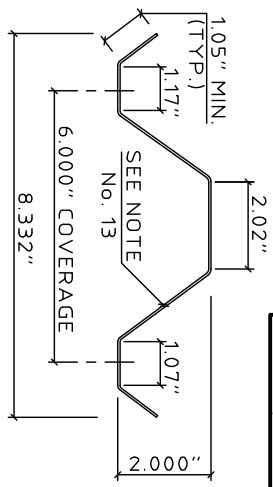


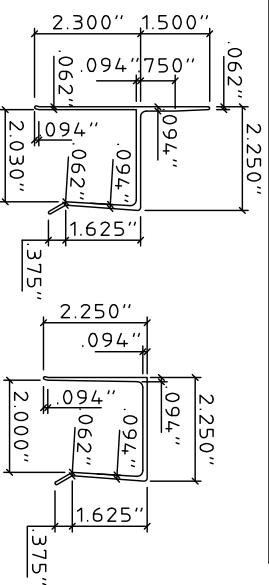
**0.040", 0.050" & 0.060" ALUMINUM STORM PANELS**



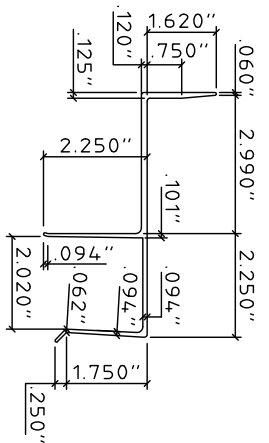
**1** STORM PANEL  
SCALE : 3" = 1'-0"



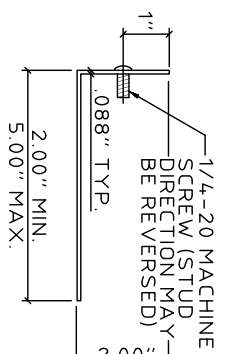
**1a** HALF STORM PANEL  
SCALE : 3" = 1'-0"



**2** U-HEADER  
SCALE : 3" = 1'-0"



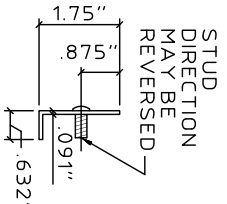
**3a** BUILD-OUT "U" HEADER  
SCALE : 3" = 1'-0"



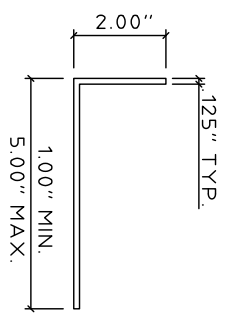
**4** STUD ANGLE  
SCALE : 3" = 1'-0"

**GENERAL NOTES:**

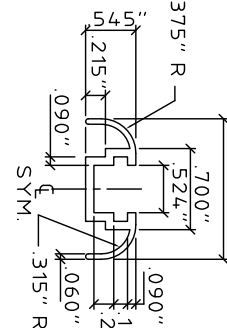
1. THESE PRODUCT EVALUATION DOCUMENTS REPRESENT A SHUTTER SYSTEM DESIGNED AND TESTED AS A LARGE MISSILE IMPACT PROTECTIVE SYSTEM IN ACCORDANCE WITH THE FLORIDA BUILDING CODE.
2. THIS SHUTTER SYSTEM HAS BEEN TESTED FOR LARGE MISSILE IMPACT RESISTANCE IN CONFORMANCE WITH THE SBCCI STANDARD SSTD 12-99 AND FOR UNIFORM STATIC AIR PRESSURE IN CONFORMANCE WITH ASTM E330-02. REFERENCED TEST REPORTS: 98-010, 98-011, 98-014, 99-014, 00-041, 00-022, 01-037 AND 02-012.
3. AN ALLOWABLE STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT.
4. DETERMINE THE POSITIVE AND NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY.
5. USE OF THESE PRODUCT EVALUATION DOCUMENTS ARE PREPARED BY THE PRODUCT ENGINEER AND ARE GENERIC. THEY DO NOT INCLUDE INFORMATION PREPARED FOR A SPECIFIC SITE.
6. USE OF THESE APPROVAL DOCUMENTS SHALL COMPLY WITH CHAPTER 61G15-23 OF THE FLORIDA ADMINISTRATIVE CODE.
7. THESE PRODUCT EVALUATION DOCUMENTS ARE SUITABLE TO BE APPLIED BY THE CONTRACTOR PROVIDED THE CONTRACTOR DOES NOT DEVIATE FROM THE CONDITIONS DETAILED HEREIN AND THE CONTRACTOR VERIFIES THE EXISTING STRUCTURE IS CAPABLE OF SUPPORTING THE SUPERIMPOSED LOADS.
8. ALTERATIONS OR ADDITIONS TO THIS DOCUMENT ARE NOT PERMITTED.
9. WHEN THE SITE CONDITIONS DEVIATE FROM THESE PRODUCT EVALUATION DOCUMENTS, THE SITE SPECIFIC DOCUMENTS SHALL BE PREPARED BY A DULY LICENSED AND REGISTERED ENGINEER OR ARCHITECT. SAID DOCUMENTS SHALL BEAR THE DATE, SIGNATURE AND EMBOSSED SEAL OF THE DELEGATED ENGINEER OR ARCHITECT AND SHALL BE SUBMITTED TO THE PRODUCT ENGINEER FOR REVIEW.
10. WHERE COMPLIANCE WITH SSTD 12-99 IS REQUIRED, PANELS SHALL BE PERMANENTLY LABELED WITH A MINIMUM OF ONE LABEL PER OPENING OR THE MANUFACTURER AND INSTALLER SHALL PROVIDE A CERTIFICATE OF COMPLIANCE. WHERE LABELS ARE USED, THE LABEL SHALL READ AS FOLLOWS:  
TOWN & COUNTRY INDUSTRIES  
FORT LAUDERDALE, FL
11. ALL SCREWS, BOLTS AND WASHERS SHALL BE 2024-T4 ALUMINUM ALLOY, STAINLESS STEEL OR GALVANIZED STEEL WITH A MINIMUM TENSILE STRENGTH OF 60 KSI, U.O.N.
12. TOP & BOTTOM DETAILS SHOWN MAY BE INTERCHANGED AS FIELD CONDITIONS DICTATE. PANELS MAY BE MOUNTED HORIZONTALLY IF C-TRACK, BUILD-OUT F-TRACK, F-TRACK, F-ANGLE, STUD ANGLE OR DIRECT MOUNT IS USED.
13. STORM PANELS SHALL BE ALUMINUM ALLOY WITH THE FOLLOWING METAL THICKNESS:  
0.040" (3004-H134)  
0.050" (5052-H32)  
0.060" (3004-H134)
14. ALL EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY, U.O.N.



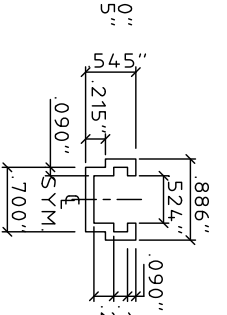
**4a** STUD ANGLE  
SCALE : 3" = 1'-0"



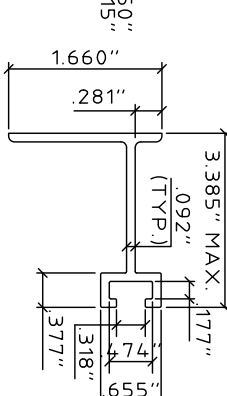
**5** ANGLE  
SCALE : 3" = 1'-0"



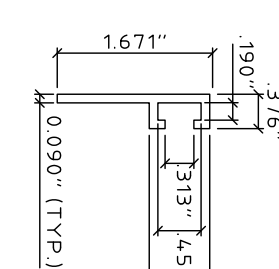
**6** C-TRACK  
SCALE : HALF SIZE



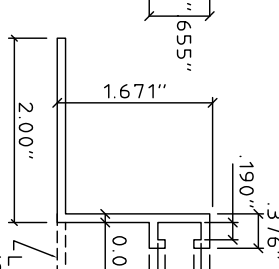
**6a** C-TRACK  
SCALE : HALF SIZE



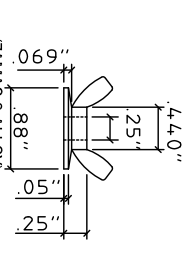
**7** BUILD-OUT F-TRACK  
SCALE : HALF SIZE



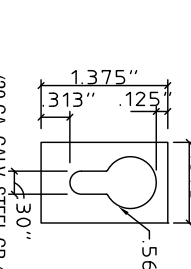
**8** 1/2" TRACK  
SCALE : HALF SIZE



**8a** 1/2" ANGLE TRACK  
SCALE : HALF SIZE

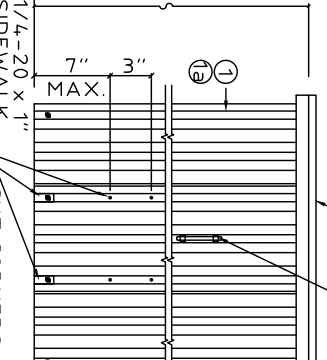


**9** 1/2" WING NUT (WWN)  
SCALE : HALF SIZE

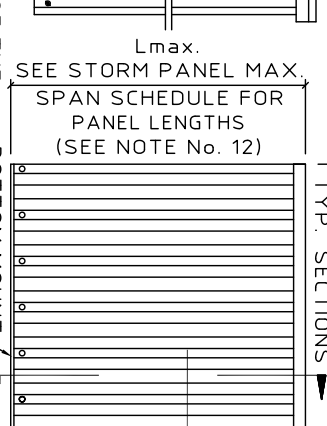


**10** KEYHOLE WASHER  
SCALE : HALF SIZE

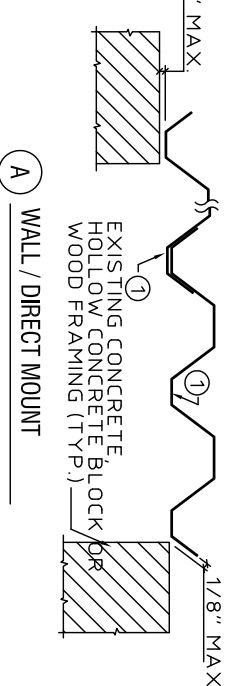
MAX. PANEL SPAN = 5'-0" @ 60.0 P.S.F. MAX.  
MAX. PANEL SPAN = 6'-0" @ 50.0 P.S.F. MAX.  
MAX. PANEL SPAN = 7'-6" @ 40.0 P.S.F. MAX.



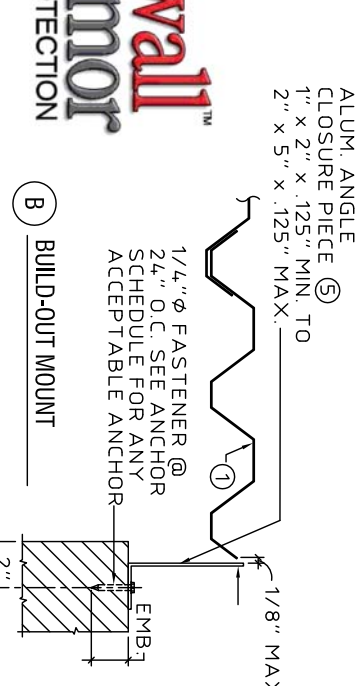
**PULL-IN PANEL ELEVATION**  
N.T.S.



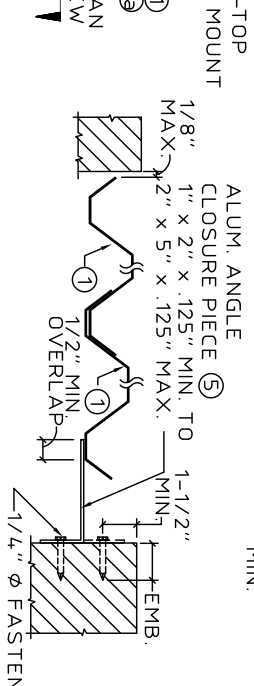
**TYPICAL VERTICAL MOUNT ELEVATION**  
N.T.S.



**A** WALL / DIRECT MOUNT



**B** BUILD-OUT MOUNT



**C** TRAP MOUNT

**TYPICAL CLOSURE DETAILS**  
SCALE: 1-1/2" = 1'-0"  
(PLAN)

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no	date	by	description

**Town & Country INDUSTRIES**  
Wholesale Aluminum and Building Products

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Consulting Engineers  
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website: www.Knezevich.com \* email: VJK@Knezevich.com

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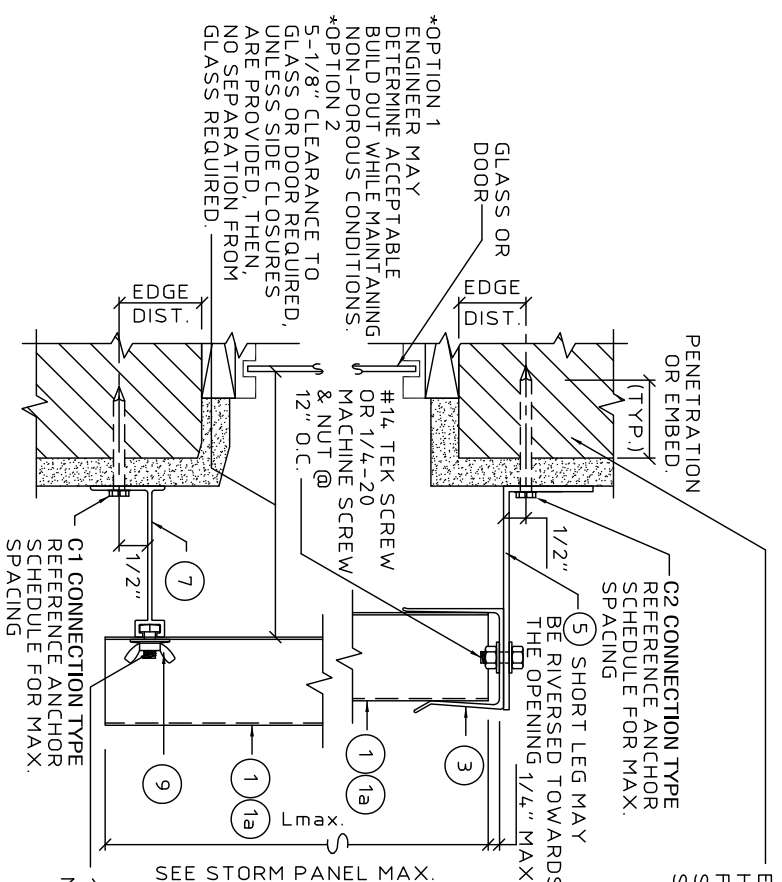
Professional Engineer  
V.J. Knezevich  
Florida License No. 10983  
Florida Exp. Date: 12/31/2008  
Florida Seal No. 27989

Drawn by: [Signature]  
Date: 09/10/2008  
Project no.: 08-353

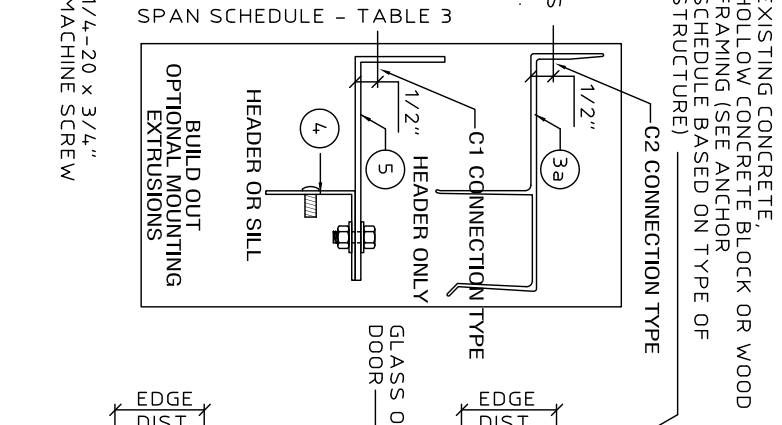
September 2008

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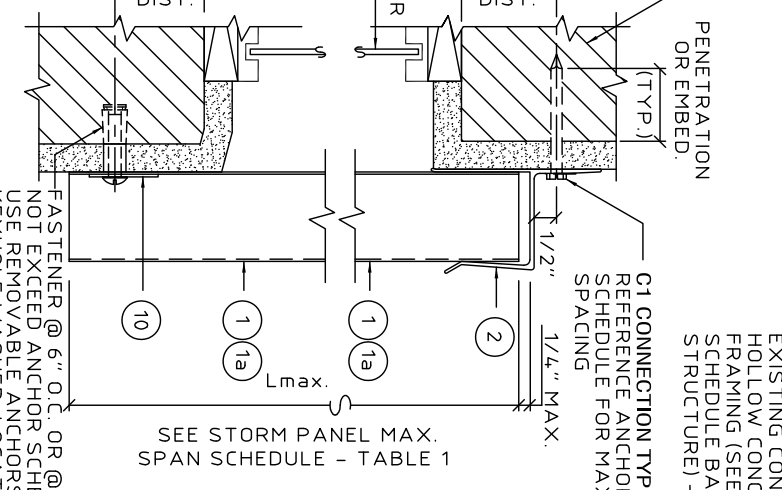
**0.040", 0.050" & 0.060" ALUMINUM STORM PANELS**



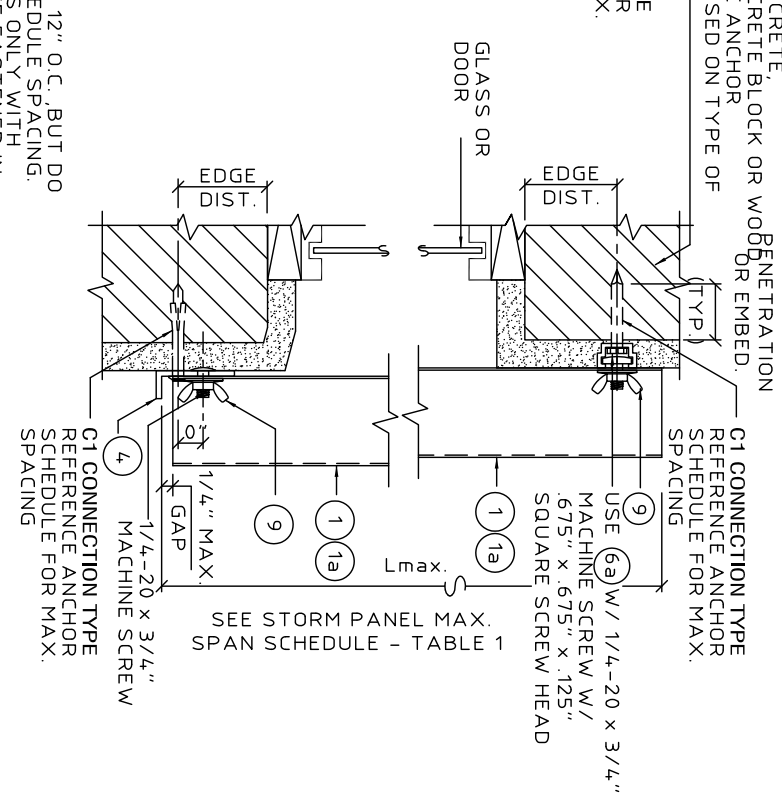
**D BUILD-OUT MOUNT SECTION**  
SCALE : 3" = 1'-0"



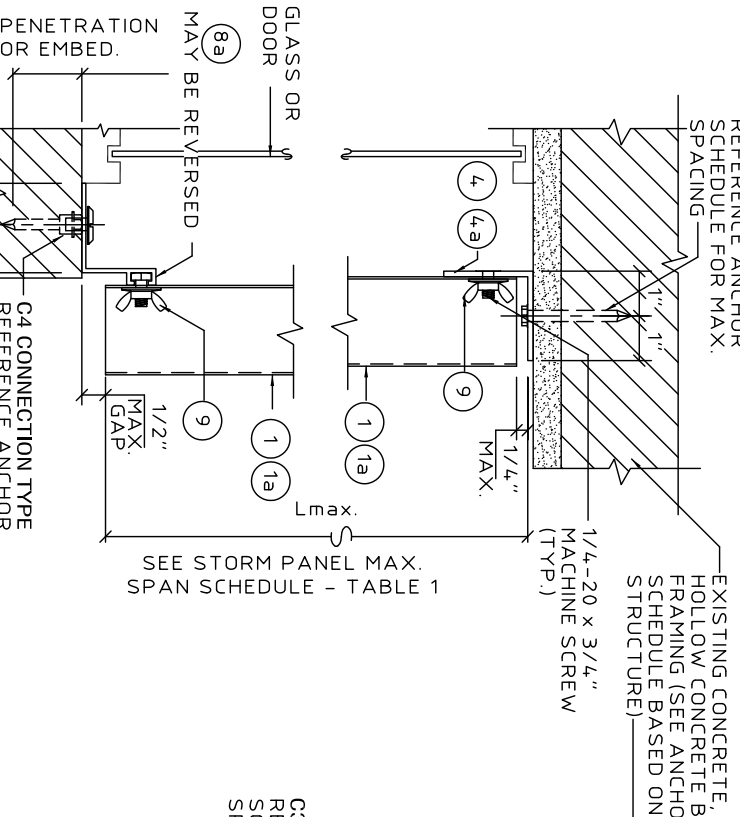
**E WALL MOUNT SECTION**  
SCALE : 3" = 1'-0"



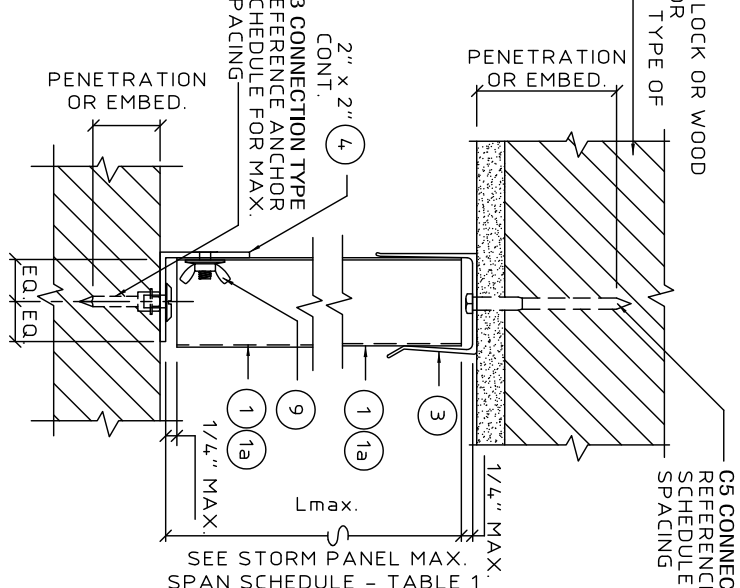
**F WALL MOUNT SECTION**  
SCALE : 3" = 1'-0"



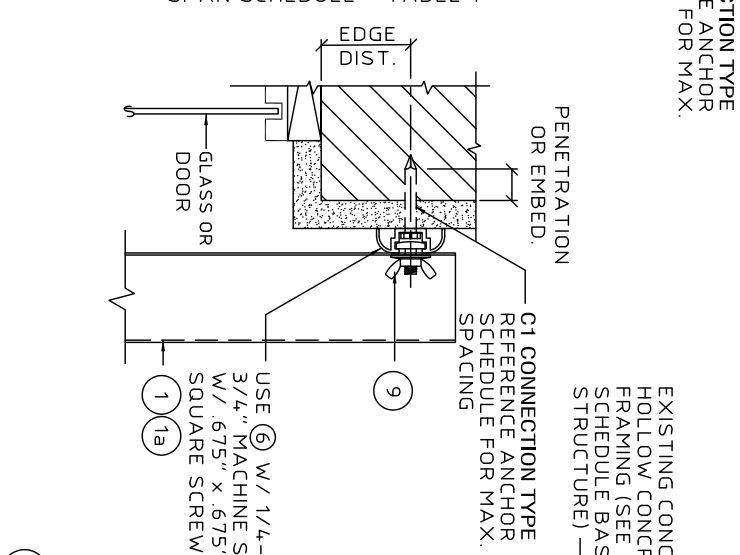
**G CEILING/FLOOR MOUNT SECTION**  
SCALE : 3" = 1'-0"



**H CEILING/FLOOR MOUNT SECTION**  
SCALE : 3" = 1'-0"



**I WALL MOUNT SECTION**  
SCALE : 3" = 1'-0"



**J WALL MOUNT SECTION**  
SCALE : 3" = 1'-0"

(THIS DETAIL MAY BE USED AT TOP AND BOTTOM)

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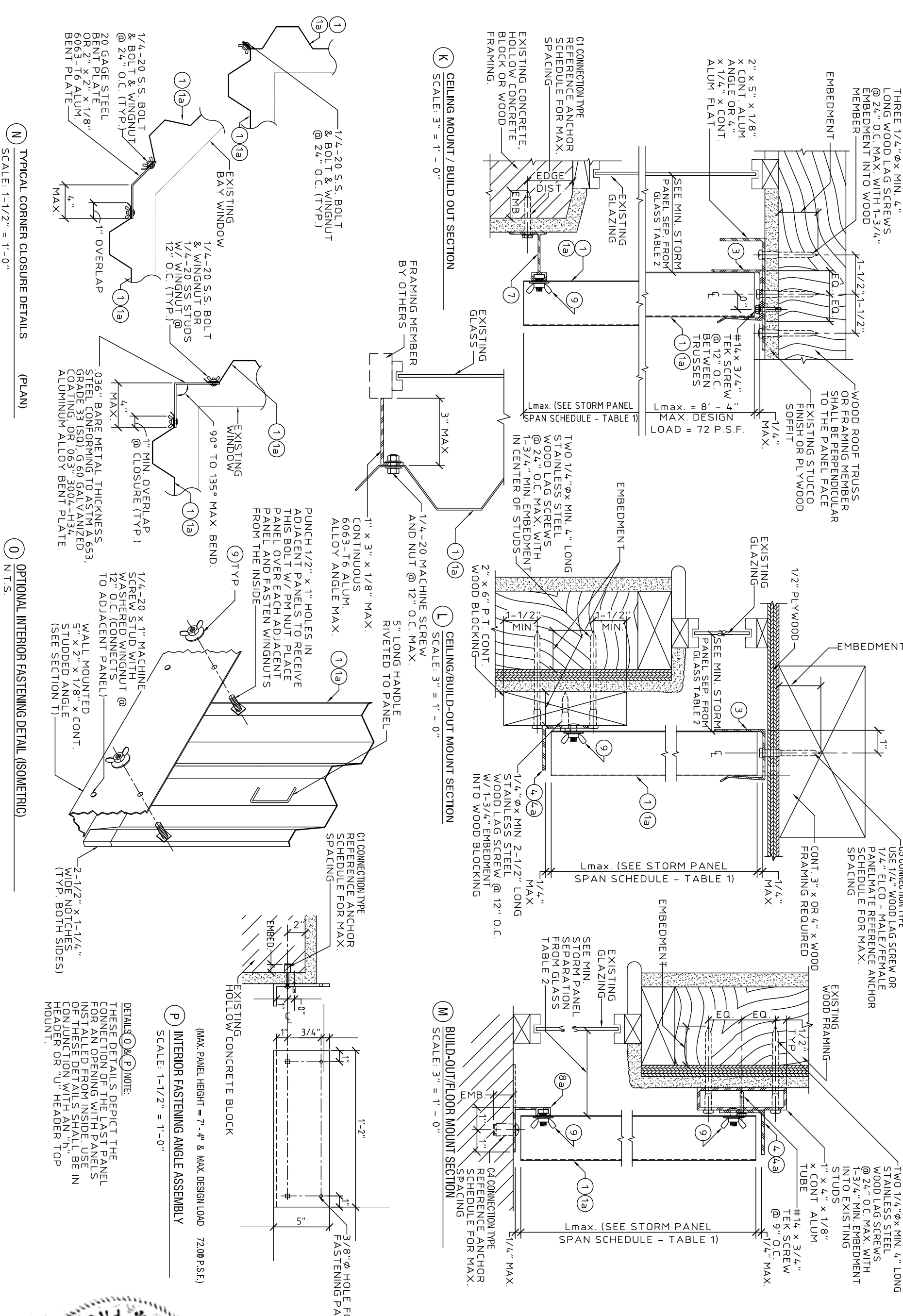
revisions			
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**Town & Country INDUSTRIES**  
Wholesale Aluminum and Building Products  
400 WEST McNAB ROAD  
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PHONE 954.970.9999 FAX 954-970-9988

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Professional Engineer  
V. J. Knezevich  
Florida License No. 10983  
Date: 09/10/2008  
Scale: AS NOTED  
Project No. 08-353  
PAGE 2 of 6

**0.040", 0.050" & 0.060" ALUMINUM STORM PANELS**



THREE 1/4" φ x MIN. 4" LONG WOOD LAG SCREWS @ 24" O.C. MAX. WITH 1-3/4" EMBEDMENT INTO WOOD MEMBER

OR WOOD ROOF TRUSS OR FRAMING MEMBER SHALL BE PERPENDICULAR TO THE PANEL FACE

C5 CONNECTION TYPE USE 1/4" WOOD LAG SCREW OR 1/4" ELCO - MALE/FEMALE PANELMATE REFERENCE ANCHOR SCHEDULE FOR MAX.

TWO 1/4" φ x MIN. 4" LONG STAINLESS STEEL WOOD LAG SCREWS @ 24" O.C. MAX. WITH 1-3/4" MIN. EMBEDMENT INTO EXISTING STUDS

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**V. J. Knezevich**  
Professional Engineer  
Florida No. 10983  
Expiration 09/30/2008

Project No. 08-353  
Date: 09/10/2008

08-353

PAGE 3 of 6

revisions			
no	date	by	description

**Town & Country INDUSTRIES**  
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0.040", 0.050" & 0.060" ALUMINUM STORM PANELS

ANCHOR SCHEDULE

FASTENER MAXIMUM SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

EXIST. STRUC.	ANCHOR TYPE	EDGE DISTANCE	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	SHORTER EDGE DISTANCES					LONGER EDGE DISTANCES													
				SPANS UP TO 5'-0" (SEE NOTE 1)		SPANS UP TO 8'-9" (SEE NOTE 1)		SPANS UP TO 12'-0" (SEE NOTE 1)		SPANS UP TO 15'-0" (SEE NOTE 1)		SPANS UP TO 5'-0" (SEE NOTE 1)		SPANS UP TO 8'-9" (SEE NOTE 1)		SPANS UP TO 12'-0" (SEE NOTE 1)		SPANS UP TO 15'-0" (SEE NOTE 1)				
				CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5	CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5	CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5	CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5	CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5	CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5	CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5	CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5			
HOLLOW CONCRETE BLOCK	1/4" Ø ITW TAPCON W/ 1-1/4" MIN. EMBEDMENT	ED = 1.0"	33.0	18	18	12	10	10	14	7	6	5	10	10	5	4	8	8	4	3	3	
				44.2	18	18	9	8	7	10	10	5	4	4	7	7	3	3	7	5	3	3
				47.2	17	17	8	7	7	10	10	5	4	4	7	6	3	3	7	5	3	3
				64.0	13	13	6	5	5	7	7	3	3	3	7	5	3	3	7	5	3	3
				80.0	10	10	5	4	4	7	5	3	3	3	7	5	3	3	7	5	3	3
				80.0	5	5	5	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	ELCO ULTRACON WITH 1/4" Ø W/ 1-1/4" MIN. EMBEDMENT	ED = 1.0"	33.0	18	18	12	10	10	14	14	7	6	5	10	10	5	4	8	8	4	3	3
				44.2	18	18	9	8	7	10	10	5	4	4	7	7	3	3	7	5	3	3
				47.2	17	17	8	7	7	10	10	5	4	4	7	6	3	3	7	5	3	3
				64.0	13	13	6	5	5	7	7	3	3	3	7	5	3	3	7	5	3	3
				80.0	10	10	5	4	4	7	5	3	3	3	7	5	3	3	7	5	3	3
				80.0	5	5	5	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1/4" Ø ELCO MALE/FEMALE "PANELMATE" W/ 1-1/4" MIN. EMBED & 1/4-20 MACHINE SCREW WITH NUT	ED = 2.0"	33.0	18	18	18	16	15	18	18	10	9	8	15	15	7	6	12	12	6	5	5	
			44.2	18	18	14	12	11	16	16	8	6	6	11	11	5	5	10	8	5	4	4
			47.2	18	18	13	11	10	15	15	7	6	6	11	10	5	4	10	8	5	4	4
			64.0	18	18	9	8	7	11	10	5	4	4	10	8	5	4	10	8	5	4	4
			80.0	15	15	7	6	6	10	8	5	4	4	10	8	5	4	10	8	5	4	4
			80.0	8	8	4	3	3	5	4	4	4	4	5	4	4	4	5	4	4	4	4
1/4" Ø POWERS ZAMAC NAIL-IN W/ 1-1/8" MIN. EMBEDMENT	ED = 2.0"	33.0	18	18	10	8	8	11	11	5	4	4	8	8	4	3	6	6	3	3	3	
			44.2	15	15	7	6	6	8	8	4	3	3	6	6	3	3	5	4	4	4	4
			47.2	14	14	7	6	5	8	8	4	3	3	5	5	3	3	5	4	4	4	4
			64.0	10	10	5	4	4	6	5	3	3	3	5	4	4	4	5	4	4	4	4
			80.0	8	8	4	3	3	5	4	4	4	4	5	4	4	4	5	4	4	4	4
			80.0	8	8	4	3	3	5	4	4	4	4	5	4	4	4	5	4	4	4	4
5/16" Ø ELCO ULTRACON WITH 1-1/4" MIN. EMBEDMENT	ED = 1.563"	33.0	18	18	15	13	12	18	18	8	7	7	15	15	6	5	12	12	5	4	4	
			44.2	18	18	11	9	9	15	15	6	5	5	11	11	4	4	10	8	4	3	3
			47.2	18	18	10	9	8	14	14	6	5	5	10	9	4	3	10	8	4	3	3
			64.0	18	18	7	6	6	10	10	4	3	3	10	8	4	3	10	8	4	3	3
			80.0	15	15	6	5	5	10	8	4	3	3	10	8	4	3	10	8	4	3	3
			80.0	15	15	6	5	5	10	8	4	3	3	10	8	4	3	10	8	4	3	3
1/4" Ø ALL-POINTS SOLID-SET ANCHOR W/ 7/8" EMBEDMENT & 1/4-20 STAINLESS STEEL MACHINE SCREW	ED = 1.25"	33.0	18	18	12	11	10	17	17	7	6	6	12	12	5	4	10	10	4	3	3	
			44.2	18	18	9	8	8	12	12	5	4	4	9	9	3	3	8	6	3	3	3
			47.2	18	18	8	7	7	12	12	5	4	4	8	8	3	3	8	6	3	3	3
			64.0	15	15	6	5	5	8	8	3	3	3	8	6	3	3	8	6	3	3	3
			80.0	12	12	5	4	4	8	6	3	3	3	8	6	3	3	8	6	3	3	3
			80.0	12	12	5	4	4	8	6	3	3	3	8	6	3	3	8	6	3	3	3
HOLLOW CONCRETE BLOCK	ED = 2.0"	33.0	18	18	18	18	18	18	18	13	11	10	17	17	9	8	13	13	7	6	6	
			44.2	18	18	17	14	13	17	17	9	8	7	12	12	7	6	11	11	9	6	5
			47.2	18	18	16	13	13	16	16	9	7	7	12	11	6	5	11	11	9	6	5
			64.0	18	18	12	10	9	12	11	6	5	5	11	9	6	5	11	9	6	5	5
			80.0	17	17	9	8	7	11	9	6	5	5	11	9	6	5	11	9	6	5	5
			80.0	17	17	9	8	7	11	9	6	5	5	11	9	6	5	11	9	6	5	5

SEE PAGE 6 OF 6 FOR COMPLETE ANCHOR NOTES.

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V. J. Knezevich
   
 Professional Engineer
   
 License No. 10983
   
 Expires 09/10/2008
   
 Date: 09/10/2008
   
 Project No. 08-353

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 website: www.Knezevich.com \* email: VJK@Knezevich.com
   
  
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