



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/building

NOTICE OF ACCEPTANCE (NOA)

Transparent Protection Systems, Inc.
6643 42nd Terrace North
West Palm Beach, FL 33407

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Clear Polycarbonate Storm Panel Shutter

APPROVAL DOCUMENT: Drawing No. 09-123, titled "Clear Polycarbonate Storm Panel", sheets 1 through 4 of 4, prepared by Knezevich Associates Consulting Engineers, dated April 14, 2009, last revision #1 dated May 22, 2012, signed and sealed by V. J. Knezevich, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each panel shall bear a permanent label with the manufacturer's name or logo, city, state, the following statement: "Miami-Dade County Product Control Approved", and NOA number, per TAS-201, TAS-202, and TAS-203, unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

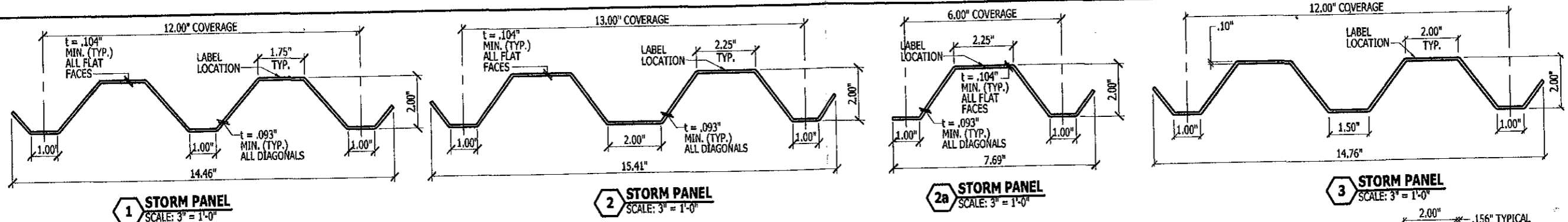
This NOA revises NOA # 09-0423.04 and consists of this page 1, evidence submitted pages E-1, E-2, & E-3 as well as approval document mentioned above.

The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



Helmy A. Makar
08/09/2012

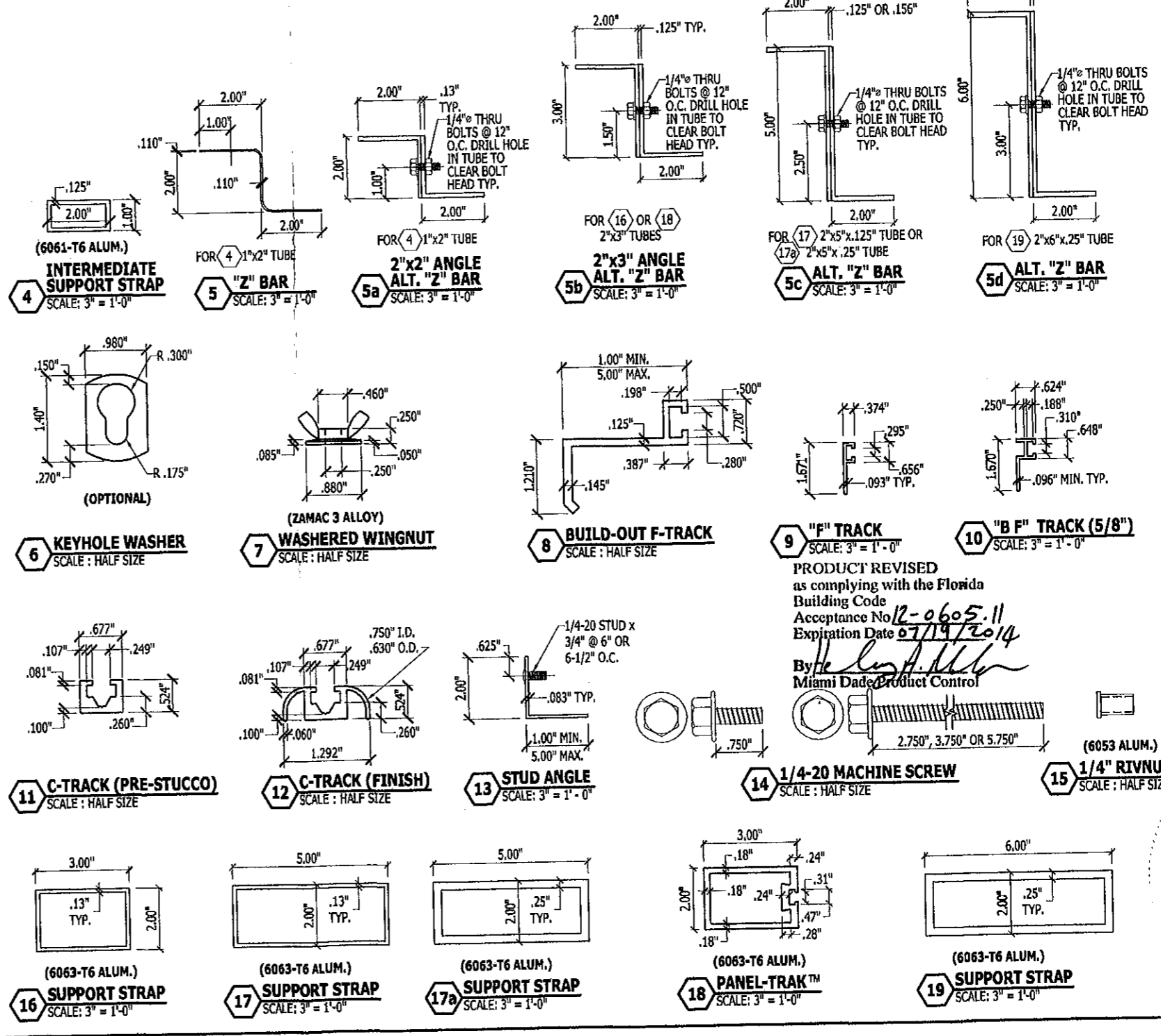
NOA No. 12-0605.11
Expiration Date: 07/19/2014
Approval Date: 08/09/2012
Page 1



GENERAL NOTES:

- THESE APPROVAL DOCUMENTS REPRESENT A SHUTTER SYSTEM ANALYZED WITH THE PROVISION SET FOR THE ISSUANCE OF A NOTICE OF ACCEPTANCE (NOA) BY MIAMI-DADE COUNTY PRODUCT CONTROL SECTION FOR THE FLORIDA BUILDING CODE (FBC) 2010, INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
- AN ALLOWABLE STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT, FOR THE WOOD SCREW ANALYSIS, A LOAD DURATION FACTOR (CD = 1.6) HAS BEEN USED PER THE PROVISIONS OF CHAPTER 16 OF THE FLORIDA BUILDING CODE (FBC) AND THE NATIONAL DESIGN STANDARD (NDS) FOR WIND LOADS AND LOAD COMBINATIONS WITH WIND.
- DETERMINE THE POSITIVE AND NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY PRESCRIBED IN ASCE 7-10.
- THESE APPROVAL DOCUMENTS ARE GENERIC AND DO NOT INCLUDE INFORMATION FOR SITE-SPECIFIC APPLICATION OF THIS SHUTTER SYSTEM.
- USE OF THESE APPROVAL DOCUMENTS SHALL COMPLY WITH CHAPTER 61G15-23 OF THE FLORIDA ADMINISTRATIVE CODE.
- THESE APPROVAL DOCUMENTS, ARE SUITABLE TO BE APPLIED BY THE CONTRACTOR PROVIDED THE CONTRACTOR DOES NOT DEVIATE FROM THE CONDITIONS DETAILED HEREIN AND THE CONTRACTOR VERIFIES THAT THE EXISTING STRUCTURE DOES NOT DEVIATE IN EITHER FORM OR MATERIAL FROM THE STRUCTURAL SUBSTRATES DETAILED HEREIN.
- ANY MODIFICATIONS OR ADDITIONS TO THESE APPROVAL DOCUMENTS WILL VOID THE APPROVAL DOCUMENTS.
- WHEN THE SITE CONDITIONS DEVIATE FROM THESE APPROVAL DOCUMENTS, THE BUILDING OFFICIAL MAY ELECT ONE OF THE FOLLOWING OPTIONS:
 - REQUIRE THAT SITE SPECIFIC DOCUMENTS BE PREPARED, SIGNED, DATED AND SEALED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT, WHICH DETAIL AND JUSTIFY THE DEVIATION. SAID DOCUMENTS SHALL BE SUBMITTED TO THE PRODUCT ENGINEER FOR REVIEW AS A CONDITION TO THE BUILDING OFFICIAL GRANTING HIS/HER APPROVAL.
 - REQUIRE THAT A ONE-TIME SITE SPECIFIC APPROVAL BE APPLIED FOR AND SECURED FROM THE MIAMI-DADE COUNTY PRODUCT CONTROL SECTION.
- WHEN THE SITE CONDITION DEVIATIONS OCCUR WITHIN THE HIGH VELOCITY HURRICANE ZONE AREAS ONLY, OPTION "B" SHALL BE ACCEPTED BY THE BUILDING OFFICIAL.
- PRODUCT MARKINGS SHALL BE WITHIN 12" OF ONE END OF THE PANEL WITH A MINIMUM OF ONE MARKING PER PANEL AND SHALL BE PERMANENTLY LABELED AS FOLLOWS:

TRANSPARENT PROTECTION SYSTEMS, INC.
WEST PALM BEACH, FLORIDA
TAS 201, 202 & 203
9 LB. LARGE MISSILE
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED
REFER TO PRODUCT APPROVAL
DRAWINGS FOR APPROVED APPLICATIONS & LIMITATIONS.
- ALL BOLTS, SCREWS AND WASHERS SHALL BE 2024-T4 ALUMINUM ALLOY OR GALVANIZED OR STAINLESS STEEL WITH A MINIMUM TENSILE STRENGTH OF 60 KSI.
- STORM PANELS SHALL BE EXTRUDED IN CLEAR POLYCARBONATE WITH A MINIMUM THICKNESS AS INDICATED ON COMPONENTS (1), (2), (2a) & (3). ALL EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY, U.O.N.
- MATERIAL SPECIFICATIONS: ALL POLYCARBONATE PANELS SHALL BE FABRICATED FROM 100% GE SYNTHETIC THERMOPLASTIC POLYMER LEXAN RESIN NUMBER 103-112 WHICH IS COMPARATIVE TO GE LEXAN POLYCARBONATE SHEET NUMBER 9034 AS APPROVED UNDER MIAMI-DADE COUNTY NOTICE OF ACCEPTANCE NUMBER 03-0924.06. SYNTHETIC THERMOPLASTIC POLYMER TENSILE STRENGTH $F_y = 8,908$ P.S.I., FLEXURAL STRENGTH $F_{bly} = 12,900$ P.S.I., FLEXURAL MODULUS = 328,700 P.S.I.. TWO APPROXIMATE EQUIVALENTS ARE THE BAYER MAKROLOIN 3103 (UV STABILIZED) POLYCARBONATE RESIN AND DOW CALIBRE 302 V6 (UV STABILIZED) POLYCARBONATE RESIN.
- THE DETAILS AND SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED FOR IMPACT, CYCLIC AND UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH FLORIDA BUILDING CODE TAS 201, 202, AND 203.
MAX. POSITIVE DESIGN LOAD = + 72.0 P.S.F.
MAX. NEGATIVE DESIGN LOAD = - 72.0 P.S.F.
- THE PERMIT HOLDER SHALL VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE TO SUSTAIN THE NEW SUPERIMPOSED LOADS AND TO VERIFY ALL DIMENSIONS AT THE JOB SITE BEFORE COMMENCING WITH THE WORK.
- TOP & BOTTOM DETAILS SHOWN MAY BE INTERCHANGED AS FIELD CONDITIONS DICTATE. PANELS MAY BE MOUNTED HORIZONTALLY WHERE APPLICABLE.
- HOMEOWNER/END USER MUST HAVE Z BARS, STRAPS AND BOLTS IN PLACE AS THEY ARE AN INTEGRAL PART OF THE APPROVED STORM PANEL SYSTEM.
WARNING: THIS STORM PANEL SYSTEM WILL NOT OFFER HURRICANE PROTECTION UNLESS ALL Z BARS, REINFORCING STRAPS AND BOLTS ARE PROPERLY INSTALLED.
- THE PANEL-TRAK™ SYSTEM AND PATENT PENDING PRODUCTS ARE REGISTERED AND OWNED BY WEATHERGUARD BUILDING PRODUCTS, INC., WEST PALM BEACH, FL.



PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 12-0605.11
Expiration Date 07/19/2014
By *[Signature]*
Miami Dade Product Control

KNEZEVICH ASSOCIATES
Consulting Engineers
2590 S.W. 105th Terrace * Davie, Florida 33324
T: (954) 821-6933 * COA 27989
email: VJ@knezevich-associates.com
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CLEAR POLYCARBONATE STORM PANEL

Transparent Protection Systems, Inc.
6643 2nd Terrace, North
West Palm Beach, FL 39407
(888) 447-5300

GLEAD GUARD HURRICANE PANELS

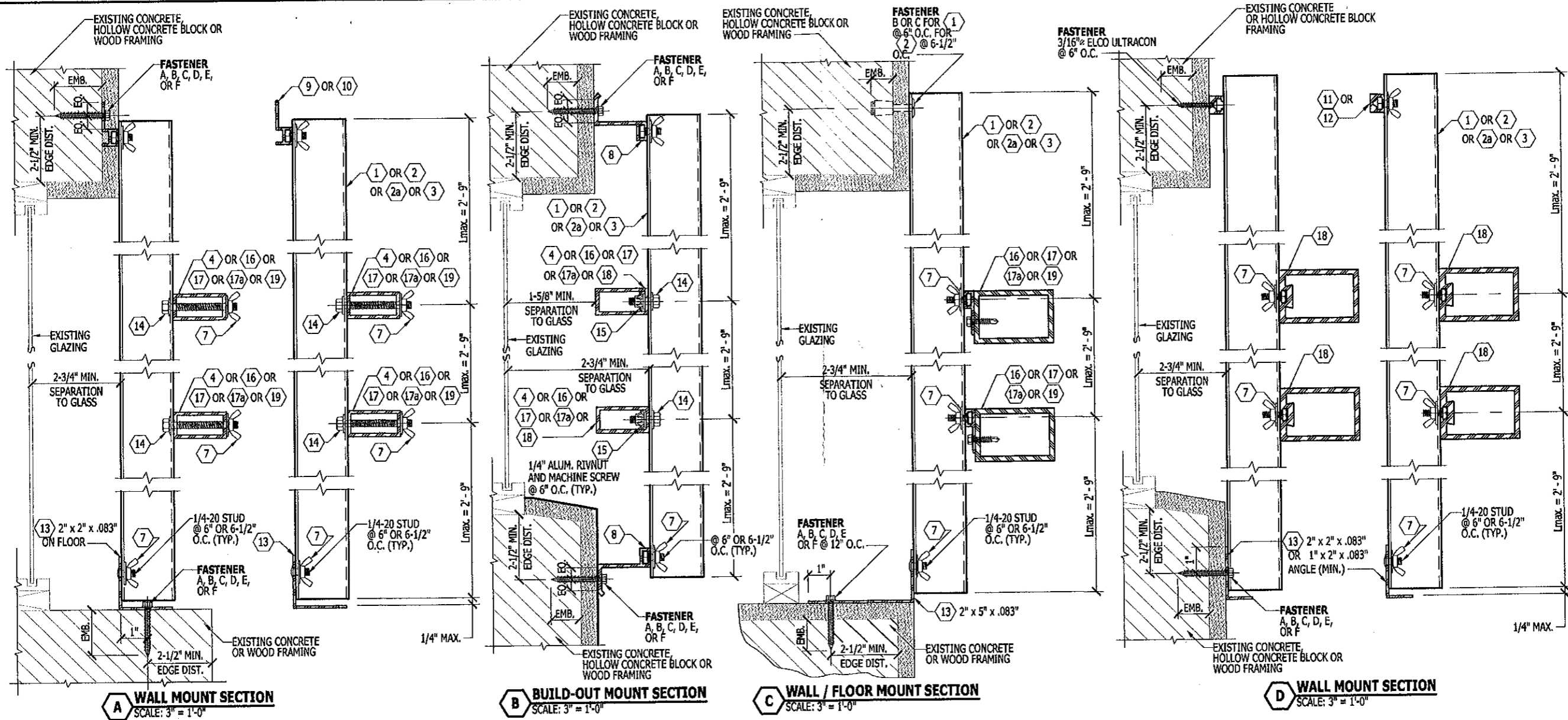
revisions	description	by	date
1	REVISIONS	VJ	04/14/2009

V.J. Knezevich
Professional Engineer
FL License No. PE 0010583

[Signature]

MAY 22 2012

drawn by: ARV scale: AS NOTED
date: 04/14/2009
drawing no: **09-123**
sheet 1 of 4



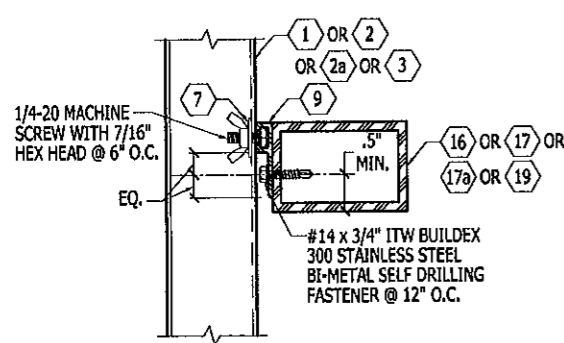
A WALL MOUNT SECTION
SCALE: 3" = 1'-0"

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

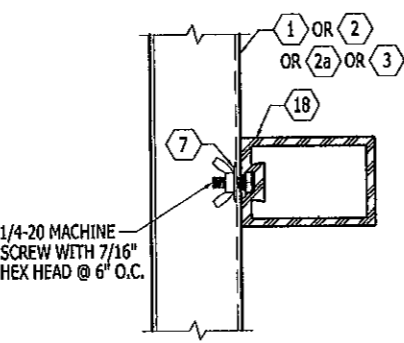
C WALL / FLOOR MOUNT SECTION
SCALE: 3" = 1'-0"

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

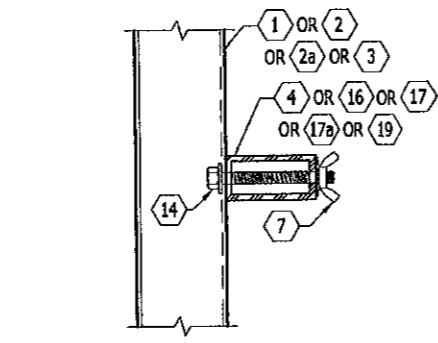
***NOTE:**
ANY WALL/WALL OR WALL/FLOOR MOUNTING CONDITION MAY USE ANY OF THE INTERMEDIATE SUPPORT STRAP SYSTEMS SHOWN IN DETAILS A, B, C OR D.



E1 SUPPORT STRAP / 'F' TRACK ASSEMBLY
SCALE: 3" = 1'-0"

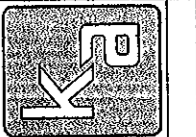


E2 ALTERNATE SUPPORT STRAP
SCALE: 3" = 1'-0"



E3 ALTERNATE SUPPORT STRAP
SCALE: 3" = 1'-0"

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Miami Dade Product Control



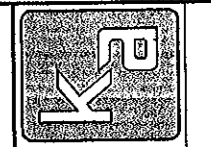
KNEZEVICH ASSOCIATES
Consulting Engineers
2590 S.W. 105th Terrace • Davie, Florida 33324
T (954) 821-6933 • COA 77989
email: VJ@Knezevich-Associates.com

CLEAR POLYCARBONATE STORM PANEL
Transparent Protection Systems, Inc.
6643 62nd Terrace, North
West Palm Beach, FL 33407
(888) 447-6800
GLEAP GUARD HURRICANE PANELS

revisions	description	by	date

V.J. Knezevich
Professional Engineer
FL License No. PE 0110983
[Signature]
MAY 27 2012
drawn by ARV scale AS NOTED
date 04/14/2009

sheet 2 of 4
09-123

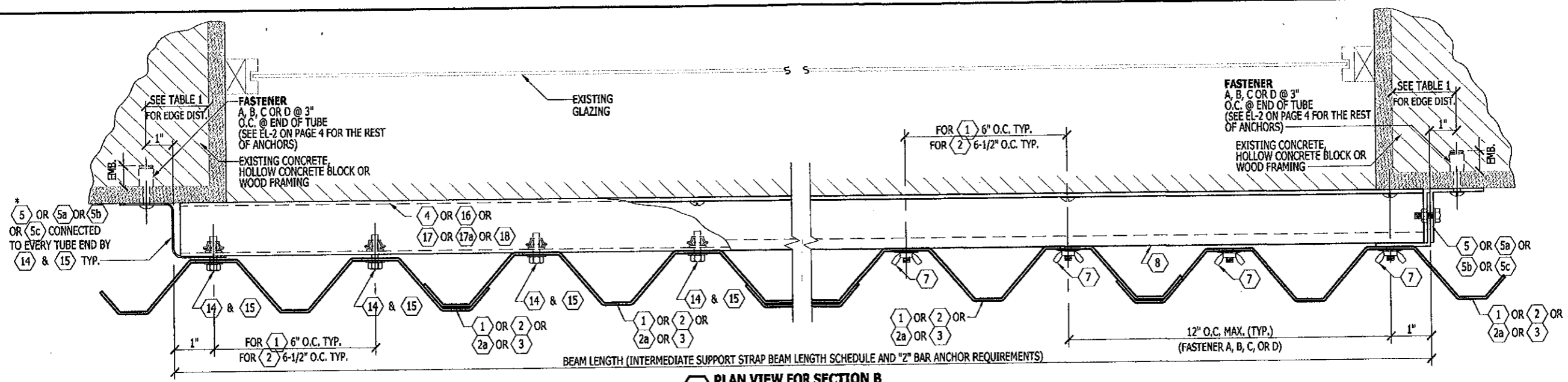


KNEZEVICH ASSOCIATES
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 2590 S.W. 105th Terrace • Davie, Florida 33324
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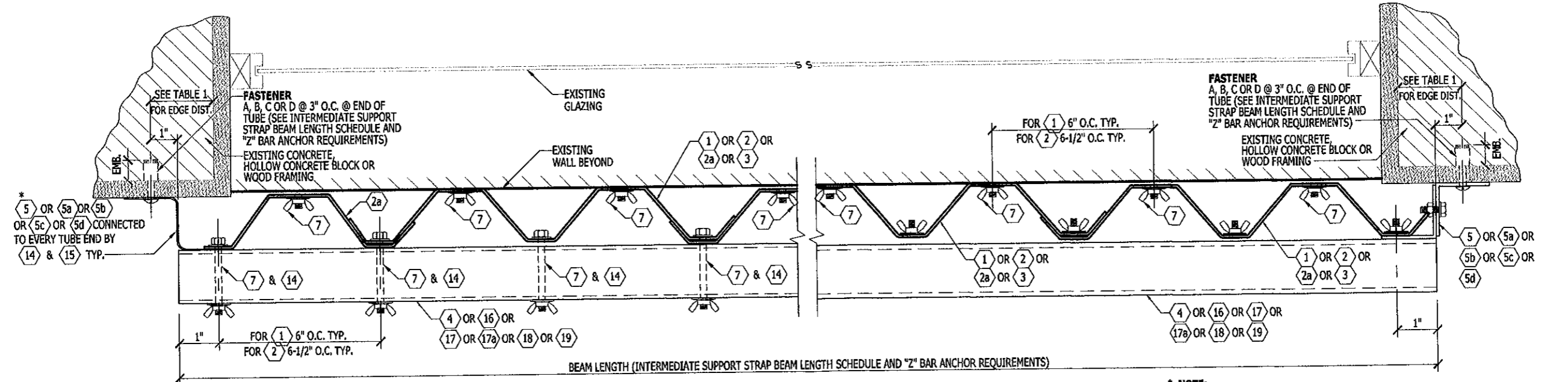
CLEAR POLYCARBONATE STORM PANEL
Transparent Protection Systems, Inc.
 8648 42nd Terrace, North
 West Palm Beach, FL 33407
 (888) 447-6320
GLEAP GUARD HURRICANE PANELS

no.	description	revision

V.J. Knezevich
 Professional Engineer
 FL License No. 28010983
 MAY 22 2012
 drawn by ARV scale AS NOTED
 date 04/14/2009
 drawing no. **09-123**
 sheet 3 of 4



E PLAN VIEW FOR SECTION B
 SCALE: 3" = 1'-0"



F PLAN VIEW FOR SECTIONS A, C & D
 SCALE: 3" = 1'-0"

*** NOTE:**
 ALL INSTALLATIONS MUST PROVIDE FULL PANELS OR HALF PANELS AT OPENINGS TO ENSURE THAT ASSEMBLY CLOSURE (5) HAS POSITIVE CONNECTIONS AS SHOWN IN ABOVE PLAN VIEW DETAILS (E) & (F).

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FASTENER TYPE	DESCRIPTION	HOLLOW CONCRETE BLOCK MIN. EMBED.	EDGE DISTANCE	CONCRETE MIN. EMBEDMENT	EDGE DISTANCE	WOOD MIN. EMBEDMENT	EDGE DISTANCE	WALL SPACING (IN)		
								CONCRETE	HOLLOW CONCRETE BLOCK	WOOD
	1/4" ELCO CRETE FLEX SS4 WITH 2" MIN. EMBEDMENT	1-1/4"	2-1/2"	1-1/4" (MIN. 3.3 KSI CONC.)	2-1/2"	N/A	N/A	12"	12"	N/A
	1/4" ALL POINTS SOLID-SET ANCHOR WITH 7/8" EMBEDMENT & 1/4-20 STAINLESS STEEL MACHINE SCREW	7/8"	3"	7/8" (MIN. 3.0 KSI CONC.)	3"	N/A	N/A	12"	12"	N/A
	1/4" ELCO MALE/FEMALE "PANELMATE" & 1/4-20 MACHINE SCREW WITH NUT	1-1/4"	2"	1-3/4" (MIN. 3.3 KSI CONC.)	2-1/2"	1-7/8"	3/4"	12"	12"	12"
	1/4" x 2-1/2" MIN. WOOD LAG SHEAR PARALLEL OR PERP. TO WOOD GRAIN G=0.55, U.O.N.	N/A	N/A	N/A	N/A	1-7/8"	3/4"	12"	N/A	12"
	1/4" ELCO ULTRACON	1-1/4"	2-1/2"	1-3/4" (MIN. 3.3 KSI CONC.)	2-1/2"	N/A	N/A	12"	11"	N/A
	3/16" ELCO ULTRACON	1-1/4"	2-1/2"	1-3/4" (MIN. 3.3 KSI CONC.)	2-1/2"	N/A	N/A	12"	6"	N/A

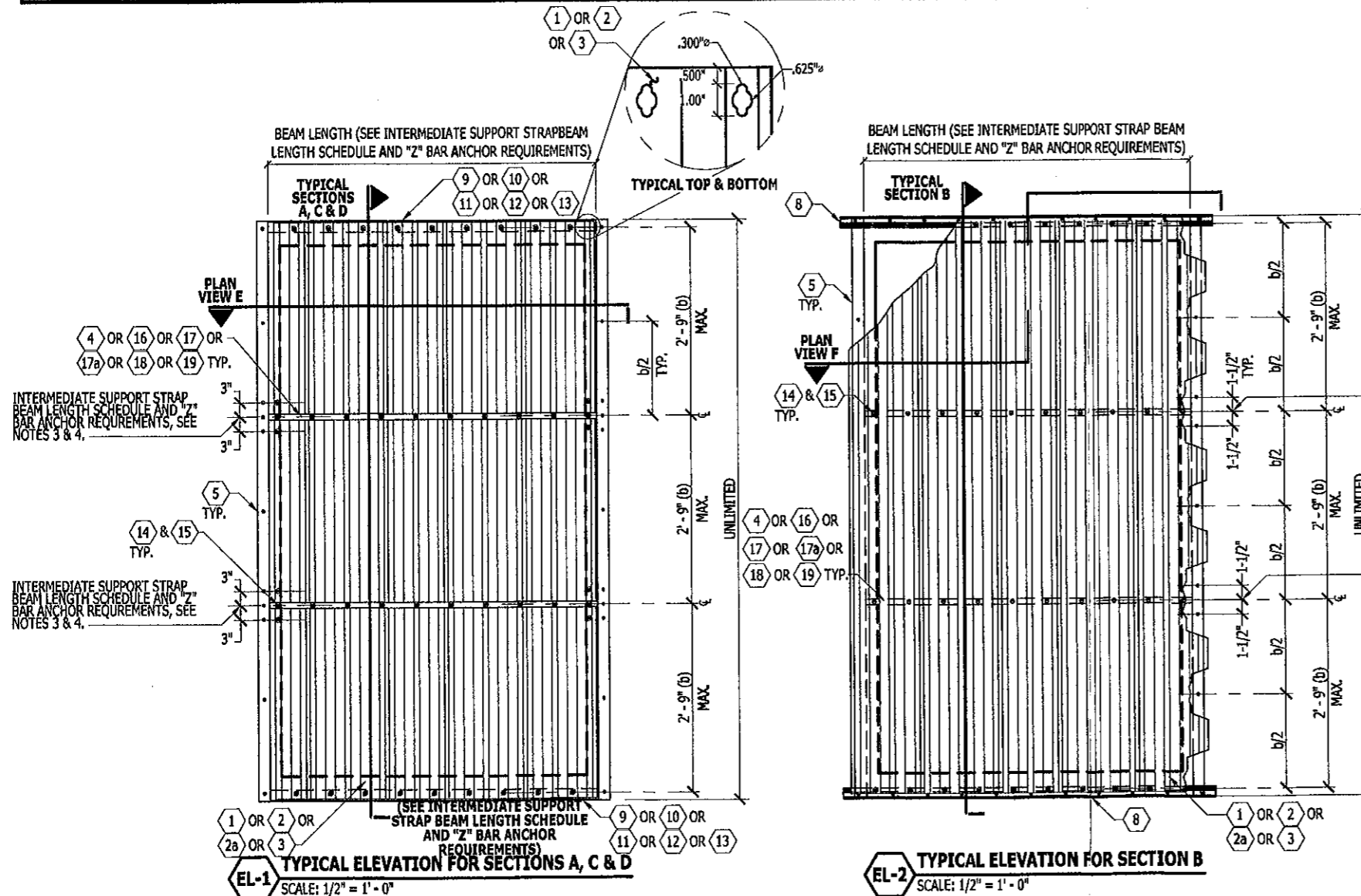
ALUMINUM TUBE COMPONENT NO.	DETAILS B, EL-1 & E LENGTH (IN.)	REACTION EACH END (LBS.)	DETAILS A, C, D, EL-2 & F LENGTH (IN.)	REACTION EACH END (LBS.)	"Z" BAR COMPONENT NO.	"Z" BAR MINIMUM THICKNESS (IN.)	ANCHOR QUANTITY				ANCHOR SPACING (IN.)
							A, B, C	D			
4	62.8"	647.0	62.8"	647.0	5 OR 5a	0.110" / 0.125"	3	1			3"
16	70"	722.0	69"	712.0	5b	0.125"	3	2			3"
17	97"	1000.0	94"	969.0	5c	0.125"	4	2			3"
17a	112"	1155.0	110"	1134.0	5c	0.156"	5	2			3"
18	79"	815.0	77"	794.0	5b	0.125"	4	2			3"
19	127"	1310.0	124"	1279.0	5d	0.156"	6	4			3"

ANCHOR NOTES:

- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES WALL FINISH OR STUCCO. EMBEDMENT OF FASTENER SHALL ONLY INCLUDE THE THREADED PORTION. EDGE DISTANCE SHALL BE AS NOTED ON DRAWING OR SPECIFIED IN THIS NOTES.
- WHERE EXISTING STRUCTURE IS WOOD FRAMING, WOOD FRAMING CONDITIONS VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT PLYWOOD.
- WHERE ELCO PANELMATES OR LAG SCREWS FASTEN TO NARROW FACE OF STUD FRAMING, FASTENER SHALL BE LOCATED IN CENTER OF NOMINAL 2" x 4" (MIN.) WOOD STUD, 3/4" EDGE DISTANCE IS ACCEPTABLE FOR WOOD FRAMING. WOOD STUD SHALL BE "SOUTHERN PINE" G=0.55 OR GREATER DENSITY.
- MACHINE SCREWS SHALL HAVE MIN. OF 1/2" ENGAGEMENT OF THREADS IN BASE ANCHOR AND SHALL HAVE A WAFER HEAD (SIDEWALK BOLT), U.O.N.
- * DESIGNATES ANCHORS WHICH ARE REMOVABLE BY REMOVING MACHINE SCREW, NUT OR WASHERED WINGNUT.
- ALL CLEAR POLYCARBONATE PANELS TO BE MOUNTED TO, EXTRUSIONS @ 6" OR 6-1/2" O.C.
- ALL POINTS SOLID SET MAY NOT BE USED IN CONCRETE FLOOR, CEILING OR BEAMS. EXCEPTION: THESE ANCHORS MAY BE USED IN CONCRETE SLABS ON GRADE.

INTERMEDIATE SUPPORT STRAP BEAM LENGTH SCHEDULE AND "Z" BAR ANCHOR REQUIREMENTS NOTES:

- (1) ANCHOR IS REQUIRED AT MIDPOINT BETWEEN "Z" BARS.
- ANY OF THE (4) ANCHORS (A, B, C OR D) SHOWN ON PAGE 4, MAY BE USED IN CONCRETE OR HOLLOW CONCRETE BLOCK WALLS. THE SOLID SET ANCHOR MAY NOT BE USED IN SLABS OR CEILINGS, EXCEPT FOR SLABS ON GRADE (SUPPORTED BY COMPACTED FILL).
- ODD NUMBER OF ANCHORS SHOWN IN SCHEDULE MUST BE PLACED IN CENTER OF Z BAR FLANGE, AT CENTERLINE OF INTERMEDIATE SUPPORT STRAP AND OTHERS AT 3" ON CENTER, EQUALLY ON BOTH SIDES OF STRAP CENTERLINE, IN Z BAR.
- EVEN NUMBER OF ANCHORS SHOWN IN SCHEDULE MUST BE PLACED IN CENTER OF Z BAR FLANGE, STARTING AT 1-1/2" ON EITHER SIDE OF CENTERLINE OF INTERMEDIATE SUPPORT STRAP AND OTHERS AT 3" ON CENTER, EQUALLY ON BOTH SIDES OF THE STRAP CENTERLINE, IN THE Z BAR.



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West Palm Beach, FL 33407
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HURRICANE PANELS

NO.	DATE	BY	REVISION

V.J. Knezevich
Professional Engineer
Fl. License No. PE 0019983

[Signature]

MAY 22 2012

drawn by ARV Scale AS NOTED
date 04/14/2009
drawing no. **09-123**
sheet 4 of 4