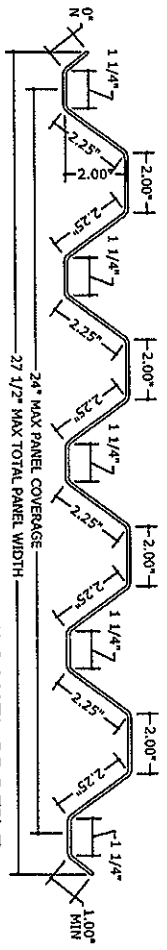
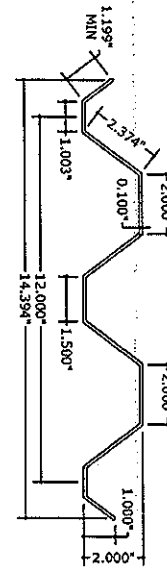


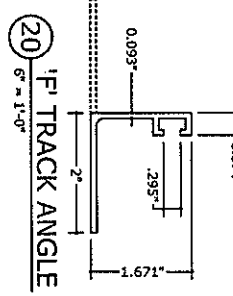
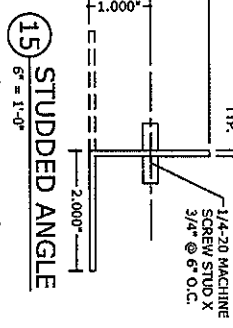
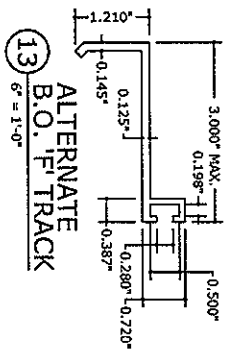
11 CLEARMAX™ DOUBLE-WIDE PANEL PROFILE  
3" = 1'-0"  
(SEE GEN NOTE 6)



21 ALTERNATE 'CLEARMAX™' DOUBLE-WIDE PANEL PROFILE  
3" = 1'-0"  
(SEE GEN NOTE 6)

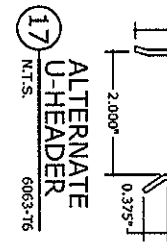
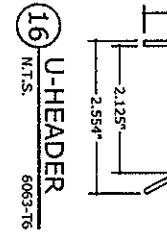
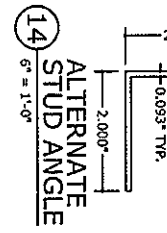


12 ALT. FULL PANEL PROFILE  
N.T.S.  
(SEE GEN NOTE 6)



LOAD (psf)	MAX SPAN (ft)
38	12'-0"
40	11'-5"
45	10'-1"
50	9'-1"
55	8'-3"
60	7'-7"
65	7'-0"
70	6'-7"
75	6'-1"
80	5'-9"
90	5'-1"
100	4'-7"
110	4'-2"
120	3'-10"

LOAD (psf)	MAX SPAN (ft)	MAX DESIGN POSITIVE PRESSURES (psf)	MAX DESIGN NEGATIVE PRESSURES (psf)
17.3	8'-7"	48	80
24.2	7'-9"	38	48
34.6	7'-0"	35	48
41.6	6'-0"	35	48
55.4	5'-0"	35	48
100	4'-0"	35	48



MAXIMUM PANEL SPAN SCHEDULE (POSITIVE CONN.)

MAXIMUM PANEL SPAN SCHEDULE (W/ "H" HEADER)

MAXIMUM PANEL SPAN SCHEDULE (W/ "U" HEADER)

MAXIMUM SPAN SCHEDULE NOTES:  
 1. SPANS SHOWN IN "MAX PANEL SPAN SCHEDULES" ARE MAXIMUM ALLOWABLE SPANS AT EACH RESPECTIVE DESIGN PRESSURE.  
 2. THE POSITIVE CONNECTIONS, SPAN SCHEDULES MAY BE USED TO DETERMINE MAXIMUM ALLOWABLE SPANS FOR PANELS INSTALLED POSITIVE CONNECTIONS, ALL INSTALLATIONS WHICH DO NOT INCLUDE AN "H" OR "U" HEADER.  
 3. THE "WITH "H" OR "U" HEADERS" SPAN SCHEDULE SHALL BE USED FOR ALL INSTALLATIONS WHICH INCLUDE AN "H" HEADER.  
 4. ALL INSTALLATIONS WHICH INCLUDE A "U" HEADER.  
 5. TABLES ARE VALID FOR PANELS MOUNTED HORIZONTALLY OR VERTICALLY. SPAN DIRECTION IS ALWAYS PERPENDICULAR TO LINE OF ANCHORAGE.

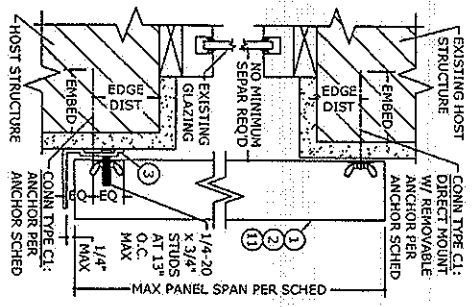
2

REMARKS	DRAWN	CHGD	DATE
SCALE	FRANK	FRANK	02/02/2010
08-TPS-0008	REVISED TPI SUBMITTAL	FRANK	11/13/09
03	2007 FBC	FRANK	05/06
	2007 FBC REVISION	FRANK	12/28/08

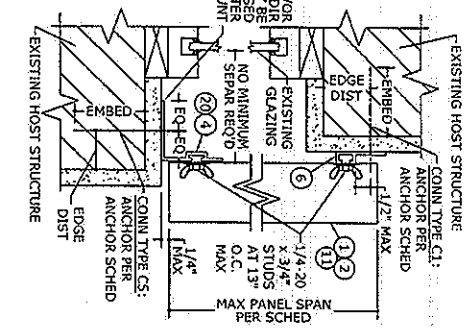
**TPS** Transparent Protection Systems, Inc.  
 6643 42nd Terrace North  
 West Palm Beach, FL 33407

CLEARGUARD POLYCARBONATE STORM PANELS  
 FOR USE OUTSIDE THE HVHZ  
 TEXAS DEPARTMENT OF INSURANCE

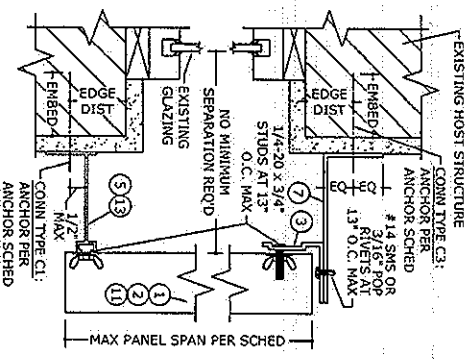
**ENGEXPCO** ENGINEERING PROFESSIONAL CORPORATION  
 FRANK L. BENNARDO, P.E.  
 160 SW 12th Ave., #100  
 DEERFIELD BEACH, FL 33442  
 Ph: (954) 354-0660 FAX: (954) 354-0661  
 WWW.ENGEXPCO.COM  
 CERT. OF REG. #P-11343  
 A FRANK L. BENNARDO, P.E., INC. INNOVATION



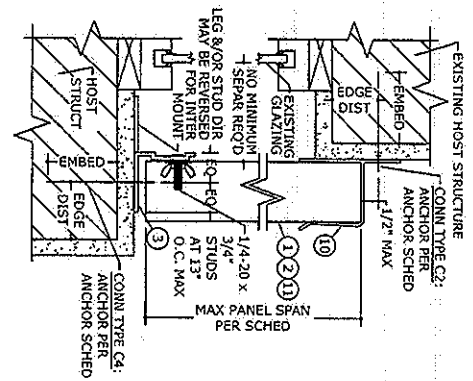
1 MOUNTING SECTION  
3 3" = 1'-0"  
VERT SECTION



2 MOUNTING SECTION  
3 3" = 1'-0"  
VERT SECTION

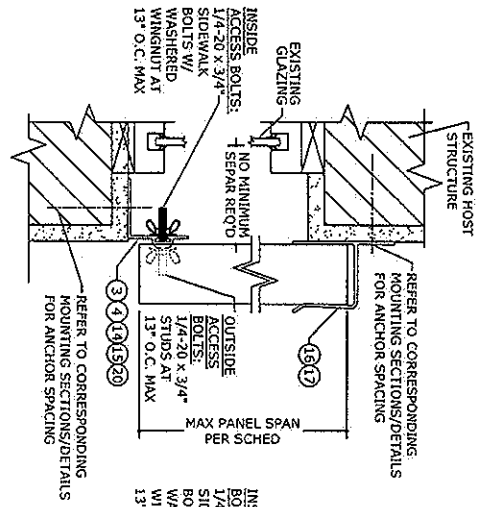


3 MOUNTING SECTION  
3 3" = 1'-0"  
VERT SECTION

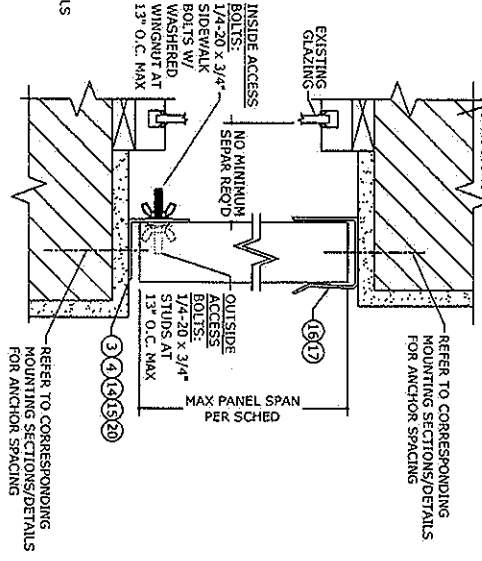


4 MOUNTING SECTION  
3 3" = 1'-0"  
VERT SECTION

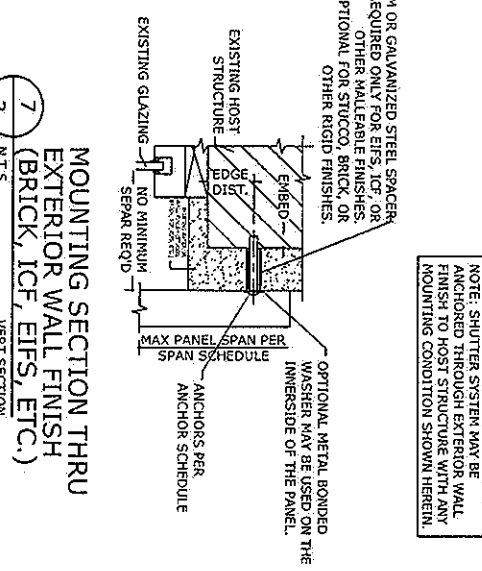
HURRI-OUT™ EGRESS STORM PANEL DETAILS\*  
(\*NOTE: SEE GENERAL NOTE #15)



5 MOUNTING SECTION  
3 N.T.S.  
VERT SECTION



6 MOUNTING SECTION  
3 N.T.S.  
VERT SECTION



7 MOUNTING SECTION THRU EXTERIOR WALL FINISH (BRICK, ICF, EIFS, ETC.)  
3 N.T.S.  
VERT SECTION

NOTE: SHUTTER SYSTEM MAY BE ANCHORED THROUGH EXTERIOR WALL FINISH TO HOST STRUCTURE WITH ANY MOUNTING CONDITION SHOWN HEREIN.

- ALUMINUM OR GALVANIZED STEEL SPACER
- REQUIRED ONLY FOR EIFS, ICF, OR OTHER MALLEABLE FINISHES.
- OPTIONAL FOR STUCCO, BRICK, OR OTHER RIGID FINISHES.

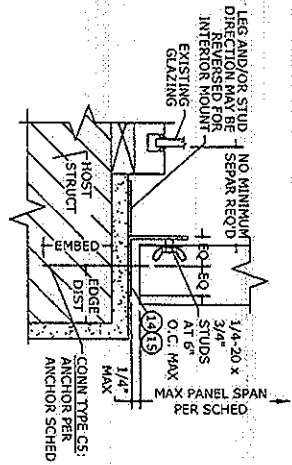
DATE	CHKD	DRWN	REMARKS
08/20/09	FLB	RKB	ADJUT DETAILS & SPANS
11/13/09	FLB	RKB	REVISED FOR SUBMITTAL
05/05/05	FLB	CL	2004 FBC
2/6/06	FLB	CL	MAX PROFILE ADDED
12/29/08	CL	KL	2007 FBC REVISION

SCALE: 1/8" = 1'-0"  
DATE REVISION: 103

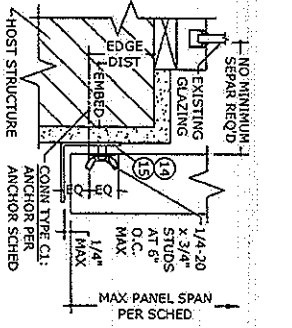
**TPS** Transparent Protection Systems, Inc.  
6543 42nd Terrace North  
West Palm Beach, FL 33407

CLEARGUARD POLYCARBONATE STORM PANELS  
FOR USE OUTSIDE THE HVHZ  
TEXAS DEPARTMENT OF INSURANCE

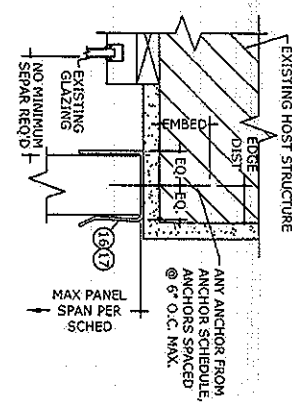
**ENGEXP** ENGINEERING PROFESSIONAL  
FRANK L. DENNARD  
160 SW 12th Avenue, Suite 406  
Deerfield Beach, FL 33442  
Ph: (954) 354-0660 Fax: (954) 354-0643  
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1 MOUNTING SECTION  
VERT SECTION  
3'-1'-0"

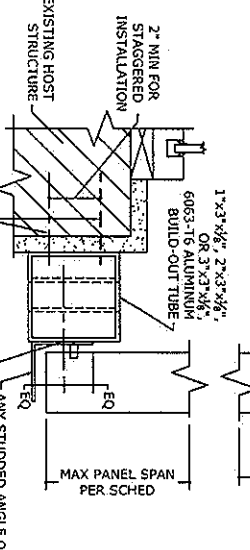
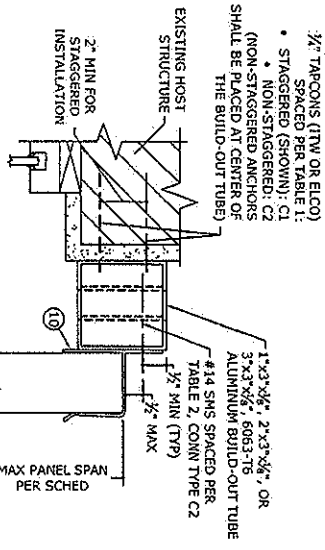


2 MOUNTING SECTION  
VERT SECTION  
3'-1'-0"



3 MOUNTING SECTION  
VERT SECTION  
N.T.S.

**BUILDOUT MOUNTING DETAILS**



4 MOUNTING SECTION  
VERT SECTION  
3'-1'-0"

5 BUILDOUT MOUNTING DETAIL  
VERT SECTION  
N.T.S.

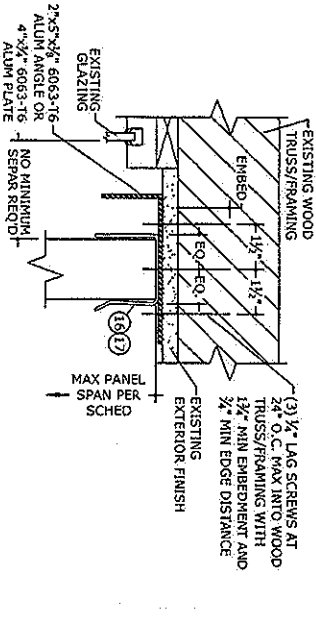
TABLE 1\*: BUILDOUT ONLY

HOST TYPE	LOAD (psf)	Spans Up To 6'-0"		Spans Up To 8'-6"		Spans Up To 11'-4"	
		CONN TYPE	CONN TYPE	CONN TYPE	CONN TYPE	CONN TYPE	CONN TYPE
CONCRETE	30	13.0"	13.0"	13.0"	13.0"	13.0"	13.0"
	48	13.0"	13.0"	13.0"	12.4"	13.0"	8.5"
	47	13.0"	13.0"	13.0"	10.1"	13.0"	8.5"
	54	13.0"	12.4"	13.0"	8.8"	13.0"	8.5"
	120	13.0"	8.5"	13.0"	8.5"	13.0"	8.5"
HOLLOW BLOCK	30	13.0"	8.2"	9.6"	5.8"	7.2"	4.3"
	38	10.8"	6.5"	7.6"	4.6"	5.2"	3.4"
	47	8.7"	4.6"	5.2"	3.2"	5.2"	3.1"
	54	7.6"	4.6"	5.4"	3.2"	5.2"	3.1"
	120	5.2"	3.1"	5.2"	3.1"	5.2"	3.1"
WOOD	30	13.0"	8.5"	10.0"	6.0"	7.5"	4.5"
	38	11.2"	6.3"	7.9"	4.7"	5.9"	3.6"
	47	9.1"	5.4"	6.4"	3.8"	5.4"	3.3"
	54	7.9"	4.7"	5.8"	3.3"	5.4"	3.3"
	120	5.4"	3.3"	5.4"	3.3"	5.4"	3.3"

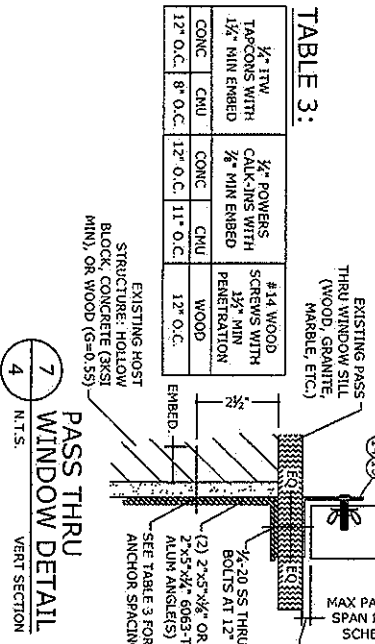
TABLE 2\*: BUILDOUT ONLY

LOAD (psf)	Spans Up To 6'-0"		Spans Up To 8'-6"		Spans Up To 11'-4"	
	CONN TYPE	CONN TYPE	CONN TYPE	CONN TYPE	CONN TYPE	CONN TYPE
30	C1	C2	C1	C2	C1	C2
38	13.0"	13.0"	13.0"	13.0"	13.0"	13.0"
47	13.0"	13.0"	13.0"	13.0"	11.3"	6.1"
48	13.0"	13.0"	12.7"	9.4"	10.3"	6.8"
54	13.0"	13.0"	10.6"	7.2"	10.3"	6.8"
120	10.3"	6.8"	10.3"	6.8"	10.3"	6.8"

NOTES:  
 1. TABLE 1 AND 2 APPLY ONLY TO BUILDOUT MOUNTING DETAIL (7/3).  
 2. TAPCONS SHALL BE INSTALLED WITH THE FOLLOWING MINIMUM EMBEDMENT:  
 • TO CONCRETE: 1 3/4" MIN  
 • TO HOLLOW BLOCK: 1 1/4" MIN  
 • TO WOOD: 1 1/2" MIN  
 3. REFER TO SHT 6 FOR ADDITIONAL ANCHOR NOTES.  
 4. THESE MOUNTING CONDITIONS MAY BE USED INDEPENDENTLY OF ONE ANOTHER AND IN CONJUNCTION WITH OTHER MOUNTING CONDITIONS/DETAILS DEPICTED HEREIN.



6 WOOD TRUSS MOUNT DETAIL  
VERT SECTION  
N.T.S.



7 PASS THRU WINDOW DETAIL  
VERT SECTION  
N.T.S.

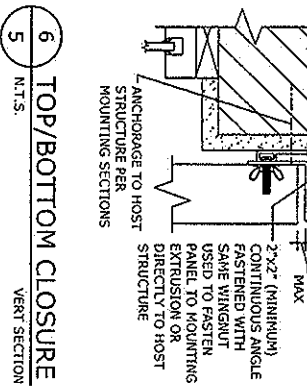
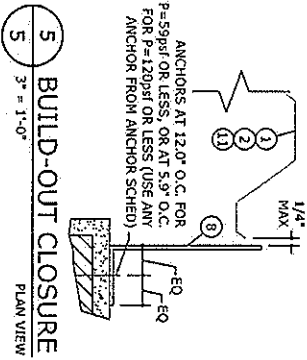
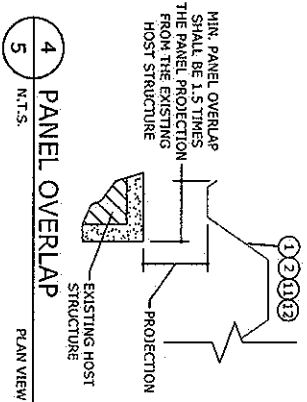
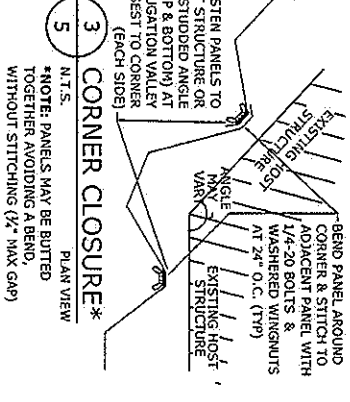
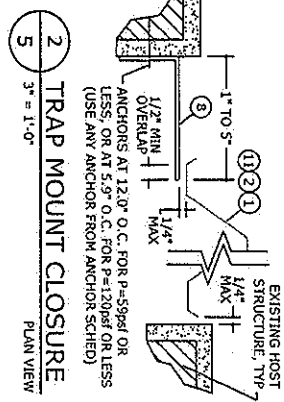
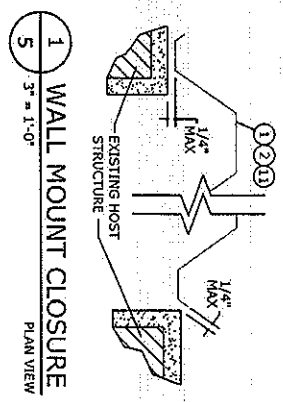
**FRANK L. BENNARD, P.E., INC.**  
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 CERT OF REG. #P-11345  
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**TPS** Transparent Protection Systems, Inc.  
 6643 42nd Terrace North  
 West Palm Beach, FL 33407  
**CLEARGUARD POLYCARBONATE STORM PANELS**  
 FOR USE OUTSIDE THE HVHZ  
 TEXAS DEPARTMENT OF INSURANCE

SCALE	DATE	DRWN/CHKD	REMARKS
AS SHOWN	08/22/09	RKB/FLB	ADJUT DETAILS & SPANS
	11/13/09	RKB/FLB	REVISED FOR SUBMITTAL
	8/5/06	CL/FLB	2004 FBC
	2/6/06	CL/FLB	ClearMAX PROFILE ADDED
	12/23/08	KL/CL	2007 FBC REVISION
			ALL OCCUPANCY IN THE WINDBOLT OR TYPICAL PANEL SHALL BE FOR EXPOSURE TO WINDS FROM ALL DIRECTIONS AT 100 MPH. THE WINDBOLT OR TYPICAL PANEL SHALL BE FOR EXPOSURE TO WINDS FROM ALL DIRECTIONS AT 100 MPH. THE WINDBOLT OR TYPICAL PANEL SHALL BE FOR EXPOSURE TO WINDS FROM ALL DIRECTIONS AT 100 MPH.
			08-TPS-0008
			03



CLOSURE DETAILS



MINIMUM SPAN SCHEDULE

TOP OR BOTTOM CLOSURE	TOP OR BOTTOM CLOSURE		TOP OR BOTTOM CLOSURE		TOP OR BOTTOM CLOSURE	
	STUD ANGLE (WALL MOUNT)	"F" TRACK	REVERSE "F" ANGLE	B.O. 2x5 + STUD ANGLE	"H" HEADER	STUD ANGLE (TRAP MOUNT)
DIRECT MOUNT	32"	30"	30"	30"	30"	30"
"F" TRACK	30"	33"	30"	30"	30"	30"
REVERSE "F" ANGLE	30"	33"	30"	30"	30"	30"
B.O. 2x5 + STUD ANGLE	32"	30"	30"	30"	30"	30"
"H" HEADER	30"	30"	30"	30"	30"	30"

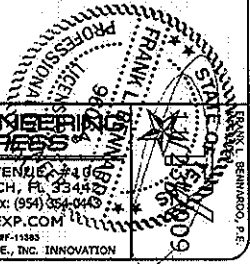
MINIMUM SPAN SCHEDULE

NO TOP/BOTTOM CLOSURES

TOP MOUNT	DIRECT MOUNT		BOTTOM MOUNT	
	STUD ANGLE (WALL MOUNT)	"F" TRACK	REVERSE "F" ANGLE	B.O. 2x5 + STUD ANGLE
DIRECT MOUNT	32"	30"	30"	30"
"F" TRACK	30"	33"	30"	30"
REVERSE "F" ANGLE	30"	33"	30"	30"
B.O. 2x5 + STUD ANGLE	32"	30"	30"	30"
"H" HEADER	30"	30"	30"	30"

MINIMUM SPAN SCHEDULE NOTES:

- SPANS SHOWN ABOVE ARE MINIMUM ALLOWABLE SPANS BASED ON ANY COMBINATION OF MOUNTING CONDITIONS AT TOP OR BOTTOM. PANEL LENGTHS LESS THAN THOSE NOTED IN TABLES ABOVE ARE NOT ACCEPTABLE.
- NO SEPARATION FROM GLASS IS REQUIRED WHEN PANEL LENGTH IS GREATER THAN THAT NOTED FOR RESPECTIVE MOUNTING COMBINATIONS ABOVE.
- SIDE CLOSURES REQUIRED IF GAP BETWEEN PANEL AND STRUCTURE EXCEEDS DISTANCE SHOWN IN HORIZONTAL SECTION DETAILS (REF. DETAILS 6/3, 7/3 AND 9/3).
- TABLES ABOVE ARE VALID FOR PANELS MOUNTED HORIZONTALLY OR VERTICALLY.
- TOP/BOTTOM CLOSURES MAY CONSIST OF NON-STRUCTURAL 2899 (0.018" MIN) GALV STEEL OR 0.022" MIN SHEET ALUMINUM OF ALLOY 5052-H32 OR 3004-H34. REFERENCE DETAILS HEREIN FOR DEPICTION OF TOP/BOTTOM CLOSURE MOUNTING REQUIREMENTS.
- STORM PANELS MAY BE INSTALLED WITH A 12" MINIMUM SPAN WHEN INSTALLED WITH A CLOSURE ANGLE AT BOTH TOP AND BOTTOM.



SCALE	DATE	DESCRIPTION
AS SHOWN	08-11-08	08-TPS-0008

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

CLEARGUARD POLYCARBONATE STORM PANELS  
 FOR USE OUTSIDE THE HVHZ  
 TEXAS DEPARTMENT OF INSURANCE

**ENGEXP** ENGINEERS & ARCHITECTS  
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 CERT. OF REG. #1-1385  
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