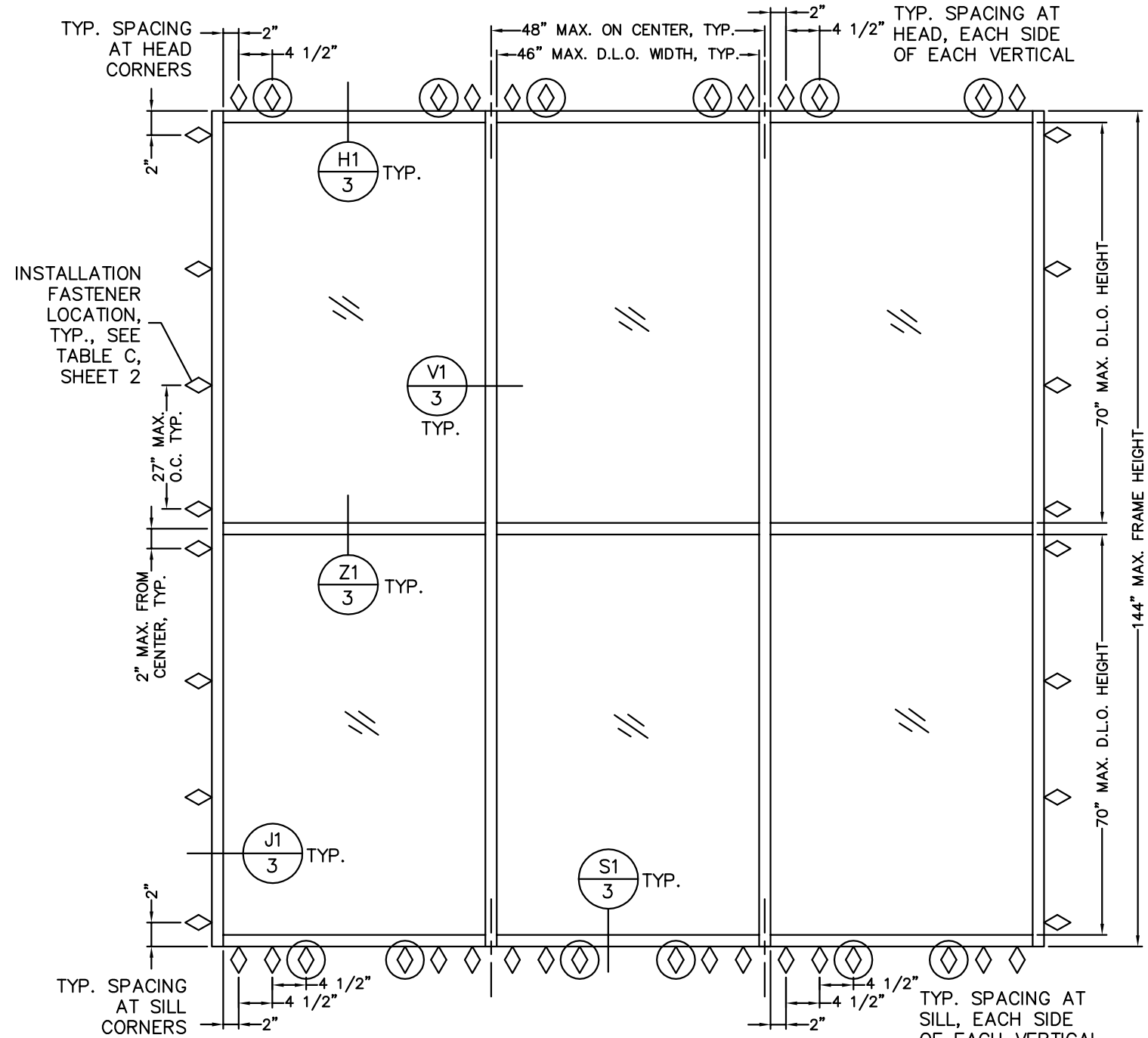


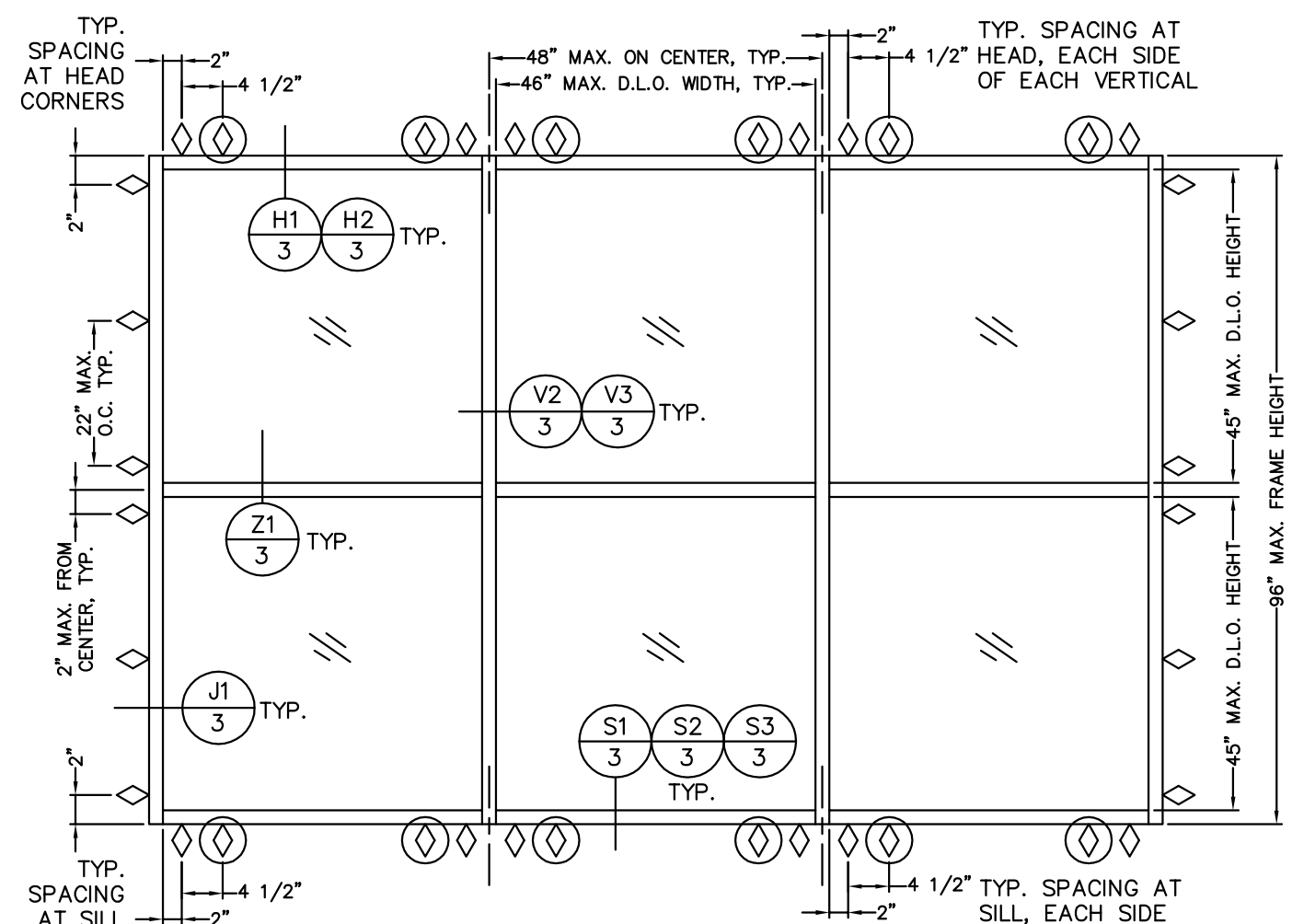
TUBELITE
SERIES E14000
STOREFRONT SYSTEM

3056 WALKER RIDGE DRIVE N.W.
WALKER, MICHIGAN 49544
PH: 800.566.2227
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TUBELITE
DEPENDABLE
LEADERS IN ECO-EFFICIENT STOREFRONT,
CURTAINWALL, AND ENTRANCE SYSTEMS

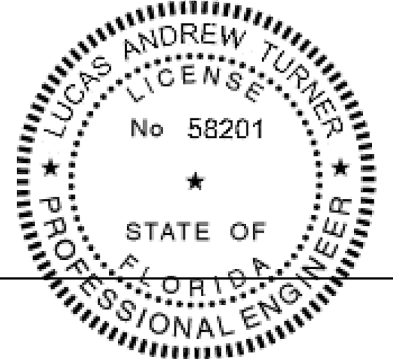


EXTERIOR ELEVATION A
12' HEIGHT WITH P1437 STEEL REINFORCEMENT



EXTERIOR ELEVATION B
8' HEIGHT WITH NO REINFORCEMENT,
REDUCED SILL ANCHORS

NOTE: CIRCLED ANCHOR LOCATIONS (SEE ) SHOWN IN ELEVATIONS A AND B ARE REQUIRED ONLY WHEN USING 1/4" INSTALLATION ANCHORS, SEE TABLE C, SHEET 2. NON-CIRCLED ANCHOR LOCATIONS (SEE ) ARE REQUIRED FOR ALL FASTENER TYPES.



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5/1/2014
LUCAS A. TURNER, P.E.
FL PE # 58201
TURNER ENGINEERING &
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(COA # 29779)
1239 JABARA AVE.
NORTH PORT, FL 34288

GENERAL NOTES:

1. THIS PRODUCT HAS BEEN TESTED TO ASTM E 283, ASTM E 330, ASTM E 331, AND AAMA 501.1 , AND MEETS THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, CURRENT EDITION, FOR USE OUTSIDE THE HIGH VELOCITY HURRICANE ZONE.
2. THIS PRODUCT IS NON-IMPACT RESISTANT AND REQUIRES THE USE OF SHUTTERS IN WINDBORNE DEBRIS REGIONS.
3. THIS PRODUCT MAY BE INSTALLED IN INFINITE WIDTHS PROVIDED THE MAXIMUM VERTICAL ON-CENTER AND DLO WIDTHS ARE NOT EXCEEDED.
4. THE DESIGN PRESSURE RATINGS OF THIS PRODUCT AS DETAILED IN TABLES A AND B, SHEET 2, ARE AS LIMITED BY ASTM E-1300 02/04 GLASS TABLES, WATER PERFORMANCE, TESTED PRESSURES, AND COMPARATIVE ANALYSIS.
5. SEALING AND FLASHING STRATEGIES FOR OVERALL WATER PERFORMANCE OF INSTALLED PRODUCTS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTRUCTIONS AND ARE THE RESPONSIBILITY OF OTHERS.
6. THE 4/3 ALLOWABLE STRESS INCREASE HAS NOT BEEN USED IN THE ANCHOR ANALYSIS FOR THIS SYSTEM. THE 1.6 Cd FACTOR WAS USED IN THE ANALYSIS OF WOOD SUBSTRATE ONLY.
7. STRUCTURAL SUITABILITY OF THE OPENING TO RECEIVE LOADS IMPARTED FROM THIS PRODUCT TO BE VERIFIED BY THE DESIGN PROFESSIONAL FOR EACH PROJECT. BUCKING, OPENINGS & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
8. DISSIMILAR MATERIALS THAT COME INTO CONTACT, INCLUDING BUT NOT LIMITED TO FASTENERS IN PRESSURE TREATED WOOD, SHALL BE COATED OR OTHERWISE PROTECTED PER FBC TO PREVENT GALVANIC REACTIONS.
9. INSTALLATIONS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS UNLESS OTHERWISE APPROVED BY A LICENSED DESIGN PROFESSIONAL.
10. FOR INTERNAL JOINERY DETAILS NOT SHOWN IN THESE DRAWINGS, SEE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS.

REVISION HISTORY:

REV	DATE	DESCRIPTION
0		ORIGINAL RELEASE
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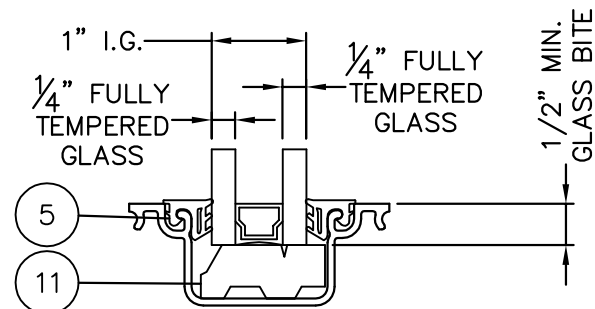
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DRAWING NUMBER:	FPA-E14000-NI
DRAWN:	
FINAL REVIEW:	
SCALE:	N.T.S.
REVISION:	0
SHEET NAME:	NOTES, ELEVATION
SHEET:	1 OF 4

TABLE A. DESIGN PRESSURE CHART (PSF) FOR SHT. 1 ELEV. A (W/ P1437 STEEL REINFORCEMENT)

ON-CENTER SPACING OF VERTICALS (IN.)	27 & Under	FRAME HEIGHT (IN.)					
		114 & Under	120	126	132	138	144
27 & Under	45.0	45.0	45.0	45.0	45.0	45.0	45.0
30	45.0	45.0	45.0	45.0	45.0	45.0	44.7
33	45.0	45.0	45.0	45.0	45.0	43.8	41.1
36	45.0	45.0	45.0	42.8	40.7	38.1	
39	45.0	44.8	42.3	40.0	38.0	35.6	
42	39.2	39.2	39.2	37.7	35.8	33.5	
45	34.1	34.1	34.1	34.1	33.8	31.6	
48	30.0	30.0	30.0	30.0	30.0	30.0	

TABLE B. DESIGN PRESSURE CHART (PSF) FOR SHT 1 ELEV. B (NO REINFORCEMENT)

ON-CENTER SPACING OF VERTICALS (IN.)	27 & Under	FRAME HEIGHT (IN.)				
		84 & Under	87	90	93	96
27 & Under	45.0	45.0	45.0	45.0	45.0	45.0
30	45.0	45.0	45.0	44.3	42.7	
33	45.0	44.6	42.7	41.1	39.5	
36	43.6	41.7	40.0	38.4	36.9	
39	41.2	39.4	37.7	36.2	34.8	
42	39.2	37.4	35.8	34.3	32.9	
45	34.1	34.1	34.1	32.7	31.3	
48	30.0	30.0	30.0	30.0	30.0	

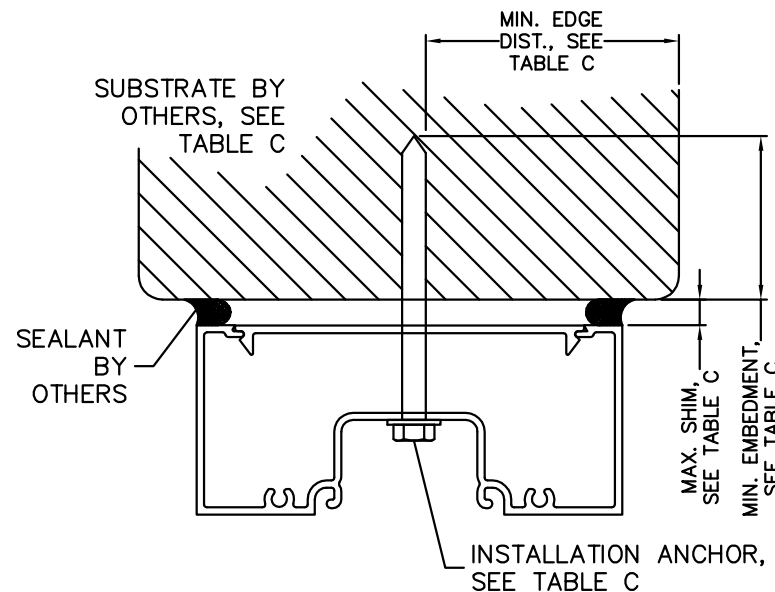


GLAZING DETAIL

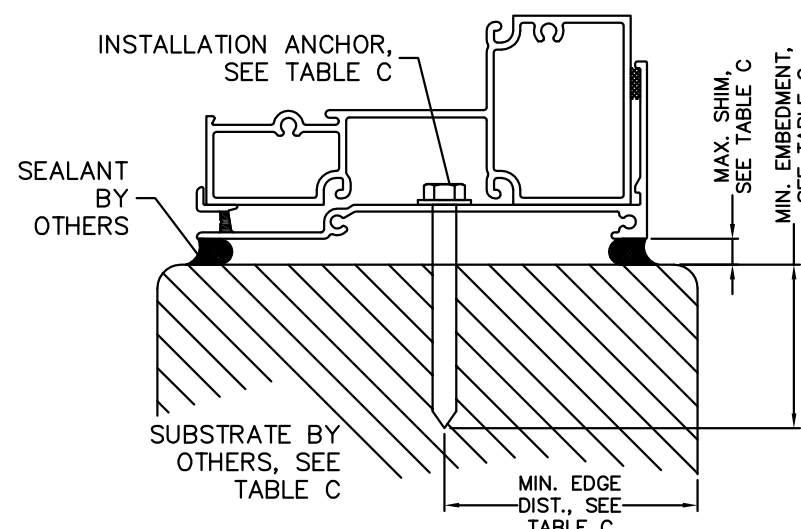
TABLE C. QUALIFIED ANCHOR INFORMATION

ID	SUBSTRATE	ANCHOR	MIN. EMBEDMENT	MIN. EDGE DISTANCE	HEAD ANCHOR QTY PER VERT.	SILL ANCHOR QTY. PER VERT. 8' HEIGHT AND BELOW	SILL ANCHOR QTY. PER VERT. ABOVE 8' HEIGHT	MAX. SHIM GAP
A	CONCRETE OR GROUT-FILLED CMU (2850 PSI MIN)	1/4" ELCO COATED CARBON STEEL ULTRACON	1 3/4"	2 1/2"	4	4	6	1/4"
B	CONCRETE OR GROUT-FILLED CMU (2000 PSI MIN)	1/4" ITW COATED CARBON STEEL TAPCON	1 1/2"	3"	4	4	6	1/4"
C	CONCRETE (3000 PSI MIN)	1/4" ITW 410 STAINLESS TAPCON	1 3/4"	2 1/2"	4	4	6	1/4"
D	CONCRETE (3000 PSI MIN)	1/4" HILTI COATED CARBON STEEL OR STAINLESS STEEL KWIK-CON II	1"	2 1/2"	4	4	6	1/4"
E	HOLLOW OR GROUT-FILLED CMU (ASTM C-90)	1/4" HILTI COATED CARBON STEEL OR STAINLESS STEEL KWIK-CON II	1"	2 1/2"	4	4	6	1/4"
F	2x MIN. SOUTHERN PINE WOOD (G=0.55 MIN)	#14 GRADE 5 WOOD SCREW	1 3/8"	1"	4	4	6	1/4"
G	16 GAUGE (0.060") MIN. STEEL STUD 33 KSI YIELD MIN.	#1/4-28 ITW TEKS SELF-DRILLING SCREW	SEE NOTE	1/2"	4	4	6	1/4"
H	1/8" ALUM. 6063-T5 MIN. OR 1/8" STEEL 33 KSI MIN.	#14 GRADE 5 SELF-TAPPING / DRILLING SCREW	SEE NOTE	1/2"	4	4	6	1/4"
I	CONCRETE OR GROUT-FILLED CMU (3000 PSI MIN)	3/8" POWERS TAPPER CARBON STEEL	1 1/2"	4 1/2"	2	2	4	1/2"
J	CONCRETE OR GROUT-FILLED CMU (3000 PSI MIN)	3/8" ITW RED HEAD LDT CARBON OR STAINLESS STEEL	1 1/2"	3"	2	2	4	1/2"
K	CONCRETE (4000 PSI MIN)	3/8" ITW RED HEAD TRUBOLT WEDGE CARBON OR STAINLESS STEEL	1 1/2"	2 5/8"	2	2	4	1/2"
L	2x MIN. SOUTHERN PINE WOOD (G=0.55 MIN)	3/8" GRADE 5 LAG SCREW	1 3/8"	1"	2	2	4	1/2"
M	16 GAUGE (0.060") MIN. STEEL STUD 33 KSI YIELD MIN.	5/16-18 ELCO DRIL-FLEX OR HILTI KWIK-FLEX SELF-DRILLING SCREW	SEE NOTE	5/8"	2	2	4	1/2"
N	1/8" ALUM. 6063-T5 MIN. OR 1/8" STEEL 33 KSI MIN.	3/8" GRADE 5 SHEET METAL SCREW	SEE NOTE	3/4"	2	2	4	1/2"

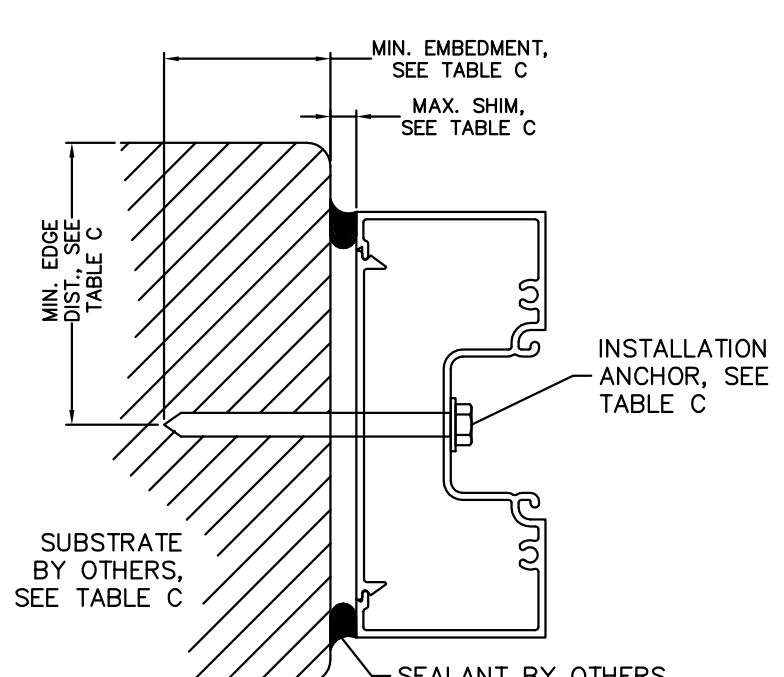
NOTE: ANCHORS THROUGH METAL SHALL BE OF SUFFICIENT LENGTH TO PROVIDE THREAD ENGAGEMENT THROUGH THE FULL METAL THICKNESS



TYPICAL HEAD ANCHORAGE

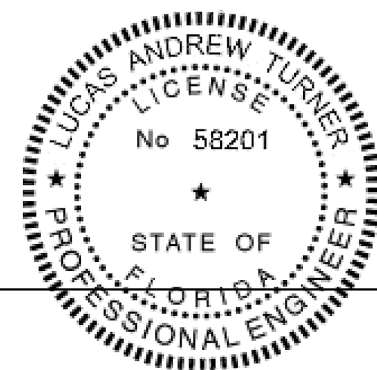


TYPICAL SILL ANCHORAGE



TYPICAL JAMB ANCHORAGE

- ANCHORAGE NOTES:
1. SHIMS SHALL BE LOAD-BEARING (PLASTIC OR METALLIC) AND CAPABLE OF TRANSFERRING APPLIED LOADS FROM THE PRODUCTS TO THE OPENING SUBSTRATES.
 2. SHIM EACH ANCHOR LOCATION WHERE GAP GREATER THAN 1/16" EXISTS BETWEEN PRODUCT FRAME AND OPENING SUBSTRATE.
 3. SPECIFIED EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
 4. MINIMUM ANCHOR SPACING SHALL BE 4 1/2"



5/1/2014

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TUBELITE
 SERIES E14000
 STOREFRONT SYSTEM

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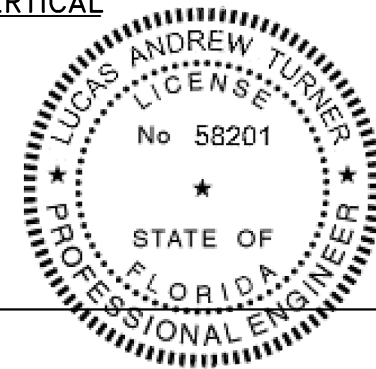
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REV	DESCRIPTION
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DATE: 04.30.14
 DRAWING NUMBER: FPA-E14000-NI
 FINAL REVIEW:
 SCALE: N.T.S.
 REVISION: 0
 SHEET NAME: INSTALLATION DETAILS, TABLES
 SHEET: 2 OF 4

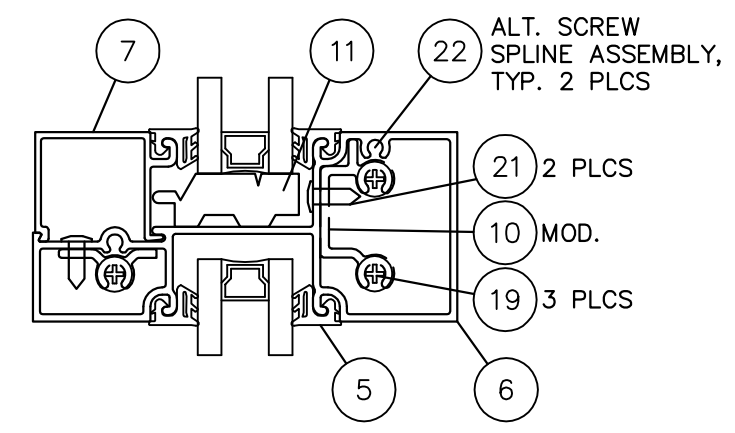
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REV	DATE	DRAWN	DESCRIPTION
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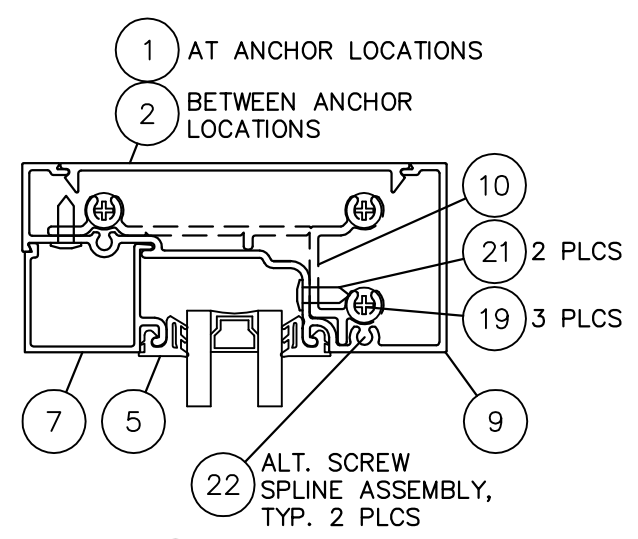
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SCALE:	N.T.S.
REVISION:	0
SHEET NAME:	SECTION DETAILS
SHEET:	3 OF 4



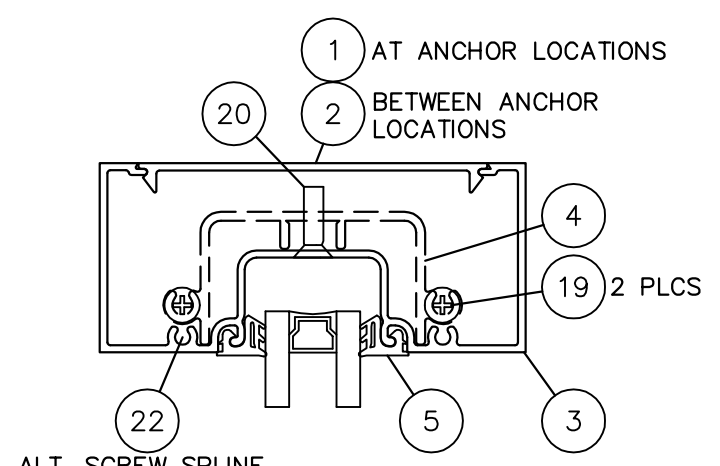
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5/1/2014
LUCAS A. TURNER, P.E.
FL PE # 58201
TURNER ENGINEERING &
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NORTH PORT, FL 34288



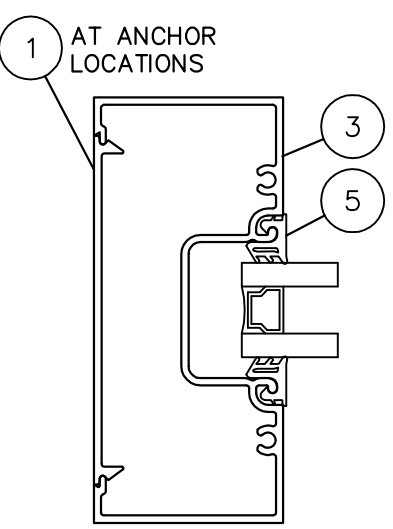
Z1
3
INTERMEDIATE HORIZONTAL



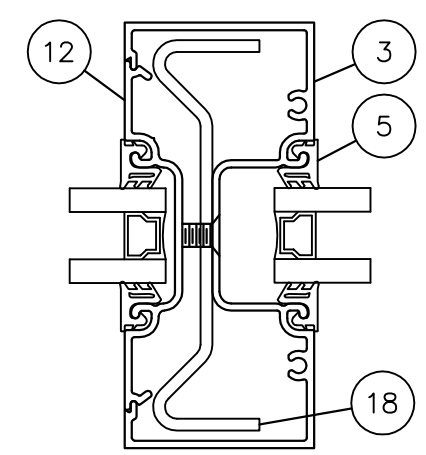
H2
3
HEAD
OPTION 2



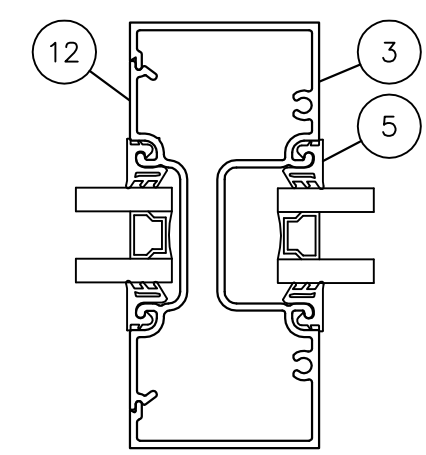
H1
3
HEAD
OPTION 1



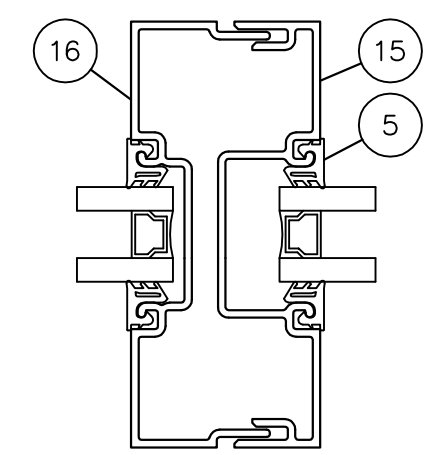
J1
3
JAMB



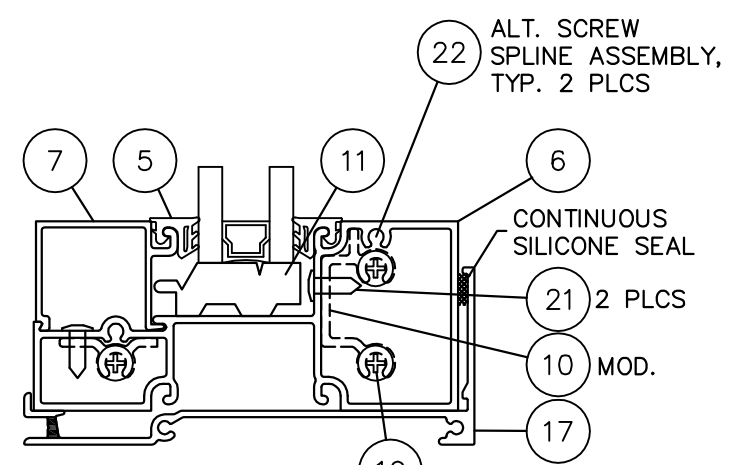
V1
3
INTERMED. VERTICAL
OPTION 1



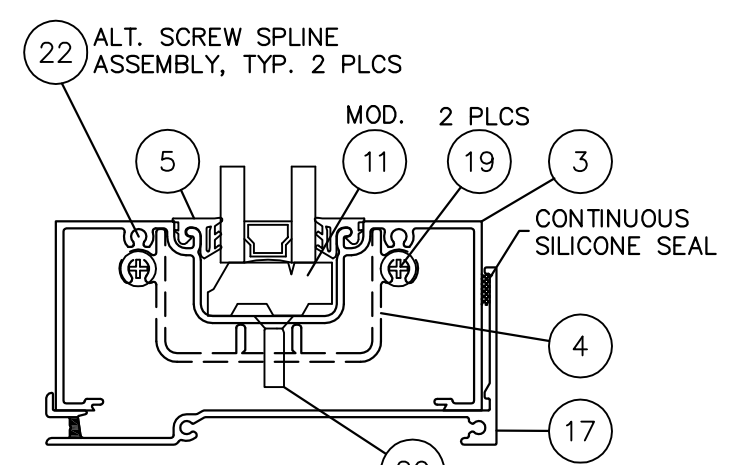
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3
INTERMED. VERTICAL
OPTION 2



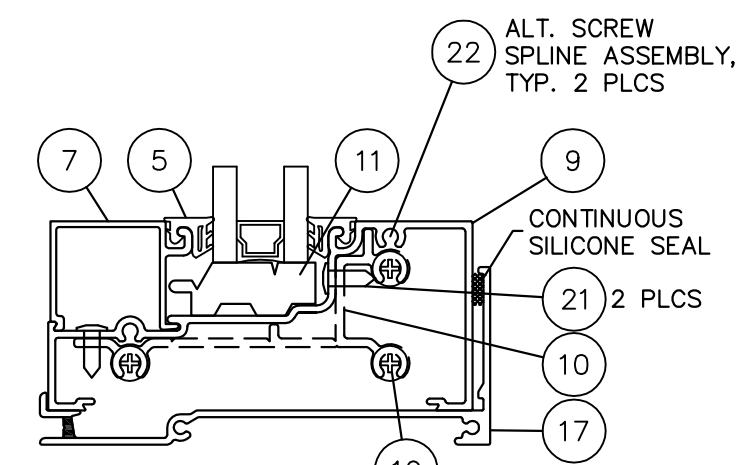
V3
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INTERMED. VERTICAL
OPTION 3



S1
3
SILL
OPTION 1

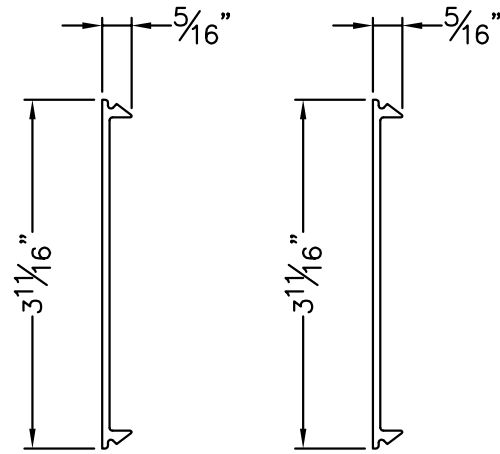


S2
3
SILL
OPTION 2



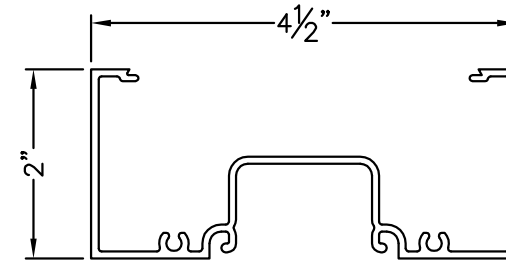
S3
3
SILL
OPTION 3

PARTS LIST			
ITEM	PART NUMBER	DESCRIPTION	MATERIAL
1	P1745	EXTRUSION ~ FLAT CLOSURE	ALUMINUM-6063-T5
2	P4543	EXTRUSION ~ FLAT CLOSURE	ALUMINUM-6063-T5
3	E14141	EXTRUSION ~ HEAD/JAMB/VERT./SILL	ALUMINUM-6063-T5
4	P1133	EXTRUSION ~ SHEAR BLOCK	ALUMINUM-6063-T5
5	P2728	GLAZING GASKET	P-PART RUBBER
6	E14103	EXTRUSION ~ HEAD/HORIZ./SILL	ALUMINUM-6063-T5
7	E14104	EXTRUSION ~ GLAZING BEAD	ALUMINUM-6063-T5
9	E14140	EXTRUSION ~ HEAD/SILL	ALUMINUM-6063-T5
10	P1134	EXTRUSION ~ SHEAR BLOCK	ALUMINUM-6063-T5
11	P1132	SETTING BLOCK	P-PART RUBBER
12	E14445	EXTRUSION ~ POCKET FILLER	ALUMINUM-6063-T5
15	E14106	EXTRUSION ~ FEMALE EXPANSION VERTICAL	ALUMINUM-6063-T5
16	E14107	EXTRUSION ~ MALE EXPANSION VERTICAL	ALUMINUM-6063-T5
17	E14059	EXTRUSION ~ SILL FLASHING	ALUMINUM-6063-T5
18	P1437	STEEL REINFORCEMENT	1008CQ HOT ROLLED
19	S009	SCREW ~ #10 X 1-3/4" PAN HD PHIL	P-PART-FASTENER
20	S149	SCREW ~ #12 X 3/4" FLAT HD PHIL	P-PART-FASTENER
21	S191	SCREW ~ #10 X 1/2" TRUSS HD PHIL	P-PART-FASTENER
22	S202	SCREW ~ #10-24 X 1" SELF-TAPPING HEX HD PHIL	P-PART-FASTENER

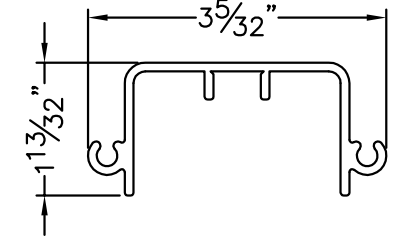


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FLAT CLOSURE

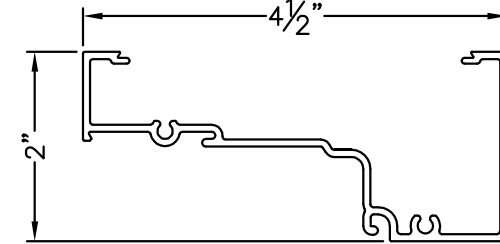
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FLAT CLOSURE



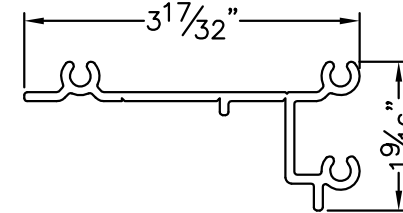
ITEM 3 - E14141
HEAD/JAMB/VERT./SILL



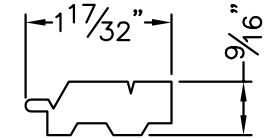
ITEM 4 - P1133
SHEAR BLOCK



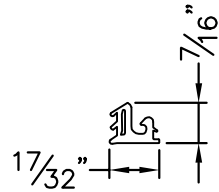
ITEM 9 - E14140
HEAD/SILL



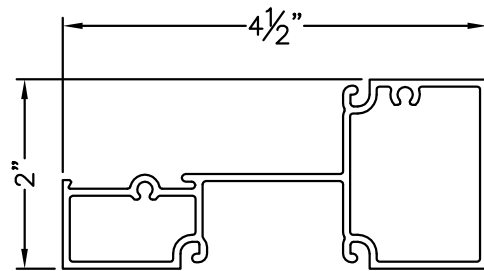
ITEM 10 - P1134
SHEAR BLOCK



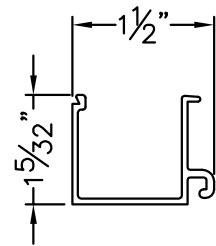
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SETTING BLOCK



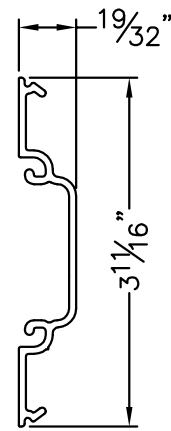
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P2728
GLAZING
GASKET



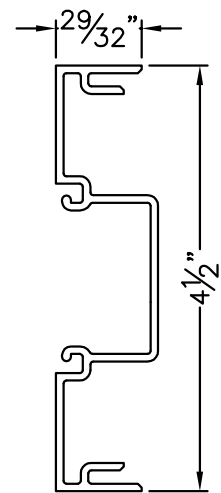
ITEM 6 - E14103
HEAD/HORIZ./SILL



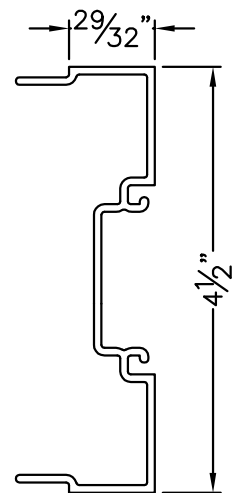
ITEM 7 - E14104
GLAZING BEAD



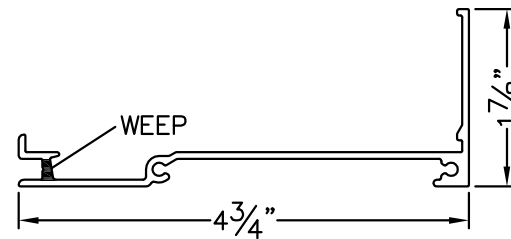
ITEM 12 - E14445
POCKET FILLER



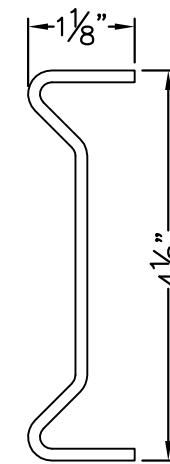
ITEM 15 - E14106
FEM. EXP. VERT.



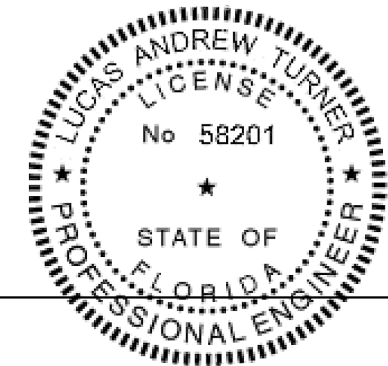
ITEM 16 - E14107
MALE EXP. VERT.



ITEM 17 - E14059
SILL FLASHING



ITEM 18 - P1437
STEEL REINFORCEMENT



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TUBELITE
SERIES E14000
STOREFRONT SYSTEM

REVISION HISTORY:

REV	DATE	DESCRIPTION
0	4.30.14	ORIGINAL RELEASE

DATE:	04.30.14
DRAWING NUMBER:	FPA-E14000-NI
FINAL REVIEW:	
SCALE:	N.T.S.
REVISION:	0
SHEET NAME:	BILL OF MAT. PART DRAWINGS
SHEET:	4 OF 4