

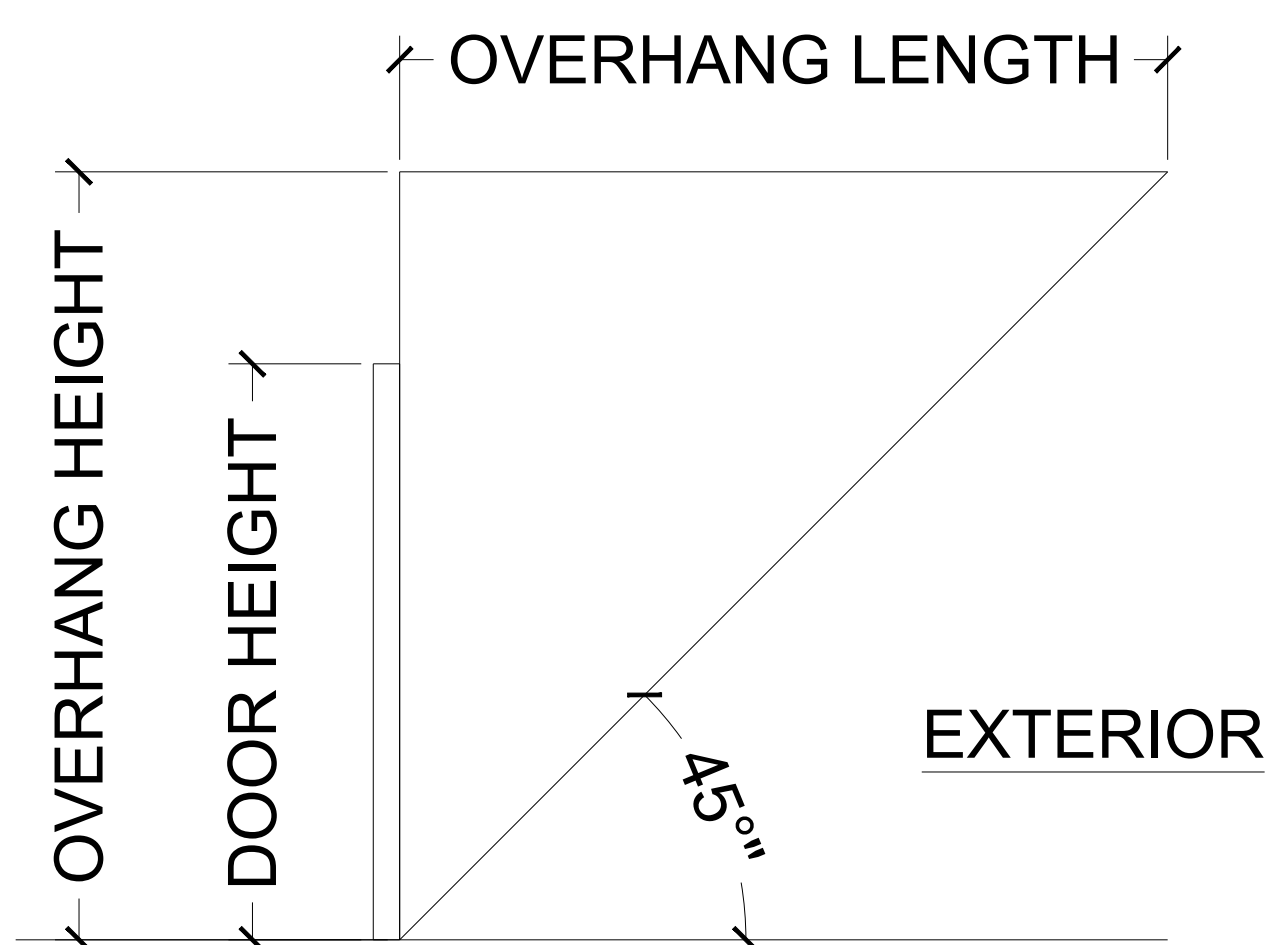
# SPECIAL-LITE, INC.

## SL SERIES FRP/ ALUMINUM HYBRID IN-SWING/ OUT-SWING DOORS FOR USE OUTSIDE THE HIGH VELOCITY HURRICANE ZONE (HVHZ) LARGE AND SMALL MISSILE IMPACT RATED

### SERIES SL-16, 17, 19-1, & 20 IN-SWING/ OUT-SWING DOOR

- THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 6TH EDITION FLORIDA BUILDING CODE (2017), TO BE USED OUTSIDE HIGH VELOCITY HURRICANE ZONE (HVHZ).
- DOORS RATED FOR LARGE AND SMALL MISSILE IMPACT AND DO NOT REQUIRE SHUTTERS.
- ANCHORS SHALL BE LISTED, SPACED AS SHOWN ON ELEVATIONS (PAGE 2). ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO SEE PAGE 9 FOR TYPICAL ANCHOR CONFIGURATIONS.
- ANCHORING OR LOADING CONDITIONS NOT SHOWN IN DRAWINGS ARE NOT PART OF THIS APPROVAL.
- MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/ METAL SCREWS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 6TH EDITION FLORIDA BUILDING CODE (2017) SECTION AS APPLICABLE.
- EGRESS REQUIREMENTS TO BE REVIEWED BY BUILDING OFFICIAL.
- DOOR IS NOT RATED WHERE WATER INFILTRATION RESISTANCE IS REQUIRED BY THE DOOR, UNLESS UNITS ARE INSTALLED IN A NON-HABITABLE AREA WHERE THE UNIT AND THE ROOM ARE DESIGNATED TO ACCEPT WATER INFILTRATION. UNITS SHALL BE INSTALLED ONLY AT LOCATIONS PROTECTED BY A CANOPY OR OVERHANG SUCH THE ANGLE BETWEEN THE EDGE OF THE CANOPY OR OVERHANG TO THE SILL IS LESS THAN OR EQUAL TO 45°.
- METAL STRUCTURES NOT BY SPECIAL-LITE, INC. MUST SUPPORT LOADS IMPOSED BY DOOR SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.

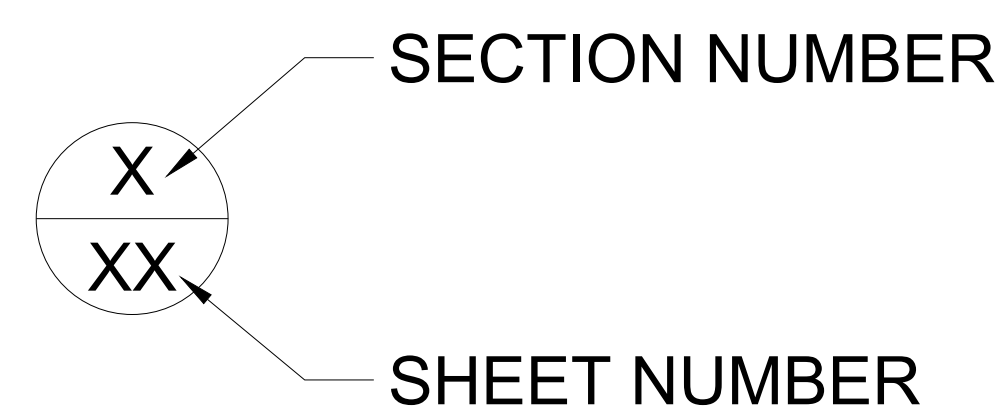
- A LOAD DURATION FACTOR IN ALLOWABLE STRESS IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.
- DOOR FACE SHEET:
  - 0.120" THICK PEBBLE GRAIN FRP
  - 0.120" THICK SANDSTONE TEXTURE FRP
  - 0.120" CONTEMPORARY WOOD GRAIN FRP
  - 0.0625" THICK SMOOTH, EMBOSSED, FLUTED TEXTURE ALUMINUM
  - 0.125" THICK SMOOTH TEXTURE ALUMINUM
- DOOR FRAME CONFIGURATIONS SEE PAGE 5.
- THE DESIGN LOADS SHOWN IN THIS DOCUMENT ARE ALLOWABLE DESIGN LOADS. ULTIMATE DESIGN LOADS OBTAINED FROM ASCE 7-10, MULTIPLIED BY 0.6 SHALL BE LESS THAN OR EQUAL TO MAXIMUM LOAD IN THIS DOCUMENT.
- HARDWARE REQUIREMENTS
  - DORMA KABA ORACODE 660 MORTISE LOCK OR EQUIVALENT
  - SL-11HD SELECT PRODUCTS CONTINUOUS HINGE
  - 200NA ANODIZED ALUMINUM NEOPRENE DOOR SWEEP BY NGP OR EQUIVALENT
  - 1" STORM GLASS BY OLDCASTLE ( $\frac{1}{8}$ " CLEAR X 0.075" STORMGLASS X  $\frac{1}{8}$ " PPG SOLARBAN 60 ON CLEAR LOW-E #4 X  $\frac{13}{32}$ " AIR SPACE X  $\frac{1}{4}$ " CLEAR)
  - $\frac{5}{16}$ " STORM GLASS BY OLDCASTLE ( $\frac{1}{8}$ " CLEAR X 0.075" STORMGLASS X  $\frac{1}{8}$ " CLEAR)



$$\text{OH RATIO} = \frac{\text{OVERHANG LENGTH}}{\text{OVERHANG HEIGHT}} \geq 1$$

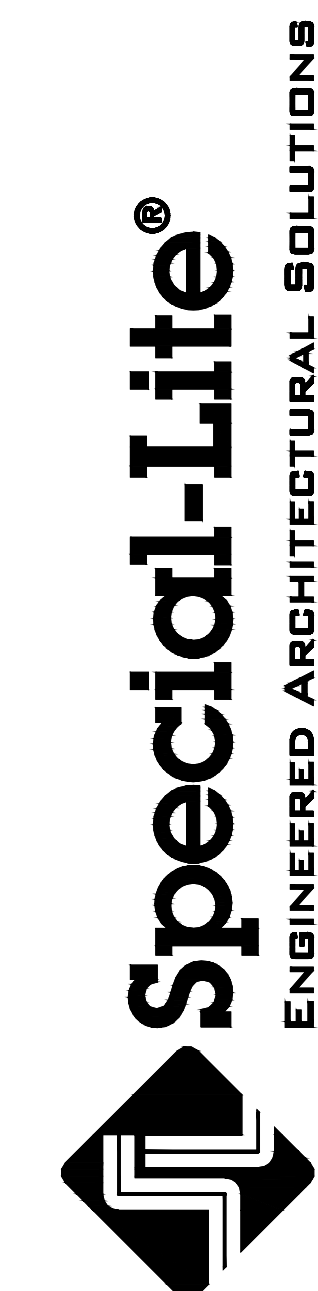
### ABBREVIATIONS AND SYMBOLS

D.L.O. - DAYLIGHT OPENING  
 F.H. - FRAME HEIGHT  
 F.W. - FRAME WIDTH  
 W/ - WITH  
 W/O - WITHOUT  
 O.C. - ON CENTER  
 MAX. - MAXIMUM



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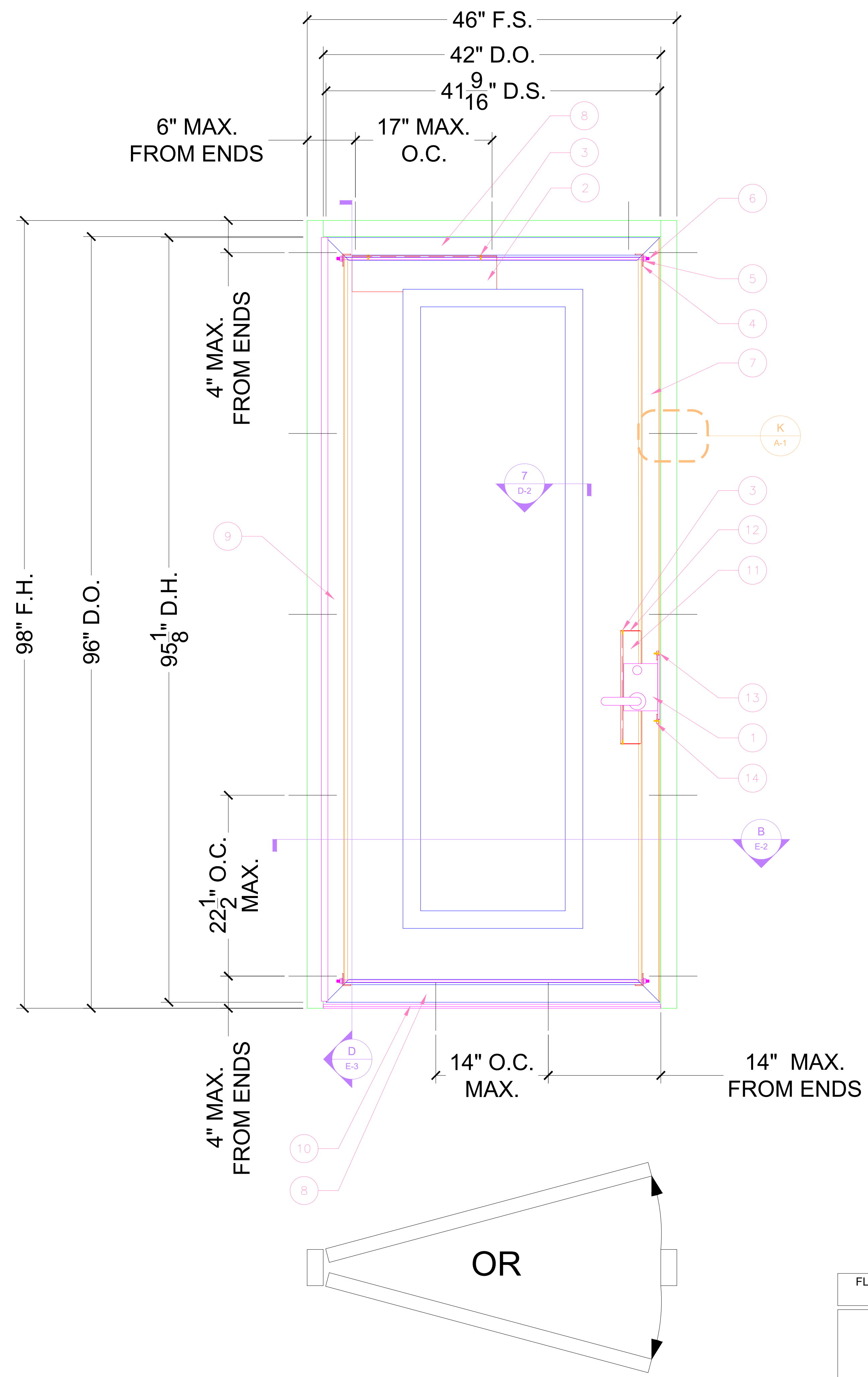
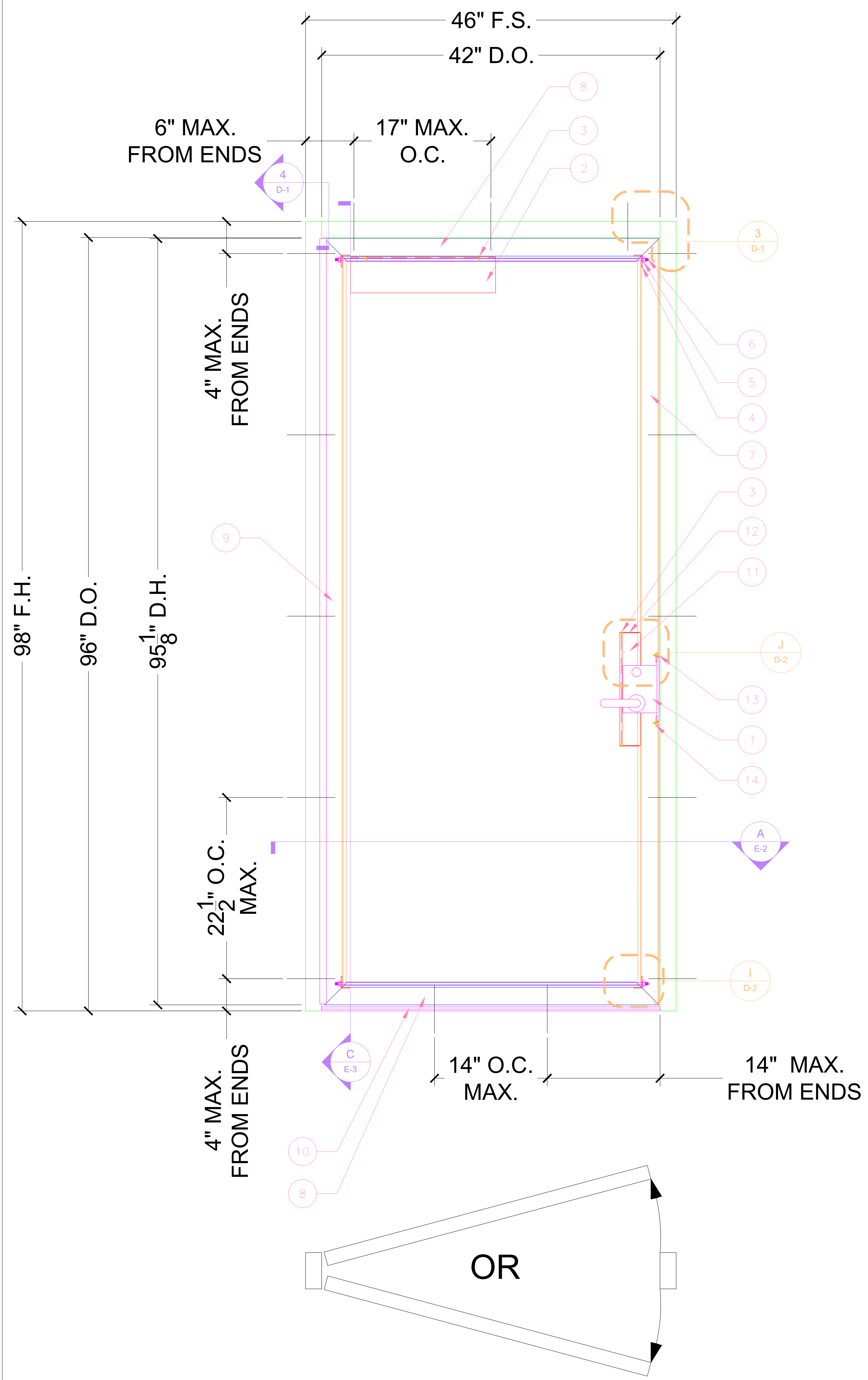
SL-SERIES FRP/ ALUMINUM HYBRID IN-SWING/  
OUT-SWING DOOR



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REVISION #	DATE/DESCRIPTION

COVER	
DATE	6/12/18
SCALE	AS SHOWN
DRAWN	A.E.
PROJECT	18-7808
DRAWING NO. <b>SL-0001</b>	
1 of 11	



REVISION #	DATE/DESCRIPTION

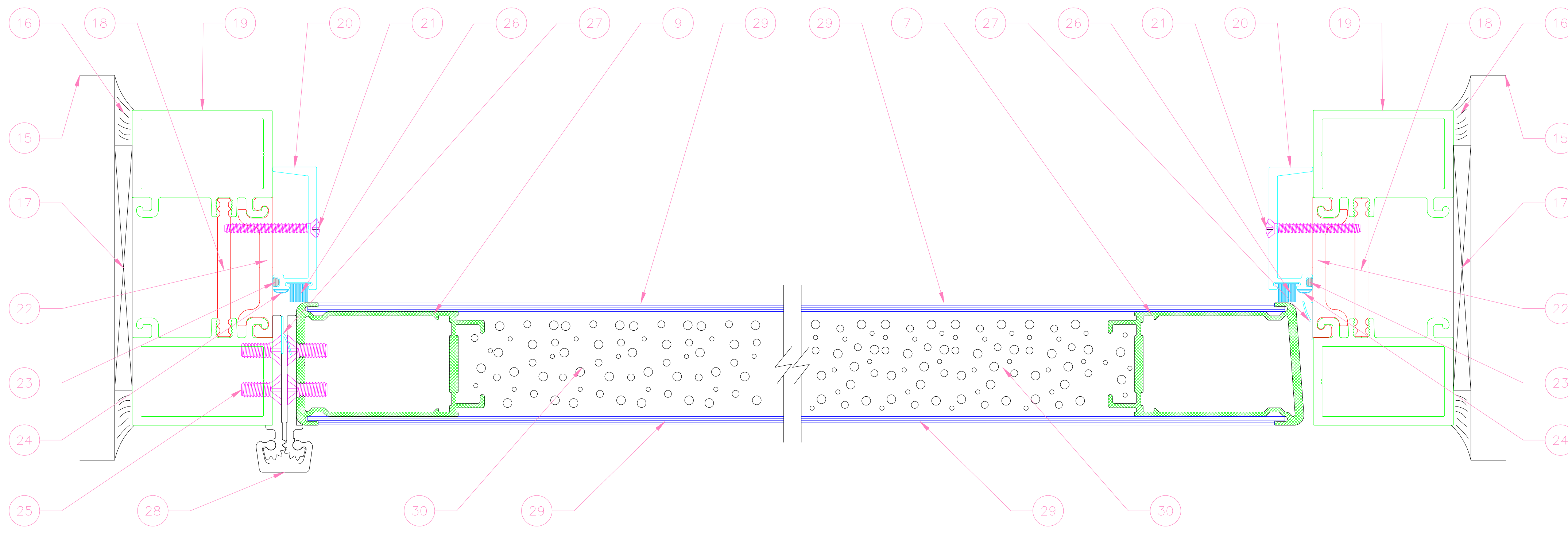
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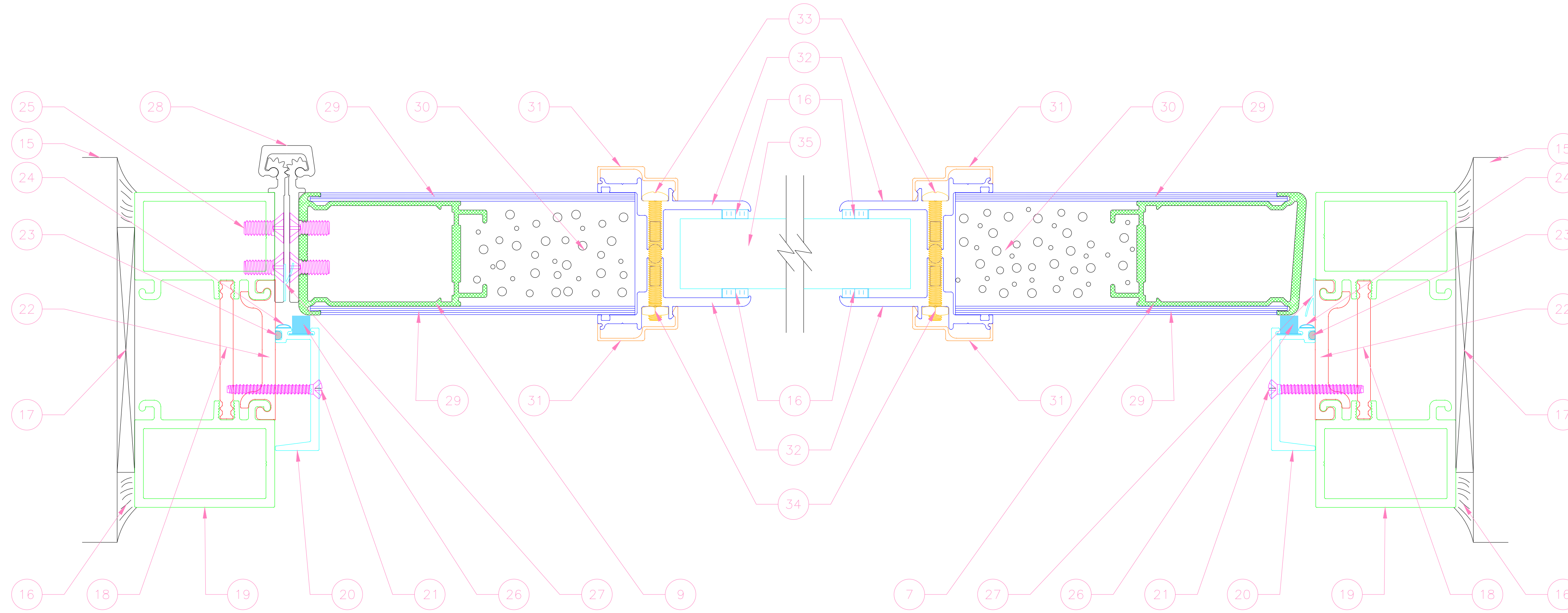
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27723.1

E-1	
DATE	6/12/18
SCALE	1:8
DRAWN	A.E.
PROJECT	18-7808
DRAWING NO. SL-0001	
2 OF 11	



A TYP. OUTSWING PLAN VIEW WITHOUT GLAZING  
1:1



B TYP. INSWING PLAN VIEW WITH GLAZING  
1:1

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OUT-SWING DOOR

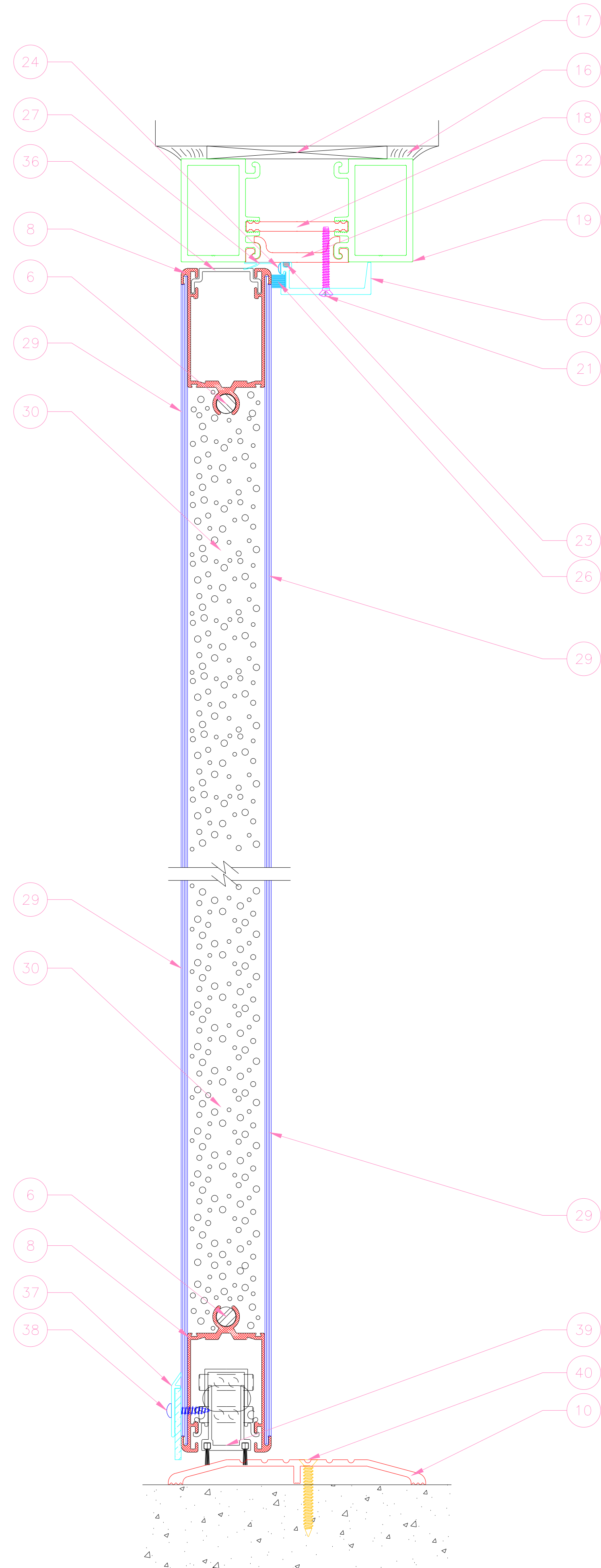


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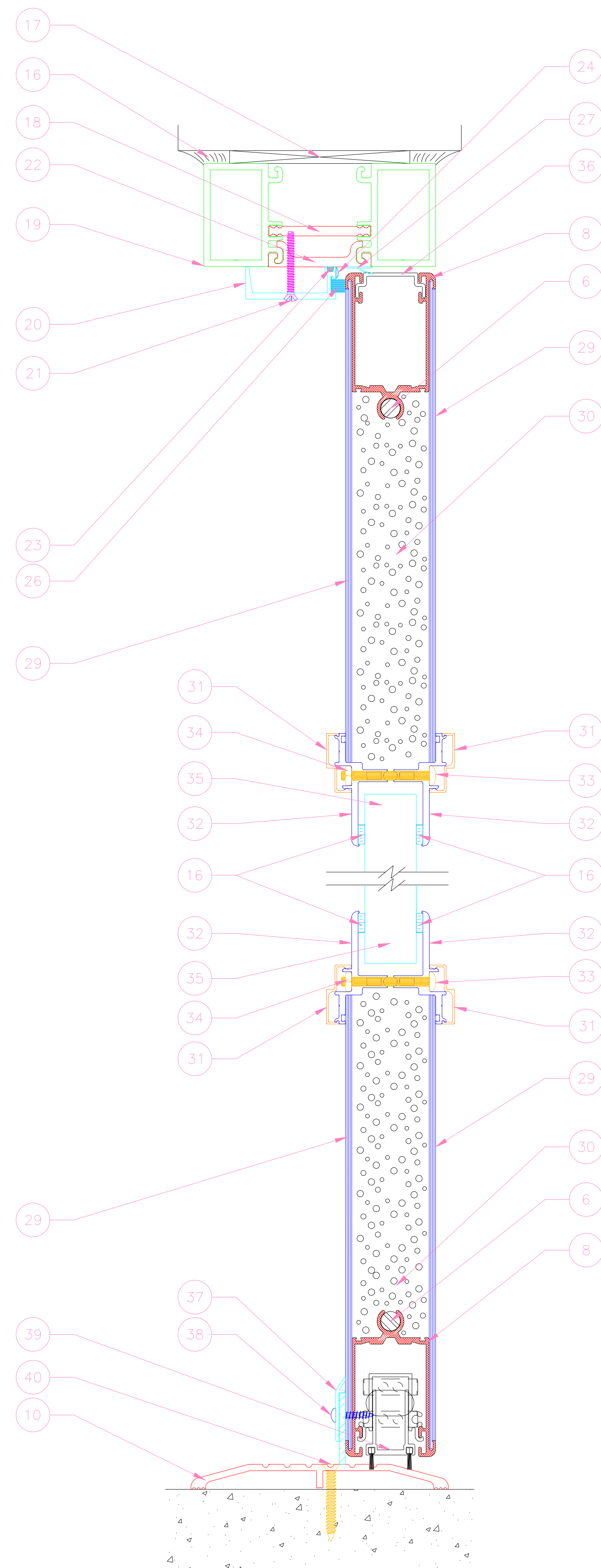
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FLORIDA APPROVAL #:  
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E-2	
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DRAWN	A.E.
PROJECT	18-7808
DRAWING NO. SL-0001	
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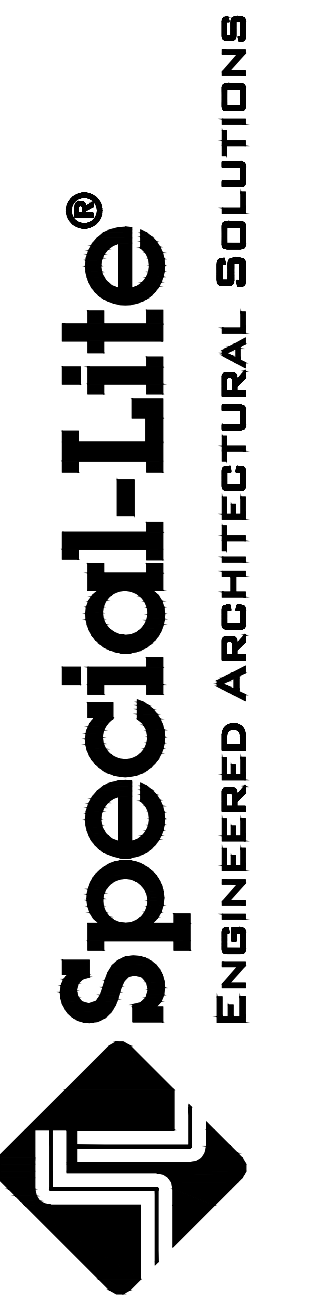
**C** TYP. OUTSWING ELEVATION VIEW WITHOUT GLAZING  
1:1.5



**D** TYP. INSWING ELEVATION VIEW WITH GLAZING  
1:1.5

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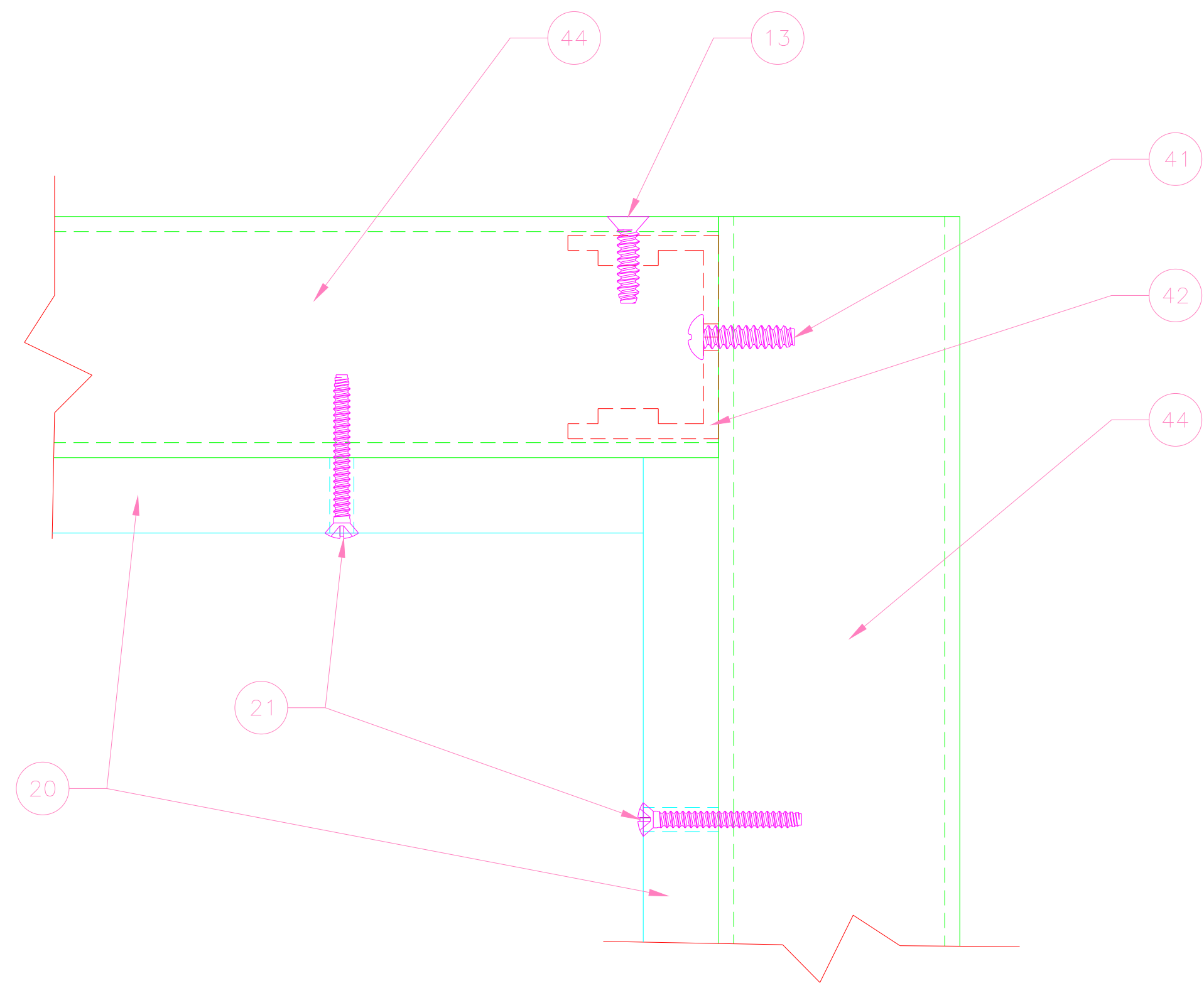
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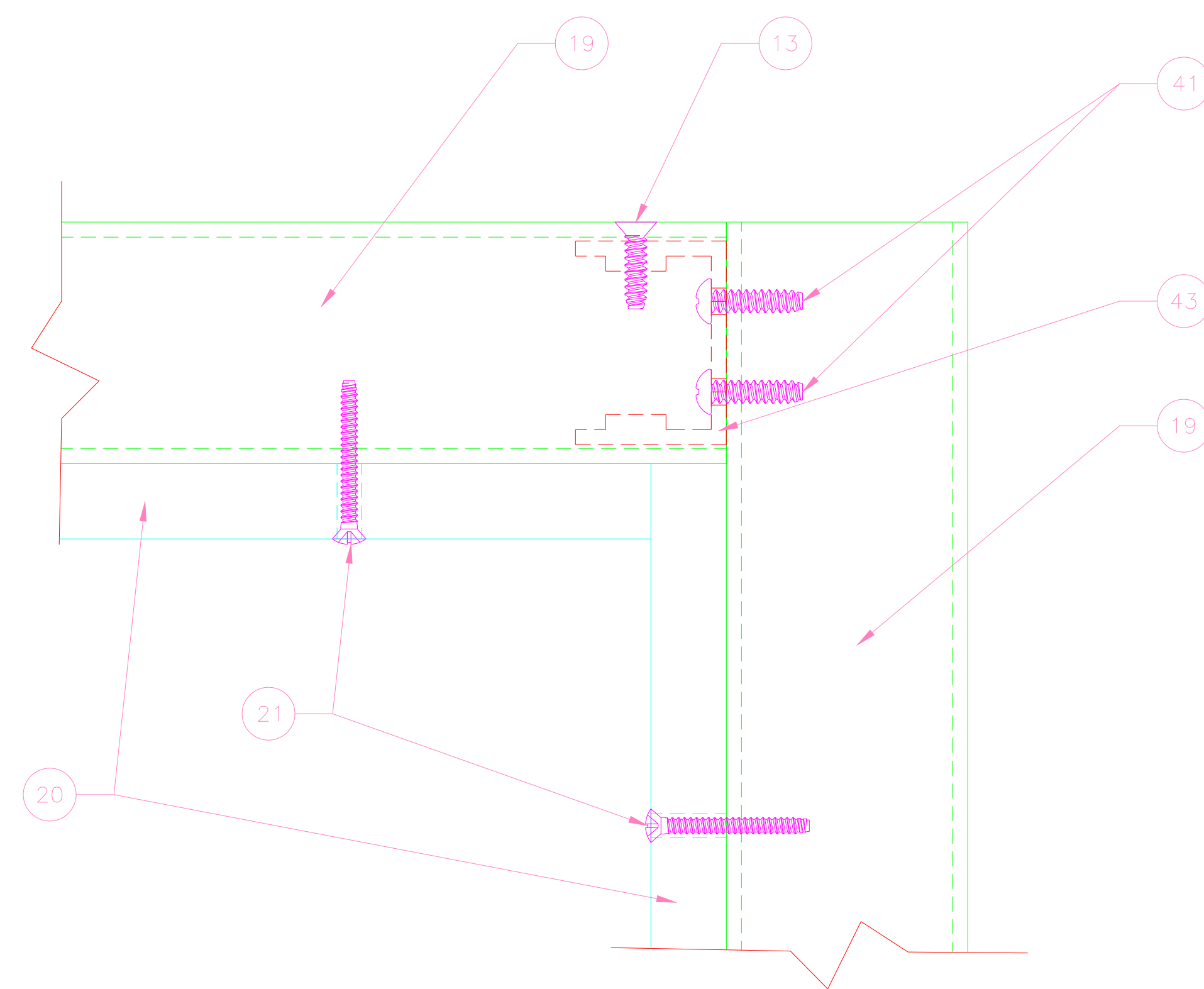
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PROJECT	18-7808

DRAWING NO.  
SL-0001

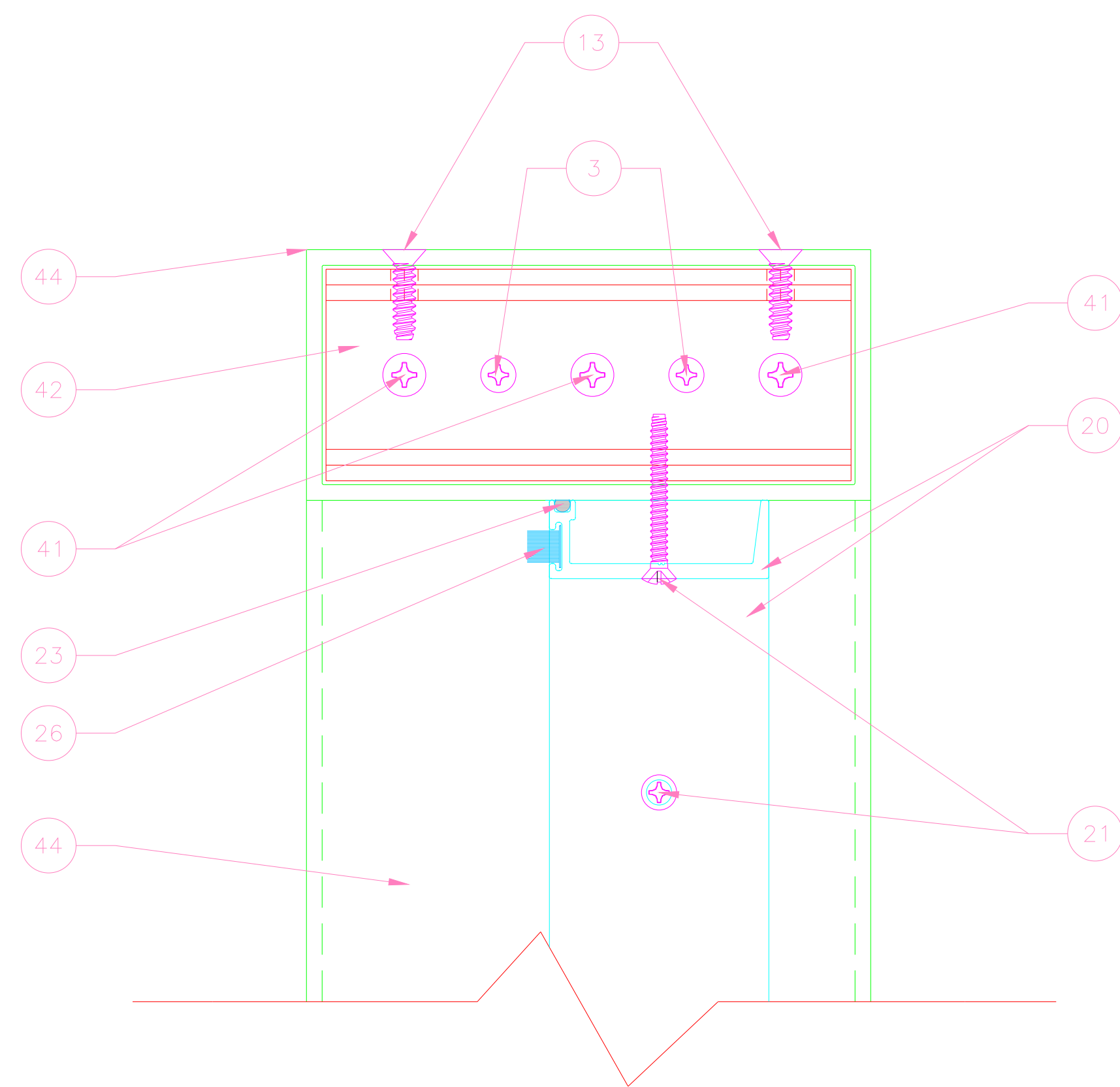
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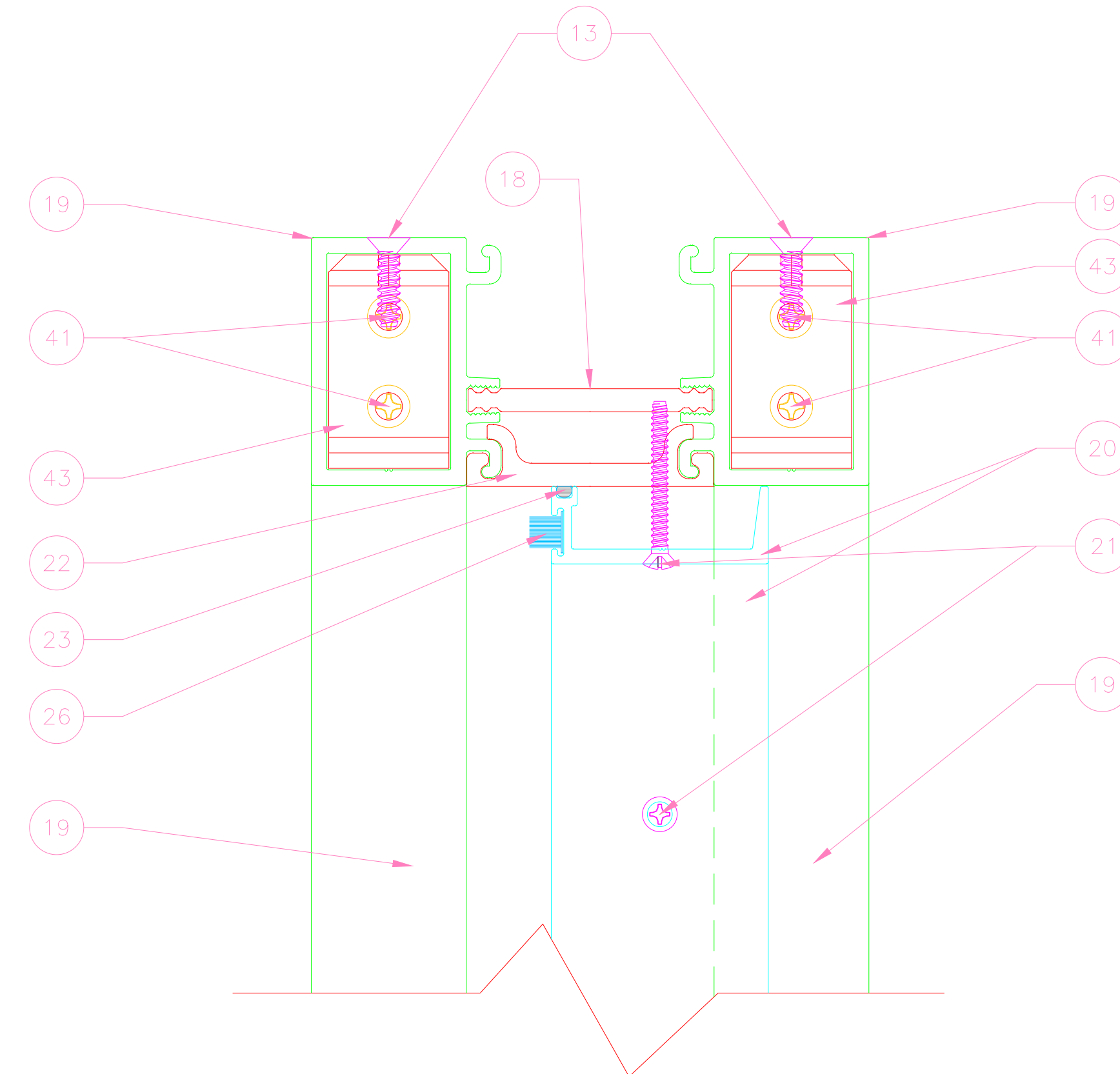
1 SL-245 CORNER JOINT  
1:1



3 SL-450TB CORNER JOINT  
1:1



2 SL-245 CORNER JOINT  
1:1



4 SL-450TB CORNER JOINT  
1:1

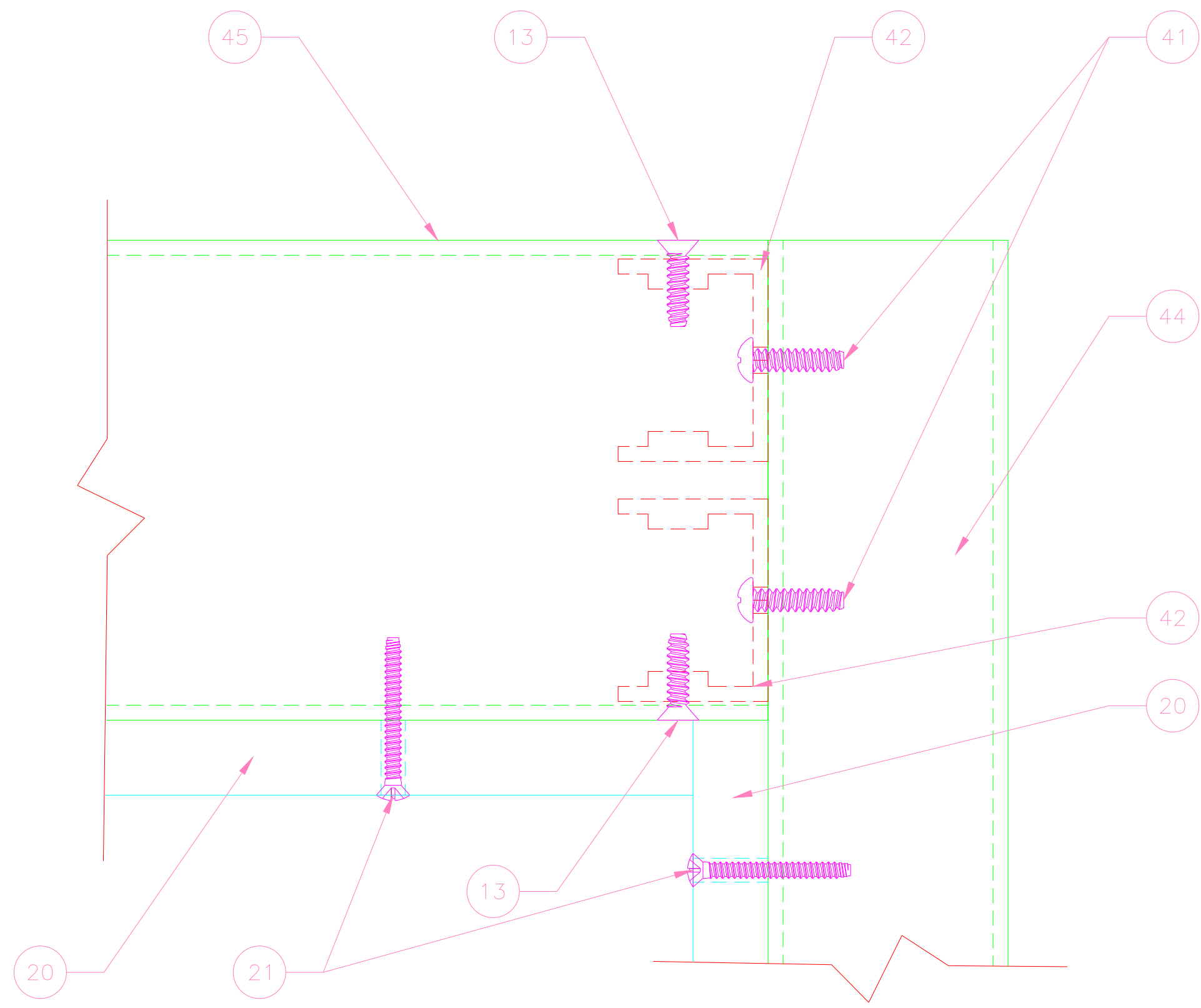
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OUT-SWING DOOR

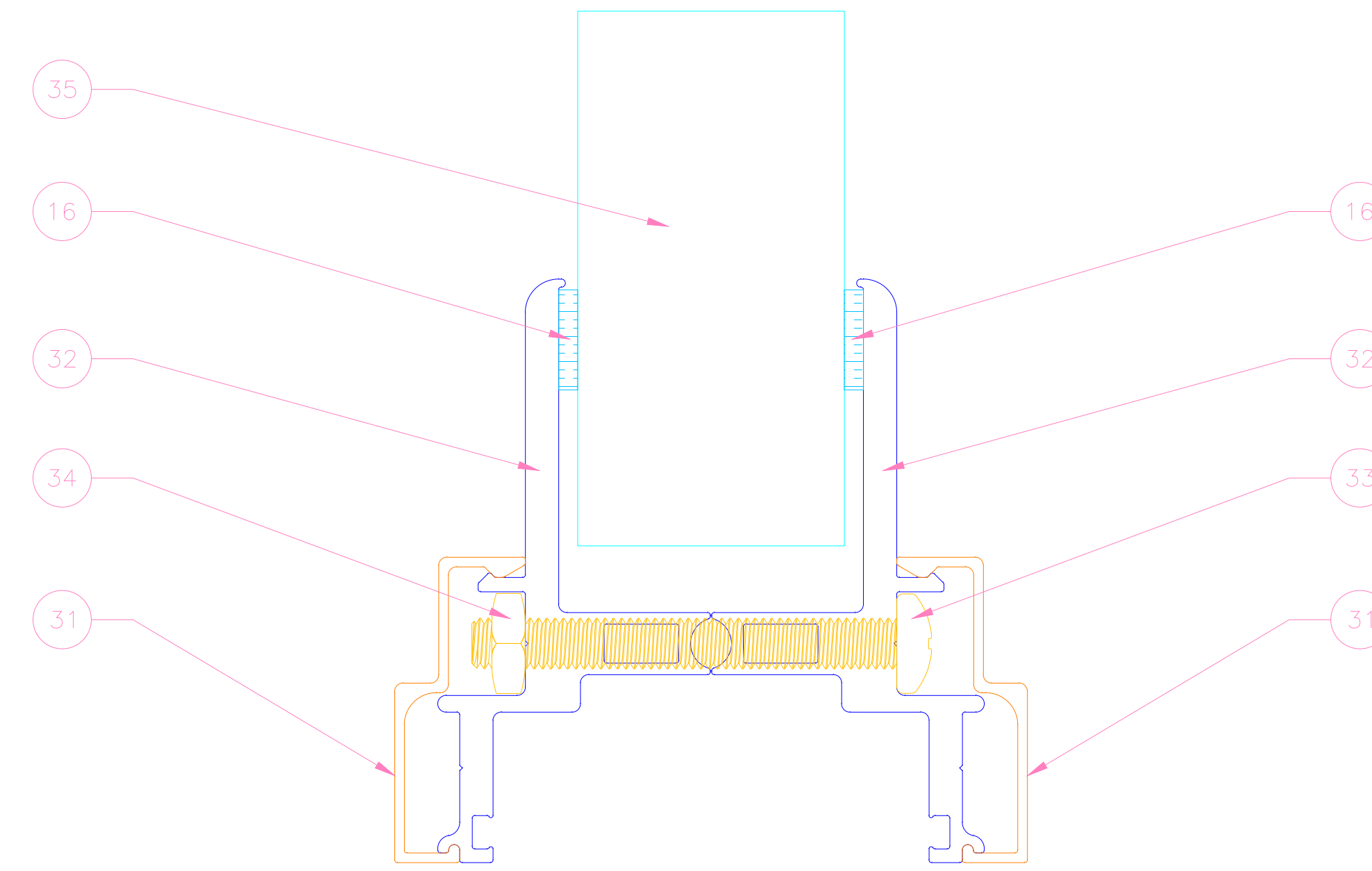


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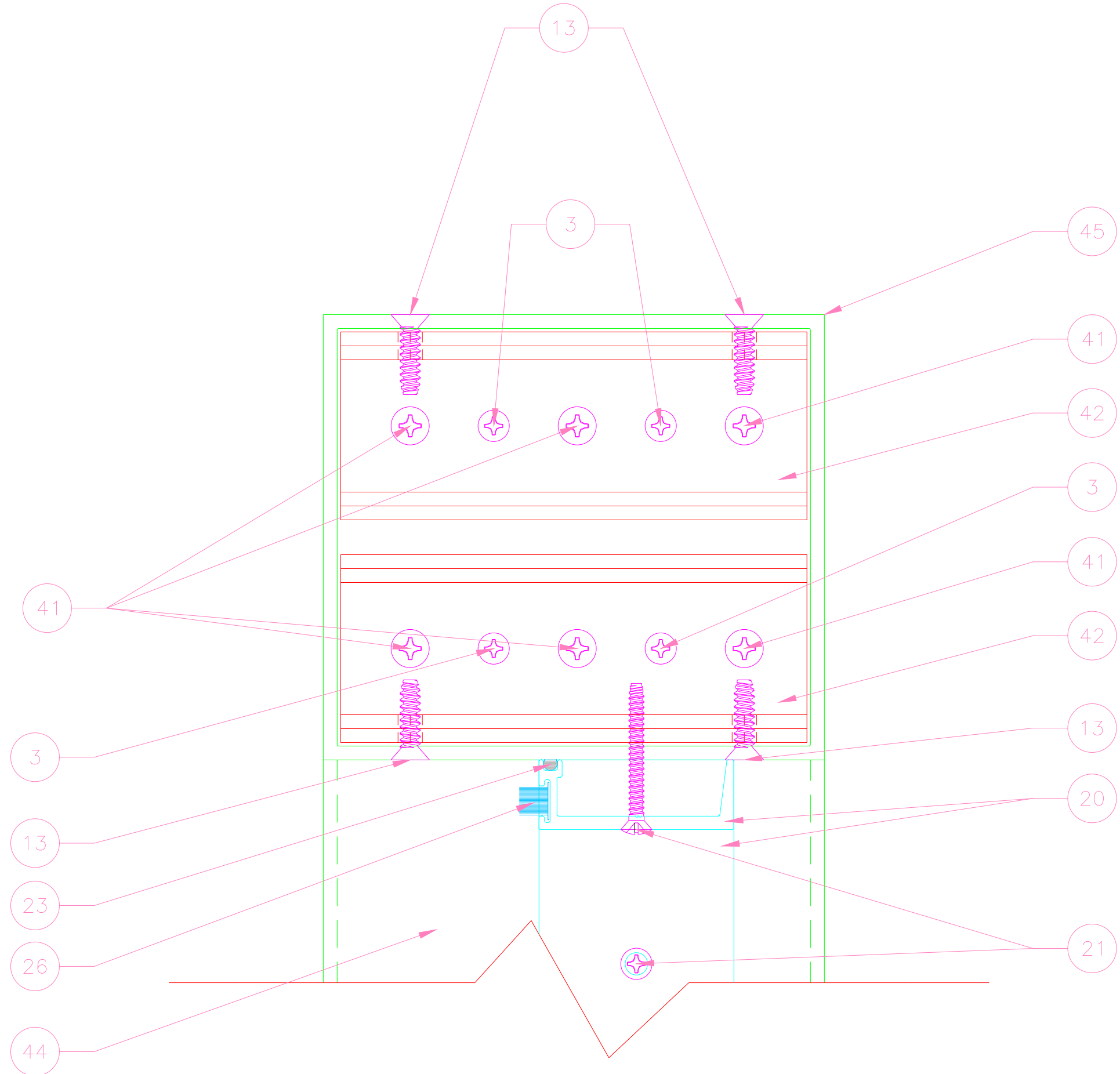
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PROJECT	18-7808
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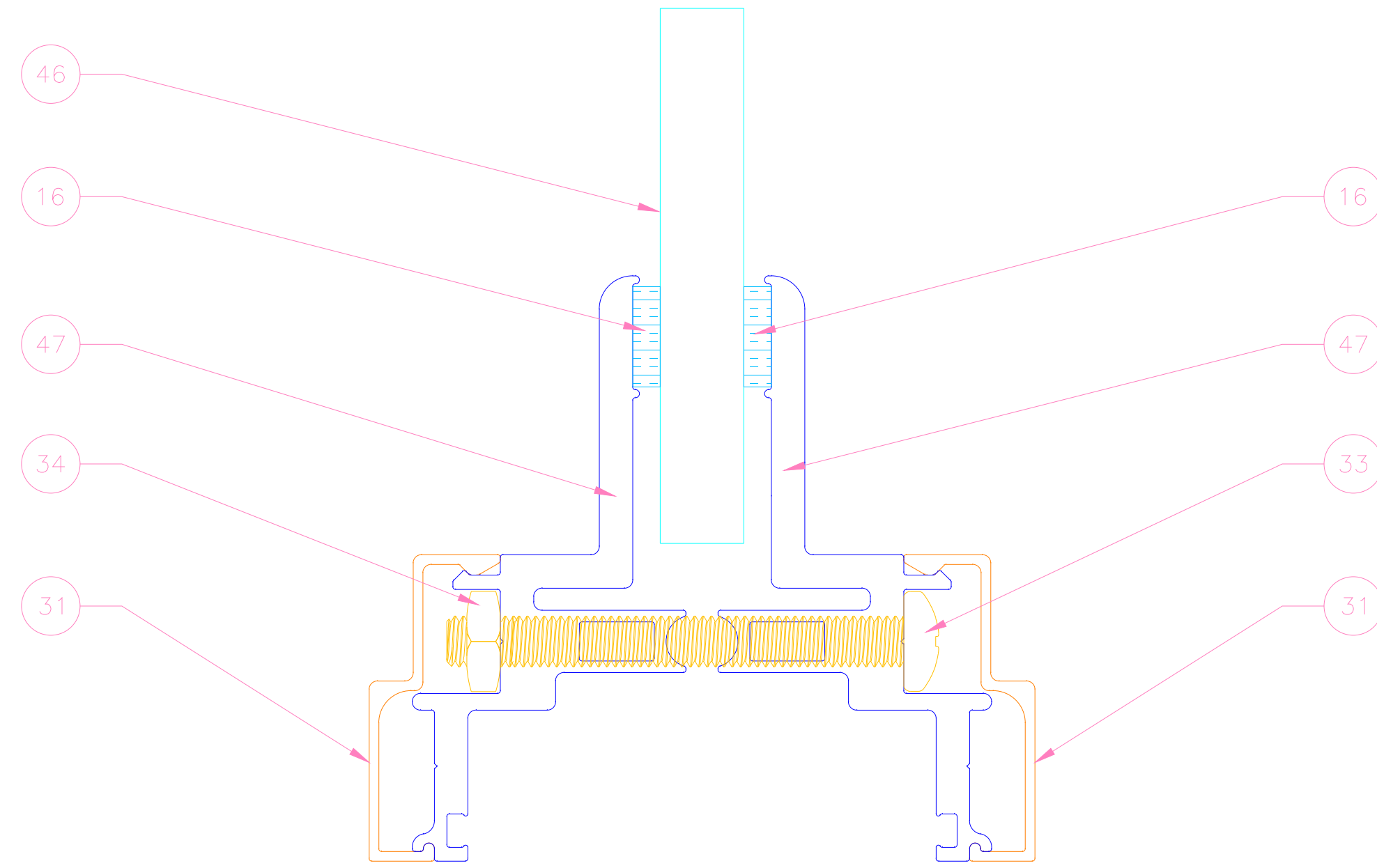
5 SL-245 W/ 4" HEAD CORNER JOINT  
1:1



7 TYP. 1" GLAZING INSTALLATION  
2:1



6 SL-245 W/ 4" HEAD CORNER JOINT  
1:1



8 TYP. 5/16" GLAZING INSTALLATION  
2:1

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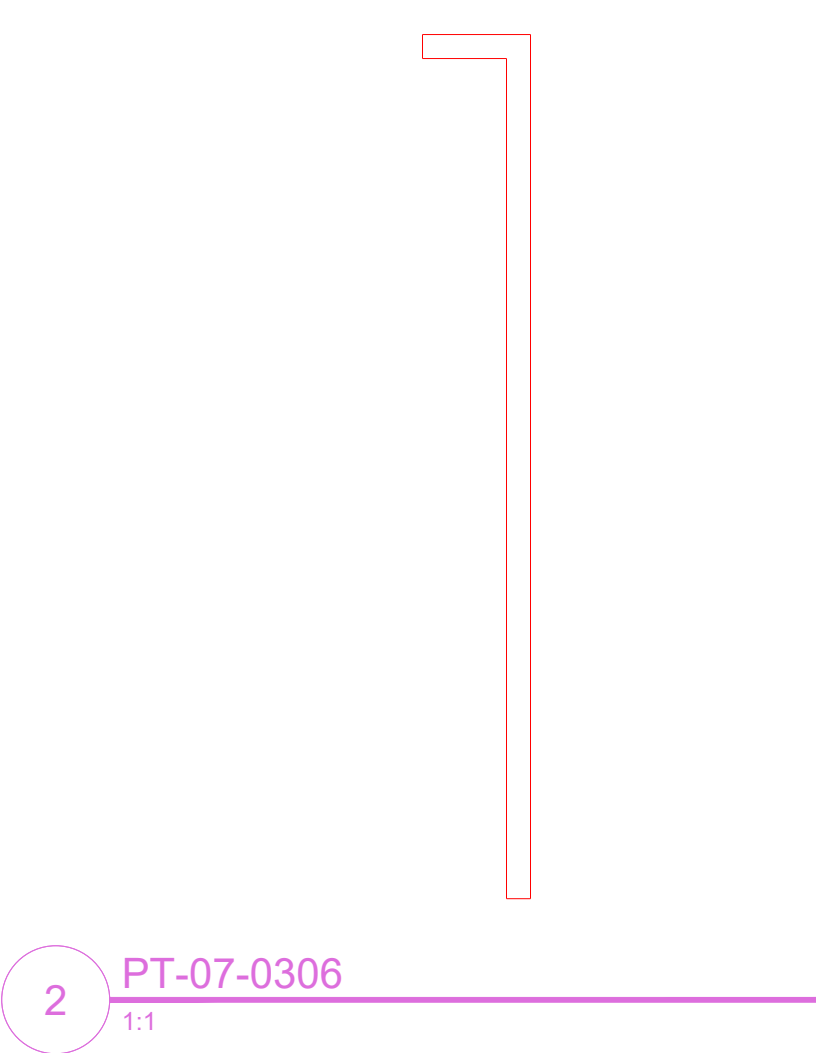
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D-2

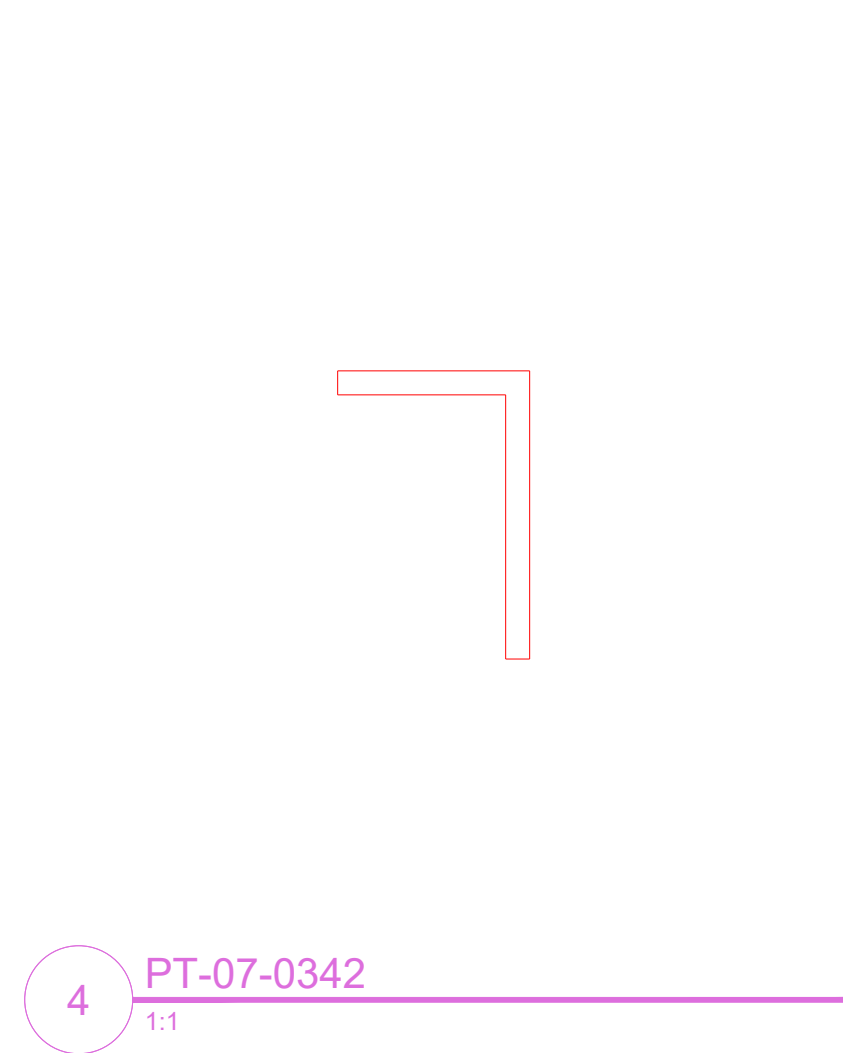
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SCALE	AS SHOWN
DRAWN	A.E.
PROJECT	18-7808

DRAWING NO.  
SL-0001

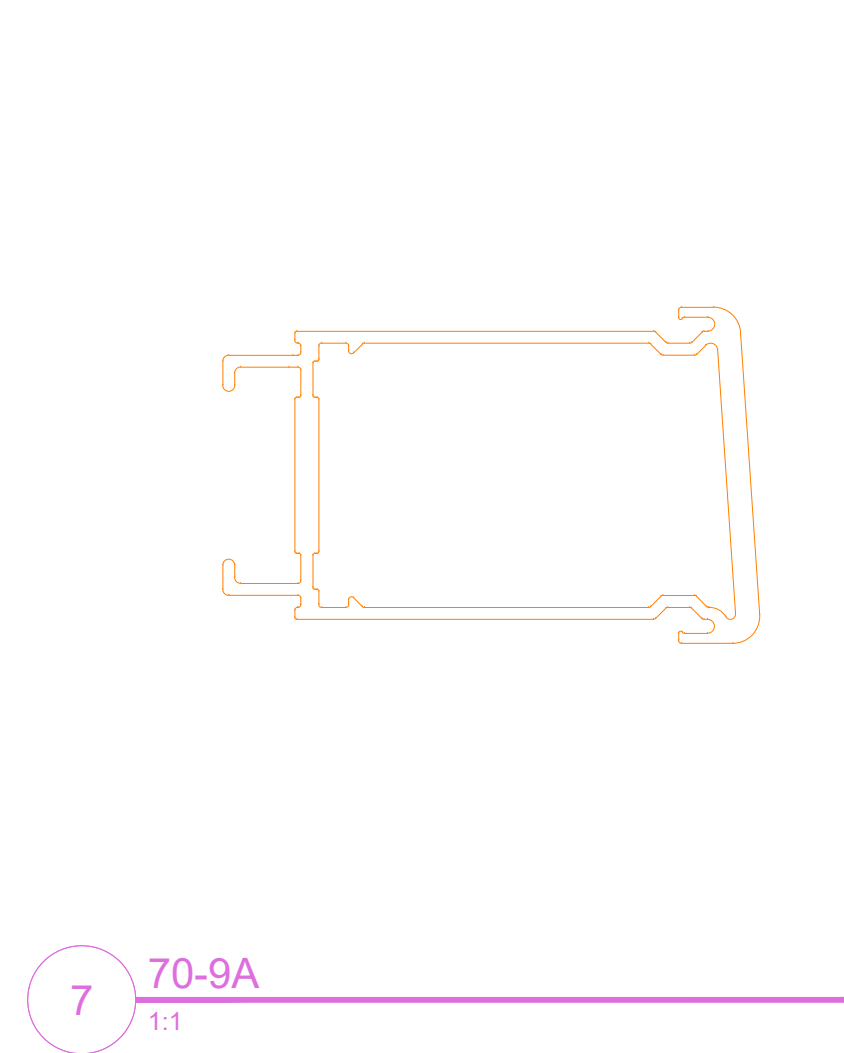
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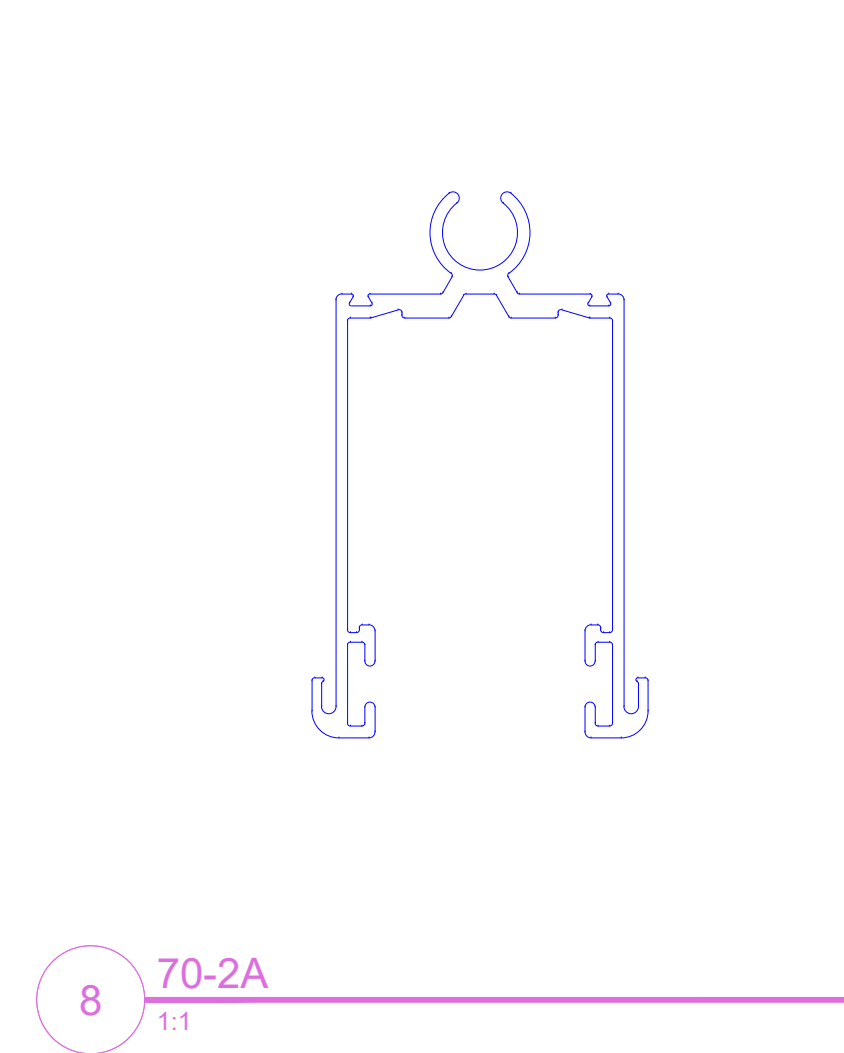
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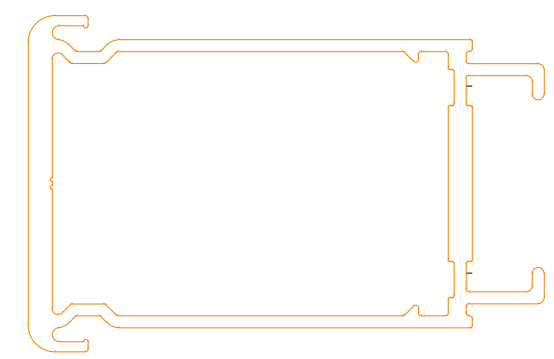
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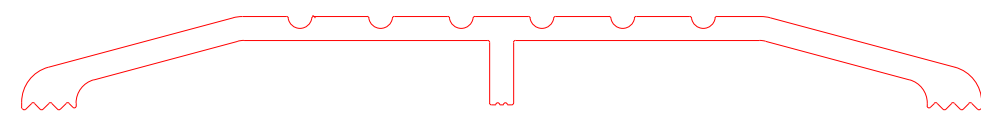
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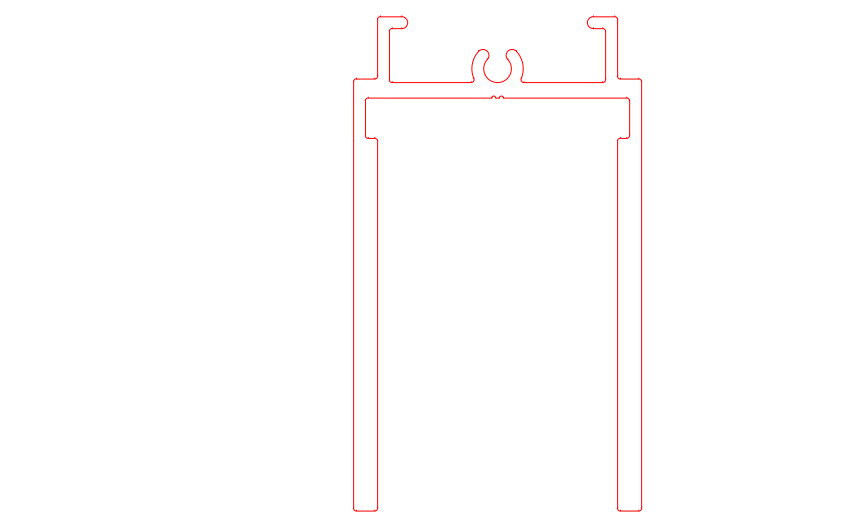
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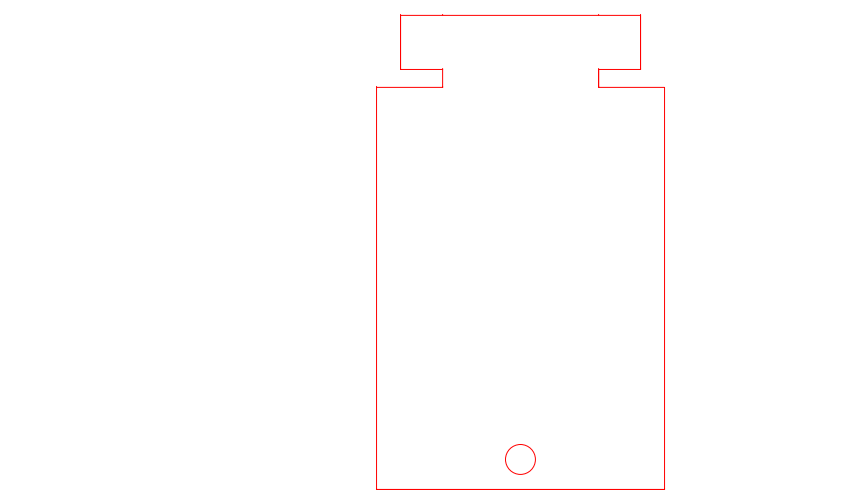
9 70-1A  
1:1



10 THRS-2  
1:1



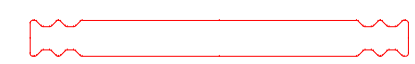
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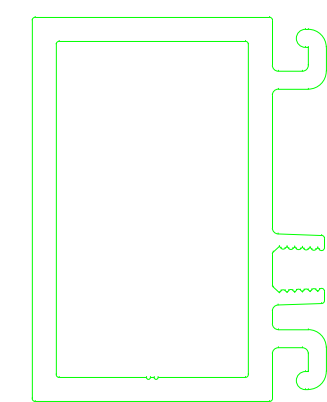
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14 PT-00-0514  
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18 AF-800-030  
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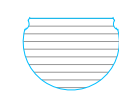
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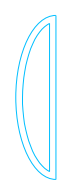
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22 AF-800-031  
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23 SL-V-01  
4:1



24 X1153HTSINGLE  
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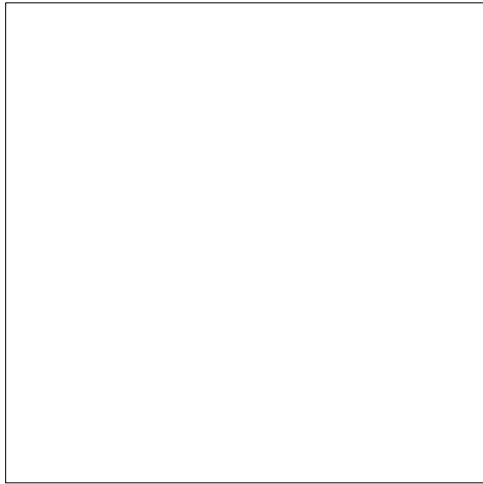
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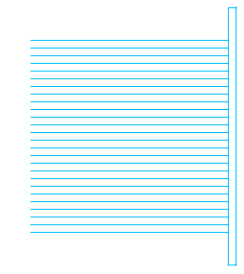


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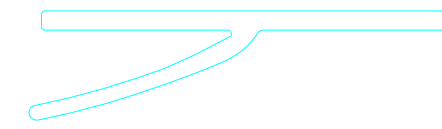
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PROJECT	18-7808

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SL-0001

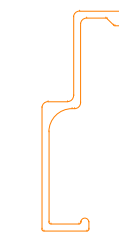
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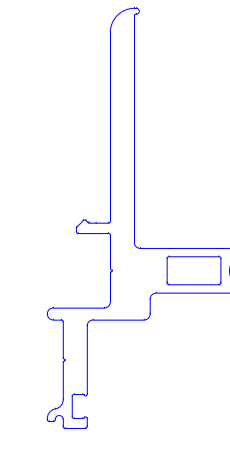
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27 5060B  
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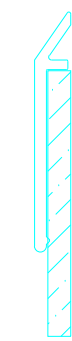
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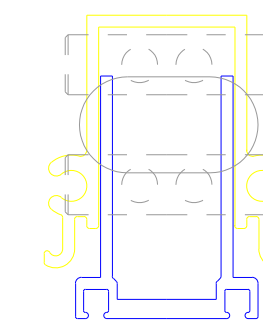
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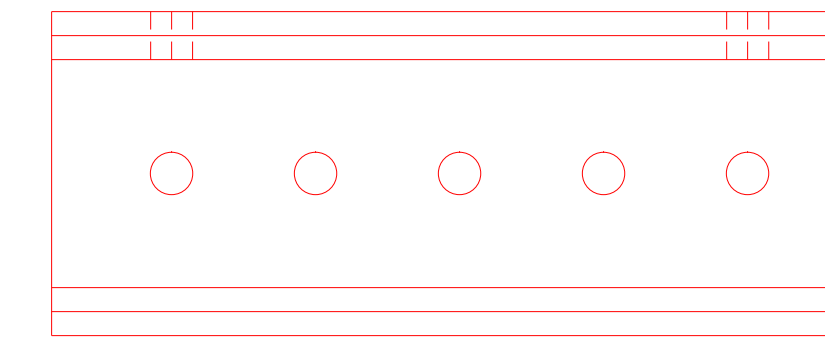
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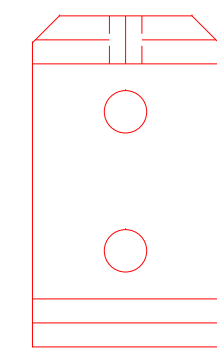
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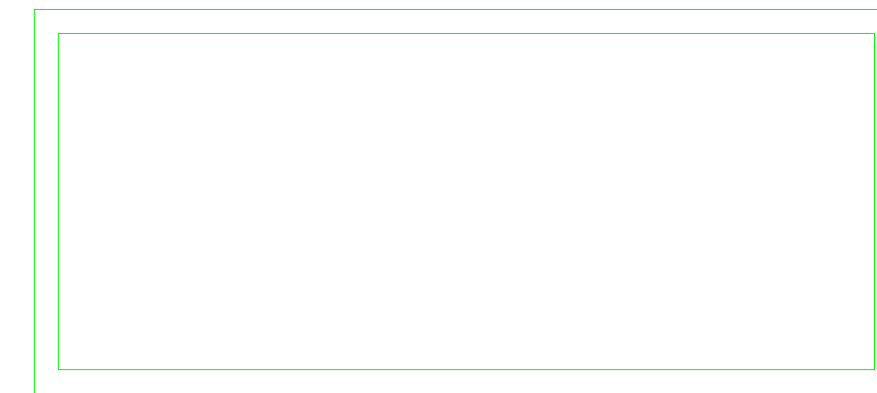
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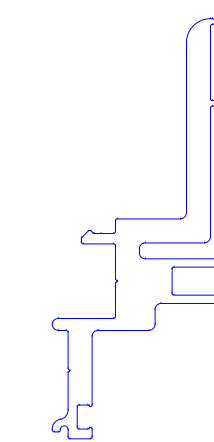
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44 T-8  
1:1



45 T-9  
1:1



47 70-802  
1:1

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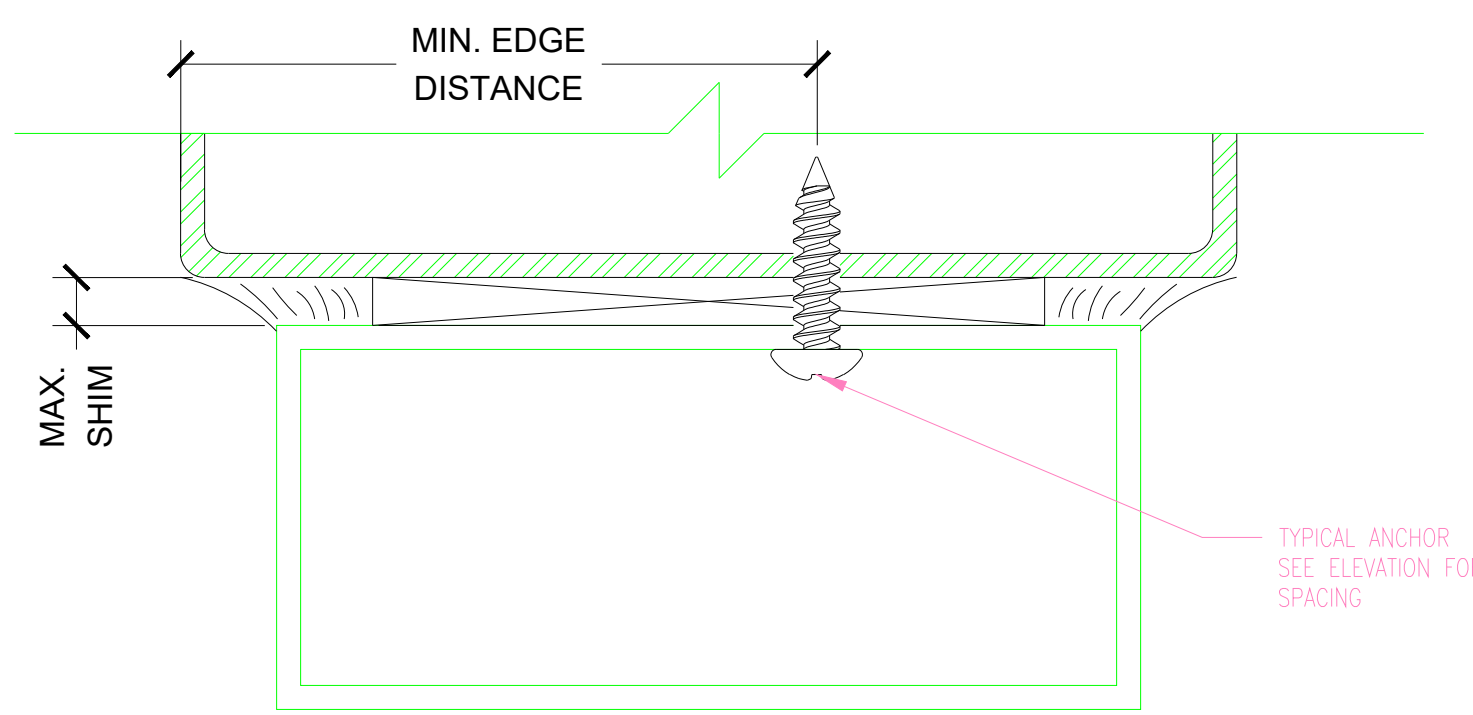
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D-4

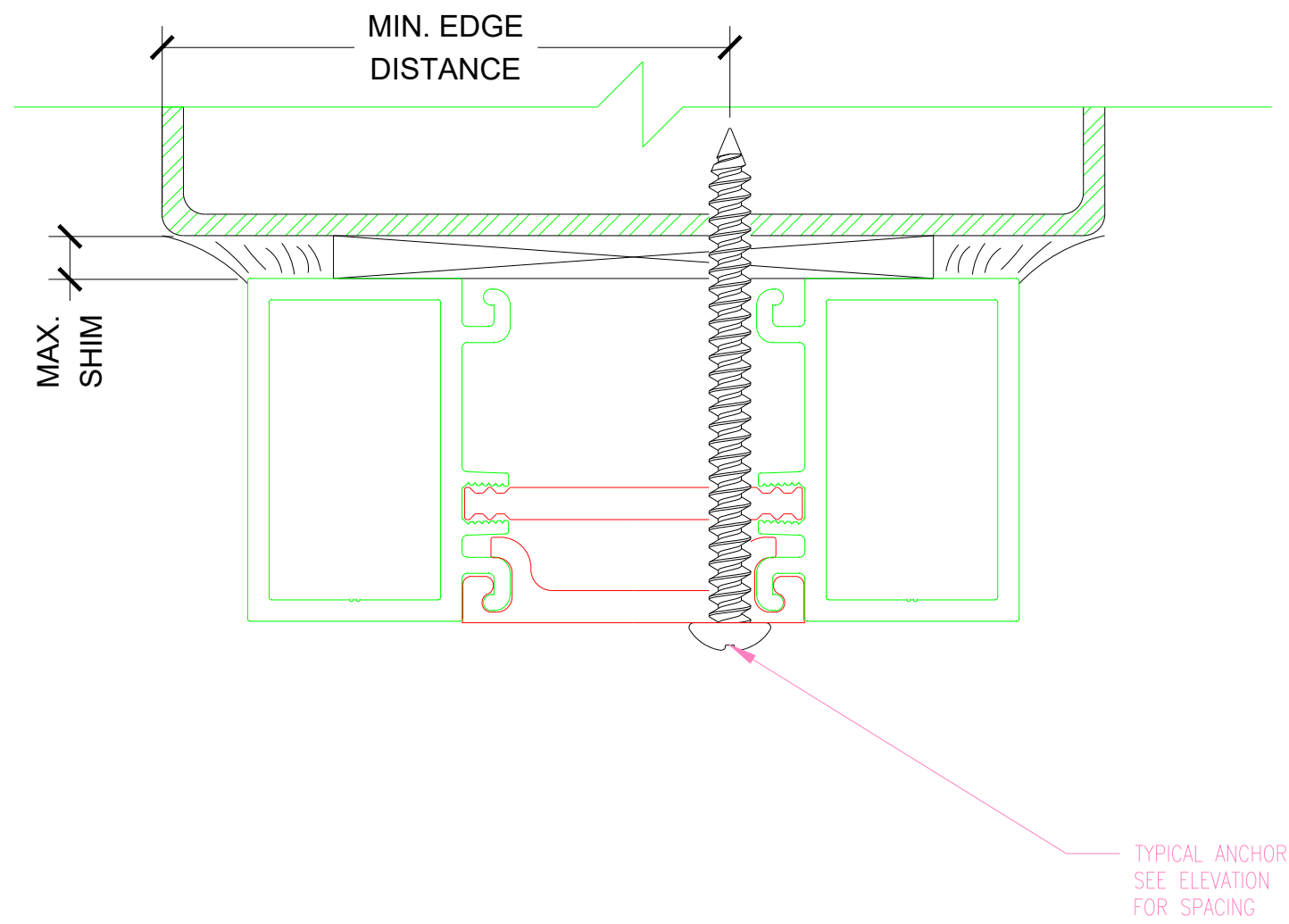




**#14 SMS OR TEKS SELF DRILLING SCREW (GRADE 5)**

- STEEL  $\frac{1}{8}$ " MIN. THICKNESS, A36 MIN. (HEAD/JAMB)
- ALUMINUM  $\frac{1}{4}$ " MIN. THICKNESS, 6063-T5 MIN. (HEAD/JAMB)
- MIN. EDGE DISTANCE  $\frac{3}{4}$ "
- $\frac{1}{2}$ " MAX SHIM

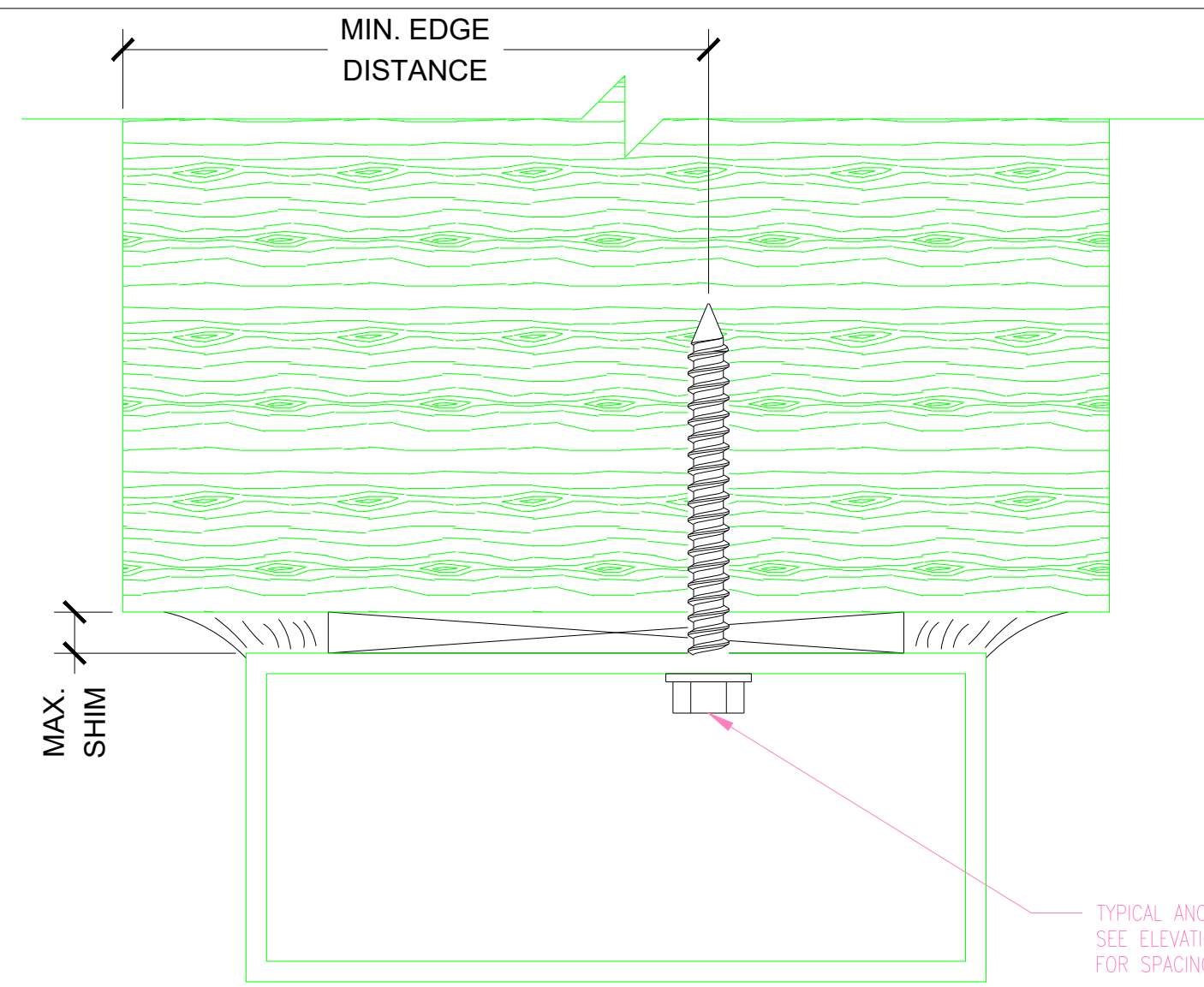
**K** #14 SMS OR TEKS SELF DRILLING SCREW (GRADE 5)  
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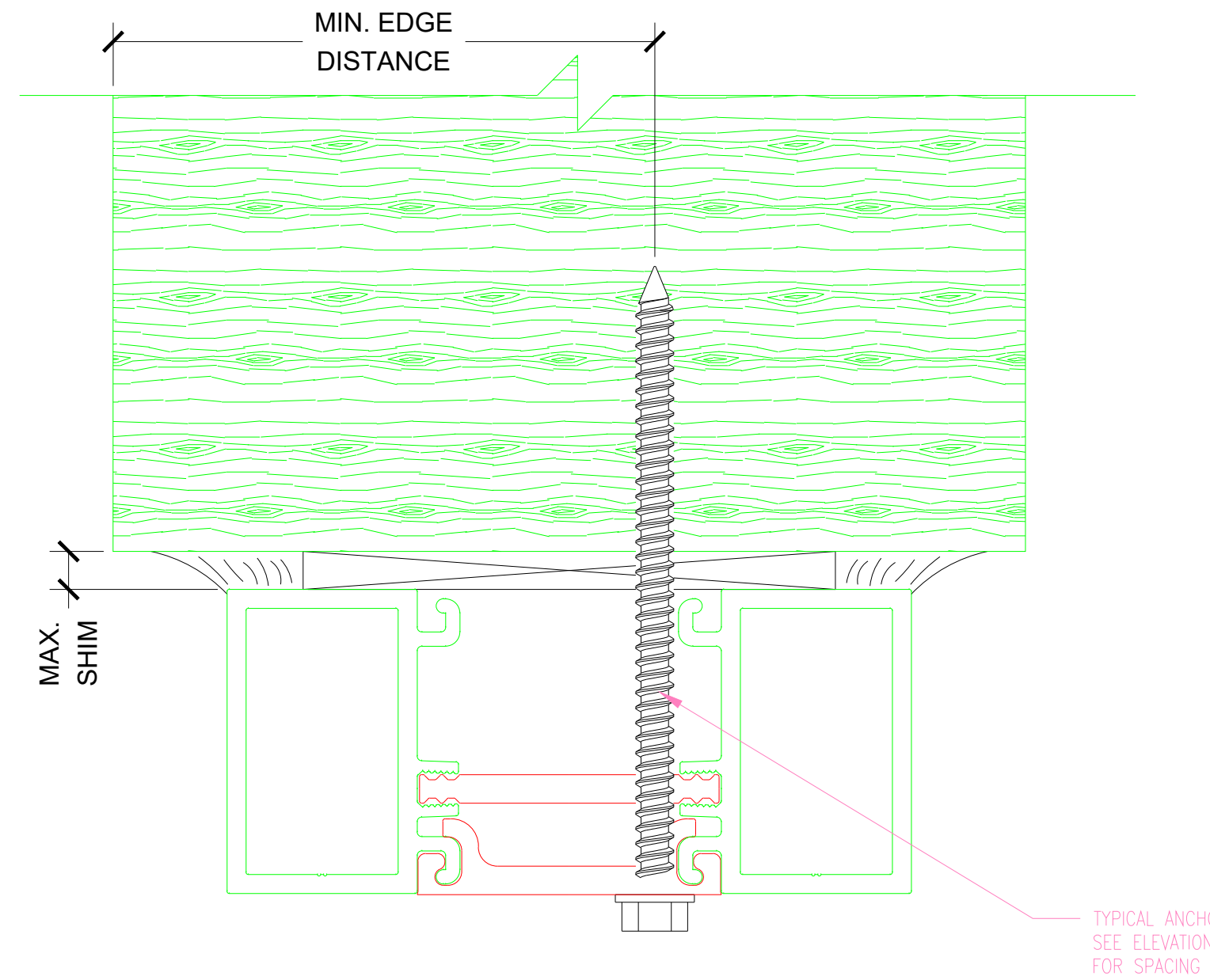
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**$\frac{1}{4}$ " DIA. ELCO ULTRACON (Fu = 177 KSI, Fy = 155 KSI)**

- CONCRETE:  $f_c = 3$  KSI MIN. (HEAD/SILL OR JAMB)
- MASONRY:  $f_c = 2$  KSI MIN. (JAMB ONLY)
- WOOD: SG = 0.55 MIN. (HEAD/JAMB)
- MIN. EMBEDMENT 1-1/2"
- MIN. EDGE DISTANCE 1" WOOD, 2-1/2" CONCRETE OR MASONRY
- $\frac{1}{2}$ " MAX SHIM

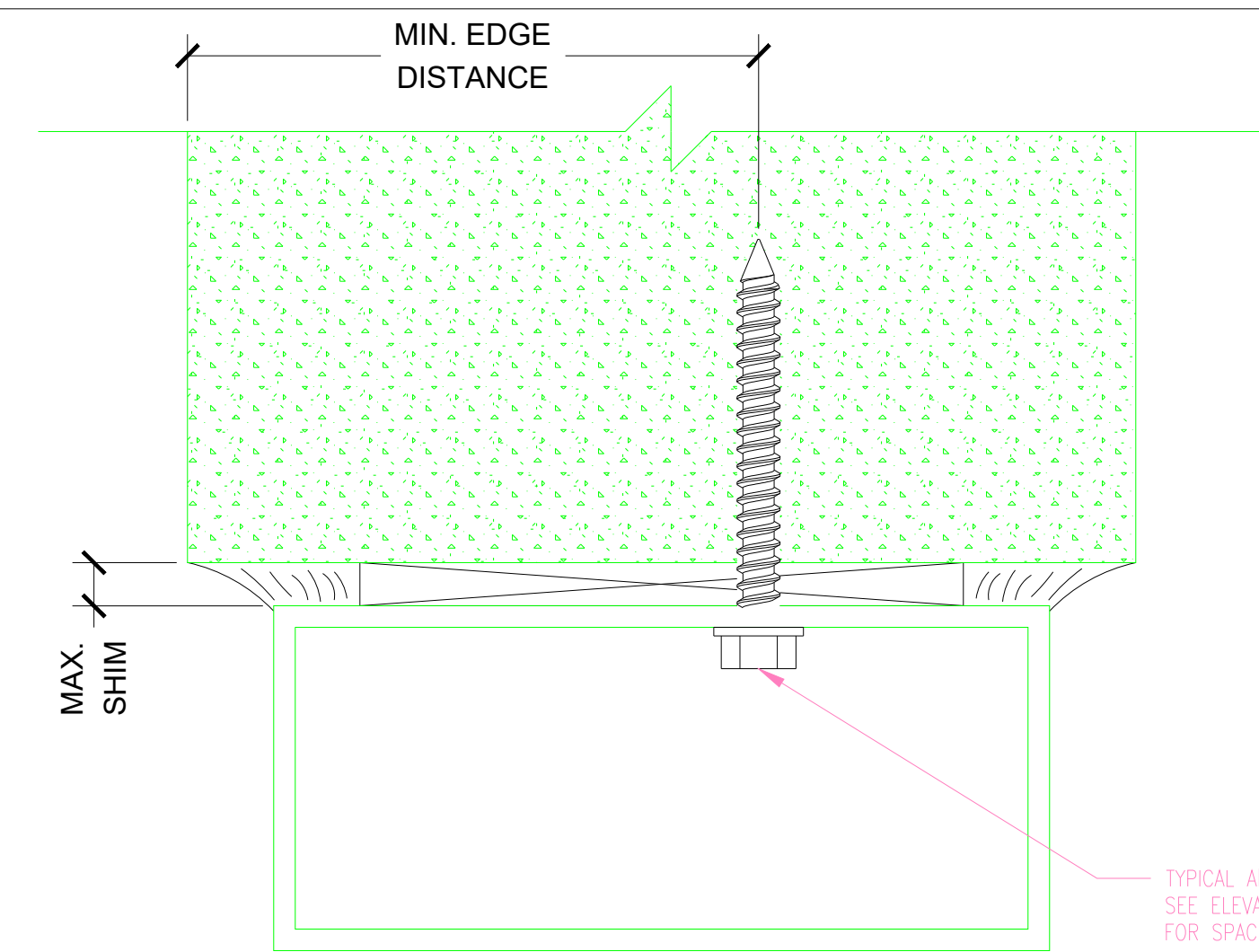
**K**  $\frac{1}{4}$ " DIA. ELCO ULTRACON (Fu = 177 KSI, Fy = 155 KSI)  
1:1



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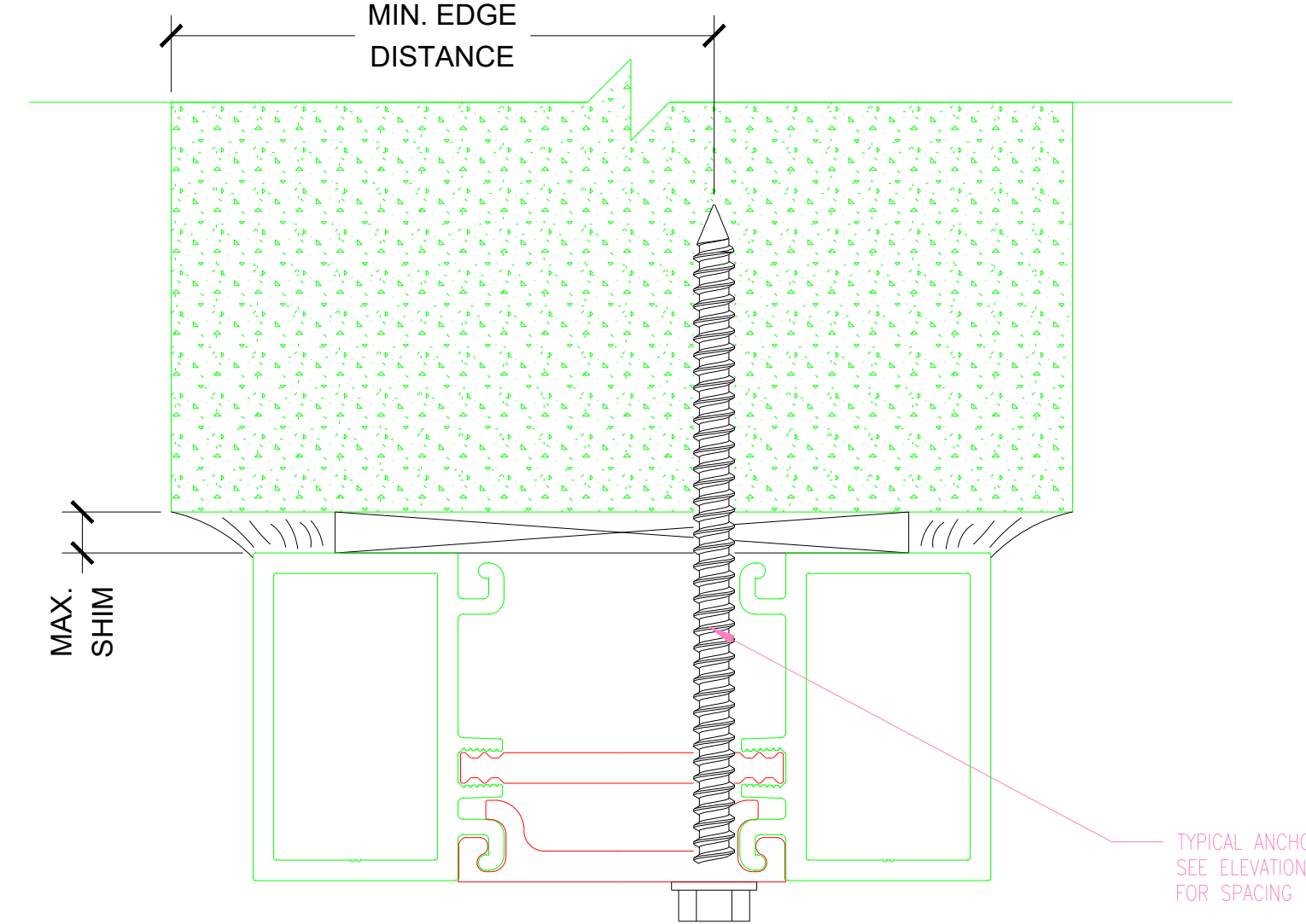
**K**  $\frac{1}{4}$ " DIA. ELCO ULTRACON (Fu = 177 KSI, Fy = 155 KSI)  
1:1



**$\frac{1}{4}$ " DIA. ITW TAPCON (Fu = 120 KSI, Fy = 92 KSI)**

- CONCRETE:  $f_c = 3$  KSI MIN. (HEAD/SILL OR JAMB)
- MASONRY:  $f_c = 2$  KSI MIN. (JAMB ONLY)
- WOOD: SG = 0.55 MIN. (HEAD/JAMB)
- MIN. EMBEDMENT 1-1/2"
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- $\frac{1}{2}$ " MAX SHIM

**K**  $\frac{1}{4}$ " DIA. TAPCON (Fu = 120 KSI, Fy = 92 KSI)  
1:1



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**K**  $\frac{1}{4}$ " DIA. TAPCON (Fu = 120 KSI, Fy = 92 KSI)  
1:1

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REVISION	DATE	DESCRIPTION
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SL-SERIES FRP/ ALUMINUM HYBRID IN-SWING/  
OUT-SWING DOOR



860 S. WILLIAMS STREET, P. O. BOX 6 DECATUR, MI 49045, WWW.SPECIAL-LITE.COM

A-1	
DATE	6/12/18
SCALE	1:1
DRAWN	A.E.
PROJECT	18-7808
DRAWING NO. SL-0001	
9 OF 11	

**BILL OF MATERIALS**

ITEM	PART #	MATERIAL	QTY.	DESCRIPTION	MANUFACTURER
1	660102KL10-U26H	N/A	1	ORACODE 660 AMERICAN STANDARD 1" MORTISE LOCK	DORMA KABA
2	PT-07-0306	6063-T5	2	PA. CLOSER REINFORCEMENT	SPECIAL-LITE
3	SC-12	410SS	AS REQUIRED	8-15 X 5/8" PHSMS	SPECIAL-LITE
4	PT-07-0342	6063-T5	4	FLUSH DOOR TIE ROD CLIP	SPECIAL-LITE
5	SC-103	STEEL	4	3/8"-16 HEX SERRATED FLANGE NUT 3/4" O.D.	SPECIAL-LITE
6	N/A	STEEL	2	3/8"-16 STEEL TIE ROD	SPECIAL-LITE
7	70-9A	6063-T5	1	BEVEL STILE	SPECIAL-LITE
8	70-2A	6063-T6	2	TOP & BOTTOM RAIL	SPECIAL-LITE
9	70-1A	6063-T6	1	SQUARE EDGE STILE	SPECIAL-LITE
10	THRS-2	6063-T5	1	FLAT THRESHOLD 1/2" X 5"	SPECIAL-LITE
11	PT-07-0317	6063-T5	1	LOCK REINFORCEMENT	SPECIAL-LITE
12	PT-07-0300	6061	2	RETAINER CLIP AND PLUG FOR LOCK REINFORCEMENT	SPECIAL-LITE
13	SC-23	410SS	AS REQUIRED	10-16 X 3/4" PHILLIPS U/C FLAT HEAD THREAD FORMING SCREW	SPECIAL-LITE
16	PT-00-0514	6061	2	KNOB AND MORTISE LOCK REINFORCING CLIP FOR FLUSH, MONUMENTAL DOORS & FRAMES	SPECIAL-LITE
15	N/A	N/A	N/A	EXISTING BUILDING	BY OTHERS
16	DOW005	SILICONE	AS REQUIRED	DOW CORNING STRUCTURAL SILICONE CAULK	DOW CORNING
17	N/A	WOOD	AS REQUIRED	WOOD SHIMS	BY OTHERS
18	AF-800-030	FIBERGLASS	AS REQUIRED	THERMAL BREAK	SPECIAL-LITE
19	TB-454	6063-T5	AS REQUIRED	TBF BASE 0.125"	SPECIAL-LITE
20	DS-33	6063-T5	AS REQUIRED	DOOR STOP W/ INTEGRAL SEAL 5/8" X 1-3/4"	SPECIAL-LITE
21	SC-17	410SS	AS REQUIRED	8-18 X 1-1/4" PHILLIPS #6 TRIM OVAL HEAD THREAD FORMING SCREW	SPECIAL-LITE
22	AF-800-031	FIBERGLASS	AS REQUIRED	POCKET FILLER	SPECIAL-LITE
23	SL-V-01	EPDM	AS REQUIRED	0.132" DIAMETER CORD EPDM FIRM SEAL BEAD W/SLIP COATING	TOTAL PLASTICS
24	X1153HTSINGLE	EPDM	AS REQUIRED	D-SHAPED EPDM SPONGE RUBBER SEAL	TRIM-LOK
25	SC-26	410SS	AS REQUIRED	12-24 X 1/2" PHILLIPS U/C FHMS	SPECIAL-LITE
26	350360GYDPS1	PILE	AS REQUIRED	WEATHER STRIPING PILE	AMESBURY GROUP
27	5060B	SILICONE	AS REQUIRED	POSITIVE PRESSURE SILICONE FIN SMOKE SEAL	NGP
28	SL-11HD	ALUMINUM	1	SELECT PRODUCTS CONTINUOUS HINGE	SELECT PRODUCTS
29	N/A	VARIES.	AS REQUIRED	DOOR FACE SHEET SEE PAGE 1 FOR OPTIONS	SPECIAL-LITE
30	N/A	POLYURETHANE	AS REQUIRED	POLYURETHANE FOAM	SPECIAL-LITE
31	70-800	6063-T5	AS REQUIRED	SECURELITE SNAP	SPECIAL-LITE
32	70-801	6063-T5	AS REQUIRED	SECURELITE 1" GLASS KIT W/ 1" BITE	SPECIAL-LITE
33	N/A	STEEL	AS REQUIRED	10-32 X 1-3/4" PHMS	SPECIAL-LITE
34	N/A	STEEL	AS REQUIRED	10-32 HEX NUT	SPECIAL-LITE
35	N/A	N/A	1	1/8" CLEAR X 0.075" STORMGLASS INTERLAYER X 1/8" PPG SOLARBAN 60 ON CLEAR LOW-E #4 X 13/32" AIR SPACE X 1/4" CLEAR	OLDCASTLE BUILDING ENVELOPE
36	70-53	6063-T5	1	COVER CAP	SPECIAL-LITE
37	200NA	VARIES	1	ANODIZED ALUMINUM NEOPRENE DOOR SWEEP	NGP
38	N/A	SS	AS REQUIRED	#6 X 3/4" PHSMS	NGP
39	SL-301	VARIES	1	ADJUSTABLE BOTTOM BRUSH	SPECIAL-LITE

REVISION #	DATE	DESCRIPTION

SL-SERIES FRP/ ALUMINUM HYBRID IN-SWING/ OUT-SWING DOOR



FLORIDA APPROVAL #:  
27723.1

<b>B.O.M.-1</b>	
DATE	6/12/18
SCALE	N/A
DRAWN	A.E.
PROJECT	18-7808
DRAWING NO. <b>SL-0001</b>	
<b>10 OF 11</b>	

**BILL OF MATERIALS**

ITEM	PART #	MATERIAL	QTY.	DESCRIPTION	MANUFACTURER
40	SC-109	410SS	AS REQUIRED	12-11 X 1-1/2" PFHWS	SPECIAL-LITE
41	SC-25	410SS	AS REQUIRED	10-16 X 3/4" PHILLIPS TRUSS HEAD SCREW	SPECIAL-LITE
42	PT-12-0131	6063-T5	2	FRAME ANCHOR FOR 2" X 4-1/2" TUBE FRAME	SPECIAL-LITE
43	PT-12-2000	6063-T5	4	FRAME ANCHOR FOR 2" X 4-1/2" TB FRAME	SPECIAL-LITE
44	T-8	6063-T5	3	TUBE FRAME 2" X 4-1/2"	SPECIAL-LITE
45	T-9	6063-T5	1	TUBE FRAME 4-1/2" X 4-1/2"	SPECIAL-LITE
46	N/A	N/A	N/A	1/8" CLEAR X 0.075" STORMGLASS INTERLAYER X 1/8" CLEAR	OLDCASTLE BUILDING ENVELOPE
47	70-802	6063-T5	AS REQUIRED	SECURELITE 1/4" GLASS KIT W/ 1" BITE	SPECIAL-LITE

<b>REVISION</b>	DATE								
	#								

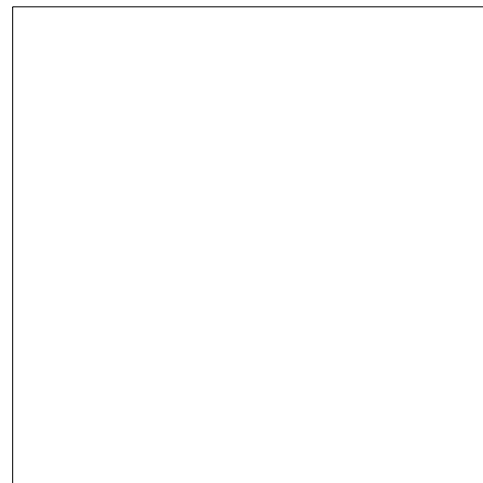
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SL-SERIES FRP/ ALUMINUM HYBRID IN-SWING/  
OUT-SWING DOOR



860 S. WILLIAMS STREET, P. O. BOX 6 DECATUR, MI 49045, WWW.SPECIAL-LITE.COM

FLORIDA APPROVAL #:  
27723.1



<b>B.O.M.-2</b>	
DATE	6/12/18
SCALE	N/A
DRAWN	A.E.
PROJECT	18-7808
DRAWING NO. <b>SL-0001</b>	
<b>11 OF 11</b>	