76 Illuminated Wave

Gen 5

Installation Guide
PN #636004

This product is designed to fit a 76 36" to 48" Canopy. Please verify that your site fits these specifications before beginning. If not, please communicate with the appropriate contacts.

Read through all of the instructions prior to beginning installation and verify (using the packing list) that all parts have been received and in good condition.

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PLEASE NOTE

The packing lists below will vary per site, depending on what is needed. These lists are to give the installer a guideline of what should be received from LSI. Please make sure to check the packing list included with each shipment for more accurate verification.

PACKING LIST PER ILLUMINATED WAVE – 36" FASCIA

36"-36' Wave

Left Hand (per wave) – Kit PN 605929

QTY.	PART #	DESCRIPTION	FINISH
1	605904	Back Panel Set w/ Orange LEDs & Extrusions – (5) panels	Aluminum
1	580840	Orange Flex Face w/ Clips	Orange Flex
1	583888	LED Power Source Assembly – (1) 60W	
1	605920	Trim Kit	Silver
1	*Kit PN 585488A*	*Hardware Kit*	*Kit Item*
220	239724	Drill Tek Screw #12x7/8	Zinc Plated
240	580768	PPH Drill Screw #6x3/8	Zinc Plated
2	244769	Snap Bushing 7/8	Black

Right Hand (per wave) – Kit PN 605928

QTY.	PART #	DESCRIPTION	FINISH
1	605902	Back Panel Set w/ Orange LEDs & Extrusions – (5) panels	Aluminum
1	580828	Orange Flex Face	Orange Flex
1	583888	LED Power Source Assembly – (1) 60W	
1	605919	Trim Kit	Aluminum
1	*Kit PN 585488A*	*Hardware Kit*	*Kit Item*
220	239724	Drill Tek Screw #12x7/8	Zinc Plated
240	580768	PPH Drill Screw #6x3/8	Zinc Plated
2	244769	Snap Bushing 7/8	Black

36"-45' Wave

Left Hand (per wave) – Kit PN 605932

QTY.	PART #	DESCRIPTION	FINISH
1	605906	Back Panel Set w/ Orange LEDs & Extrusions– (6) panels	Aluminum
1	580847	Orange Flex Face w/ Clips	Orange Flex
1	570610	LED Power Source Assembly – (2) 60W	
1	605922	Trim Kit	Aluminum
1	*Kit PN 585488A*	*Hardware Kit*	*Kit Item*
220	239724	Drill Tek Screw #12x7/8	Zinc Plated
240	580768	PPH Drill Screw #6x3/8	Zinc Plated
2	244769	Snap Bushing 7/8	Black

Right Hand (per wave) – Kit PN 605930

QTY.	PART #	DESCRIPTION	FINISH
1	605905	Back Panel Set w/ Orange LEDs & Extrusions – (6) panels	Aluminum
1	580844	Orange Flex Face w/ Clips	Orange Flex
1	570610	LED Power Source Assembly – (2) 60W	
1	605921	Trim Kit	Aluminum
1	*Kit PN 585488A*	*Hardware Kit*	*Kit Item*
220	239724	Drill Tek Screw #12x7/8	Zinc Plated
240	580768	PPH Drill Screw #6x3/8	Zinc Plated
2	244769	Snap Bushing 7/8	Black

36"-53' Wave

Left Hand (per wave) – Kit PN 605934

QTY.	PART #	DESCRIPTION	FINISH
1	605910	Back Panel Set w/ Orange LEDs & Extrusions – (6) panels	Aluminum
1	580857	Orange Flex Face w/ Clips	Orange Flex
1	570610	LED Power Source Assembly – (2) 60W	
1	605925	Trim Kit	Aluminum
1	*Kit PN 585488A*	*Hardware Kit*	*Kit Item*
220	239724	Drill Tek Screw #12x7/8	Zinc Plated
240	580768	PPH Drill Screw #6x3/8	Zinc Plated
2	244769	Snap Bushing 7/8	Black

Right Hand (per wave) – Kit PN 605933

QTY.	PART #	DESCRIPTION	FINISH
1	605909	Back Panel Set w/ Orange LEDs & Extrusions – (6) panels	Aluminum
1	580852	Orange Flex Face w/ Clips	Orange Flex
1	570610	LED Power Source Assembly – (2) 60W	
1	605924	Trim Kit	Aluminum
1	*Kit PN 585488A*	*Hardware Kit*	*Kit Item*
220	239724	Drill Tek Screw #12x7/8	Zinc Plated
240	580768	PPH Drill Screw #6x3/8	Zinc Plated
2	244769	Snap Bushing 7/8	Black

PACKING LIST PER WAVE – 48" FASCIA
48"-36' Wave

Left Hand (per wave) – Kit PN 605936

QTY.	PART #	DESCRIPTION	FINISH
1	605912	Back Panel Set w/ Orange LEDs & Extrusions – (6) panels	Aluminum
1	580967	Orange Flex Face w/ Clips	Orange Flex
1	583888	LED Power Source Assembly – (1) 60W	
1	605920	Trim Kit	Aluminum
1	*Kit PN 585488A*	*Hardware Kit*	*Kit Item*
220	239724	Drill Tek Screw #12x7/8	Zinc Plated
240	580768	PPH Drill Screw #6x3/8	Zinc Plated
2	244769	Snap Bushing 7/8	Black

Right Hand (per wave) – Kit PN 605935

QTY.	PART #	DESCRIPTION	FINISH
1	605911	Back Panel Set w/ Orange LEDs & Extrusions– (6) panels	Aluminum
1	580946	Orange Flex Face w/ Clips	Orange Flex
1	583888	LED Power Source Assembly – (1) 60W	
1	605919	Trim Kit	Aluminum
1	*Kit PN 585488A*	*Hardware Kit*	*Kit Item*
220	239724	Drill Tek Screw #12x7/8	Zinc Plated
240	580768	PPH Drill Screw #6x3/8	Zinc Plated
2	244769	Snap Bushing 7/8	Black

48"-45' Wave

Left Hand (per wave) – Kit PN 605938

QTY.	PART #	DESCRIPTION	FINISH
1	605916	Back Panel Set w/ Orange LEDs & Extrusions– (6) panels	Aluminum
1	580971	Orange Flex Face w/ Clips	Orange Flex
1	570610	LED Power Source Assembly – (2) 60W	
1	605922	Trim Kit	Aluminum
1	*Kit PN 585488A*	*Hardware Kit*	*Kit Item*
220	239724	Drill Tek Screw #12x7/8	Zinc Plated
240	580768	PPH Drill Screw #6x3/8	Zinc Plated
2	244769	Snap Bushing 7/8	Black

Right Hand (per wave) – Kit PN 605937

QTY.	PART #	DESCRIPTION	FINISH
1	605914	Back Panel Set w/ Orange LEDs & Extrusions– (6) panels	Aluminum
1	580969	Orange Flex Face w/ Clips	Orange Flex
1	570610	LED Power Source Assembly – (2) 60W	
1	605921	Trim Kit	Aluminum
1	*Kit PN 585488A*	*Hardware Kit*	*Kit Item*
220	239724	Drill Tek Screw #12x7/8	Zinc Plated
240	580768	PPH Drill Screw #6x3/8	Zinc Plated
2	244769	Snap Bushing 7/8	Black

48"-53' Wave

Left Hand (per wave) – Kit PN 605941

QTY.	PART #	DESCRIPTION	FINISH
1	605918	Back Panel Set w/ Orange LEDs & Extrusions – (6) panels	Aluminum
1	580976	Orange Flex Face w/ Clips	Orange Flex
1	570610	LED Power Source Assembly – (2) 60W	
1	605925	Trim Kit	Aluminum
1	*Kit PN 585488A*	*Hardware Kit*	*Kit Item*
220	239724	Drill Tek Screw #12x7/8	Zinc Plated
240	580768	PPH Drill Screw #6x3/8	Zinc Plated
2	244769	Snap Bushing 7/8	Black

Right Hand (per wave) – Kit PN 605939

QTY.	PART #	DESCRIPTION	FINISH
1	605917	Back Panel Set w/ Orange LEDs & Extrusions – (6) panels	Aluminum
1	580974	Orange Flex Face w/ Clips	Orange Flex
1	570610	LED Power Source Assembly – (2) 60W	
1	605924	Trim Kit	Aluminum
1	*Kit PN 585488A*	*Hardware Kit*	*Kit Item*
220	239724	Drill Tek Screw #12x7/8	Zinc Plated
240	580768	PPH Drill Screw #6x3/8	Zinc Plated
2	244769	Snap Bushing 7/8	Black

NOTE BEFORE CUTTING OR INSTALLING ANY ELEMENTS, FIELD VERIFY THE CANOPY DIMENSIONS!

Verification is <u>vital</u> in ensuring all canopy elements are installed properly

This product is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the product.

The location of the disconnect switch after installation shall comply with Article 600 (A)(1) of the National Electrical Code.

PLEASE REFER TO THE SITE SPECIFIC LAYOUTS/RENDERINGS FOR GUIDANCE WITH CUT PANELS AND ELECTRICAL WIRING

76 Wave Installation Guide

NOTE There are two different wave types – Illuminated and Vinyl

ILLUMINATED WAVE

Hardware

Name	Image	Application	Location
#10 x 2" Tek screw		Attaching back assembly to ACM	Back assembly panel into ACM

GEN 2 EXTRUSION W/ TUBE CROSS SECTION – DWG. 1

TOP COVER

#6 X 3/8" PHP DRILL SCREW (PAINT SILVER)

#10 X 3/4" TEK SCREW (6" O.C.)

#10 X 2" TEK SCREW

BACK SKIN WITH LED

#10 X 3/4" TEK SCREW (6" O.C.)

BOTTOM COVER
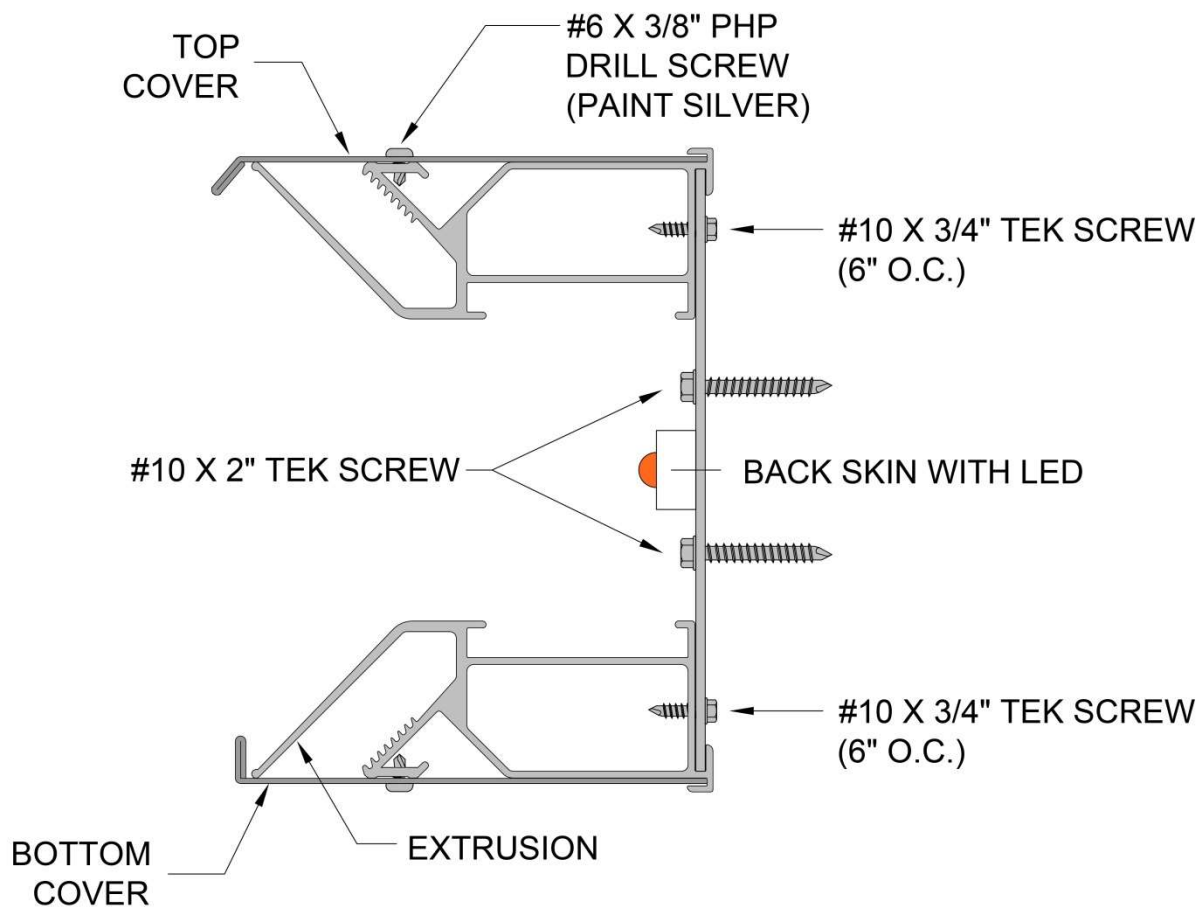
EXTRUSION

Wave Kits

36' Wave on 36"/48" Canopy

- (5) back panels assembled with orange LEDs & extrusion, labeled by section
- (1) orange flex face wave with clips attached & centerline marked
- (5) 96" .040 aluminum top cover panels
- (5) 96" .040 aluminum bottom cover panels
- (2) .040 aluminum end cover panels
- (1) Transco box w/ 1 60W power supply & 2 cables

A   **RF**

B

RF   **C**
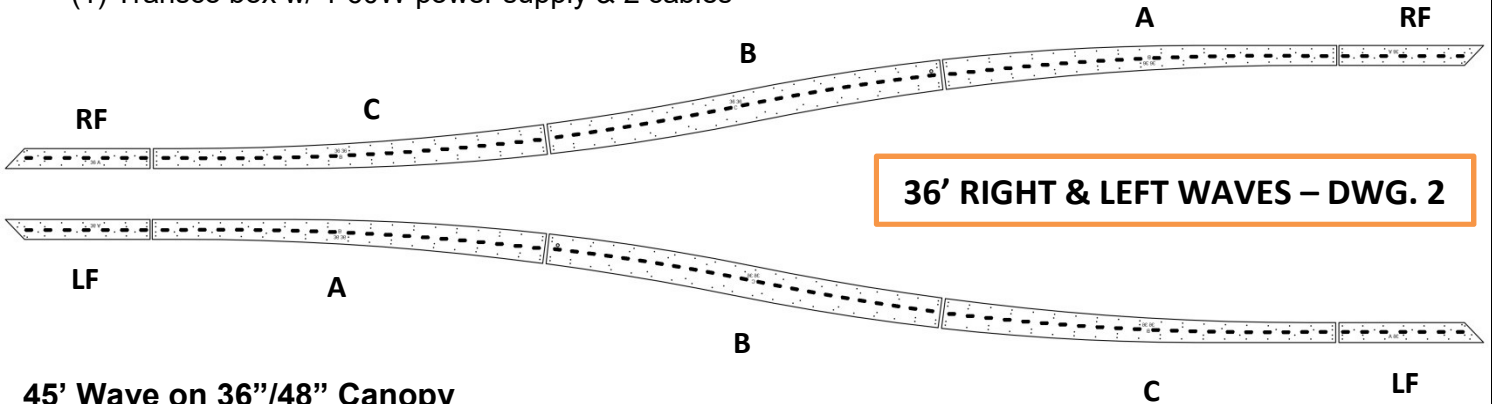
36' RIGHT & LEFT WAVES – DWG. 2

LF

A

B

C   **LF**

45' Wave on 36"/48" Canopy

- (6) back panels assembled with orange LEDs & extrusion, labeled by section
- (1) orange flex face wave with clips attached & centerline marked
- (6) 96" .040 aluminum top cover panels
- (6) 96" .040 aluminum bottom cover panels
- (2) .040 aluminum end cover panels
- (1) Transco box w/ 2 60W power supplies & 2 cables

B   **A**   **RF**

C

RF   **D**
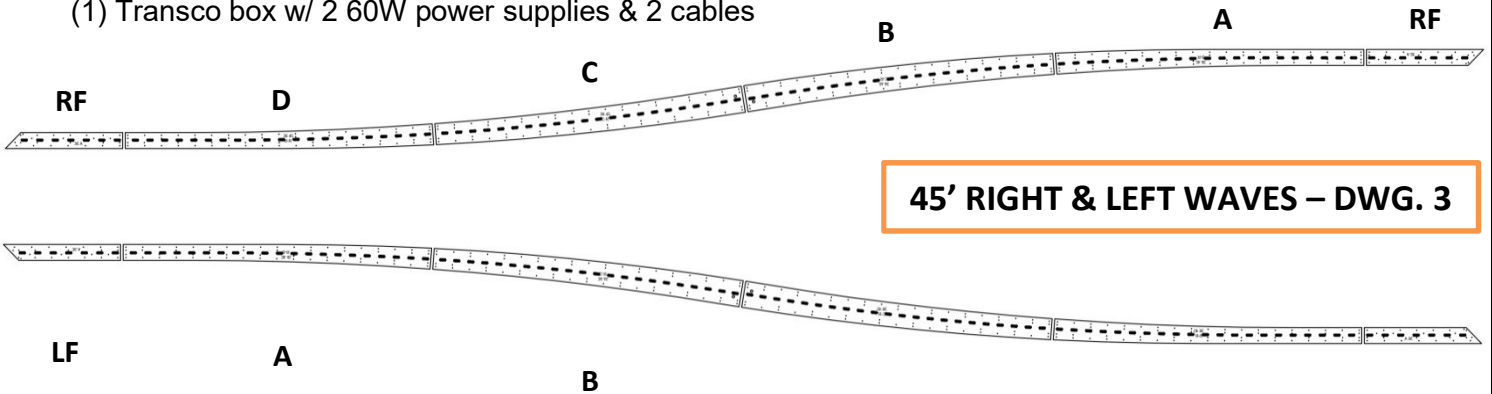
45' RIGHT & LEFT WAVES – DWG. 3

LF   **A**

B

C   **D**   **LF**

53' Wave on 36"/48" Canopy

- (7) back panels assembled with orange LEDs & extrusion, labeled by section
- (1) orange flex face wave with clips attached & centerline marked
- (7) 96" .040 aluminum top cover panels
- (7) 96" .040 aluminum bottom cover panels
- (2) .040 aluminum end cover panels
- (1) Transco box w/ 2 60W power supplies & 2 cables

C   **B**   **A**   **RF**

RF   **E**   **D**

53' RIGHT & LEFT WAVES – DWG. 4

LF   **A**   **B**   **C**   **D**   **E**   **LF**

LSi Graphic Solutions
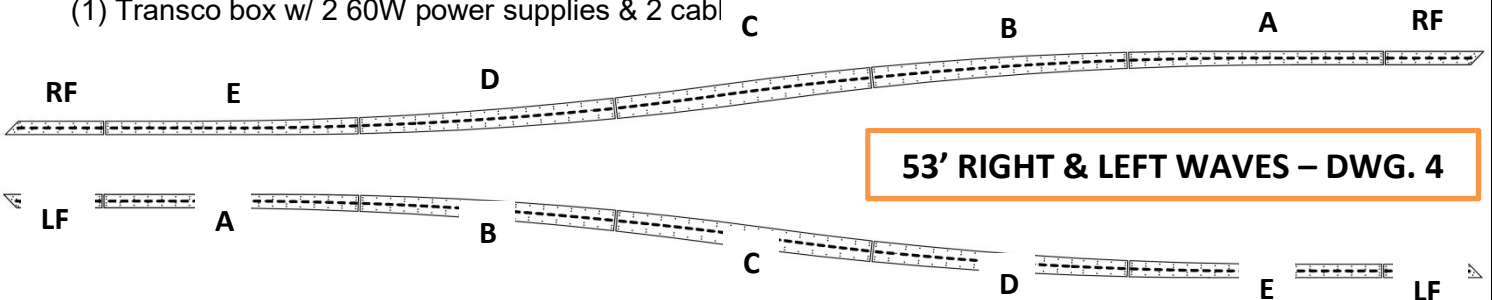
Assembly of the Illuminated Wave

Installers will receive labeled back panels with LEDs and extrusion attached.
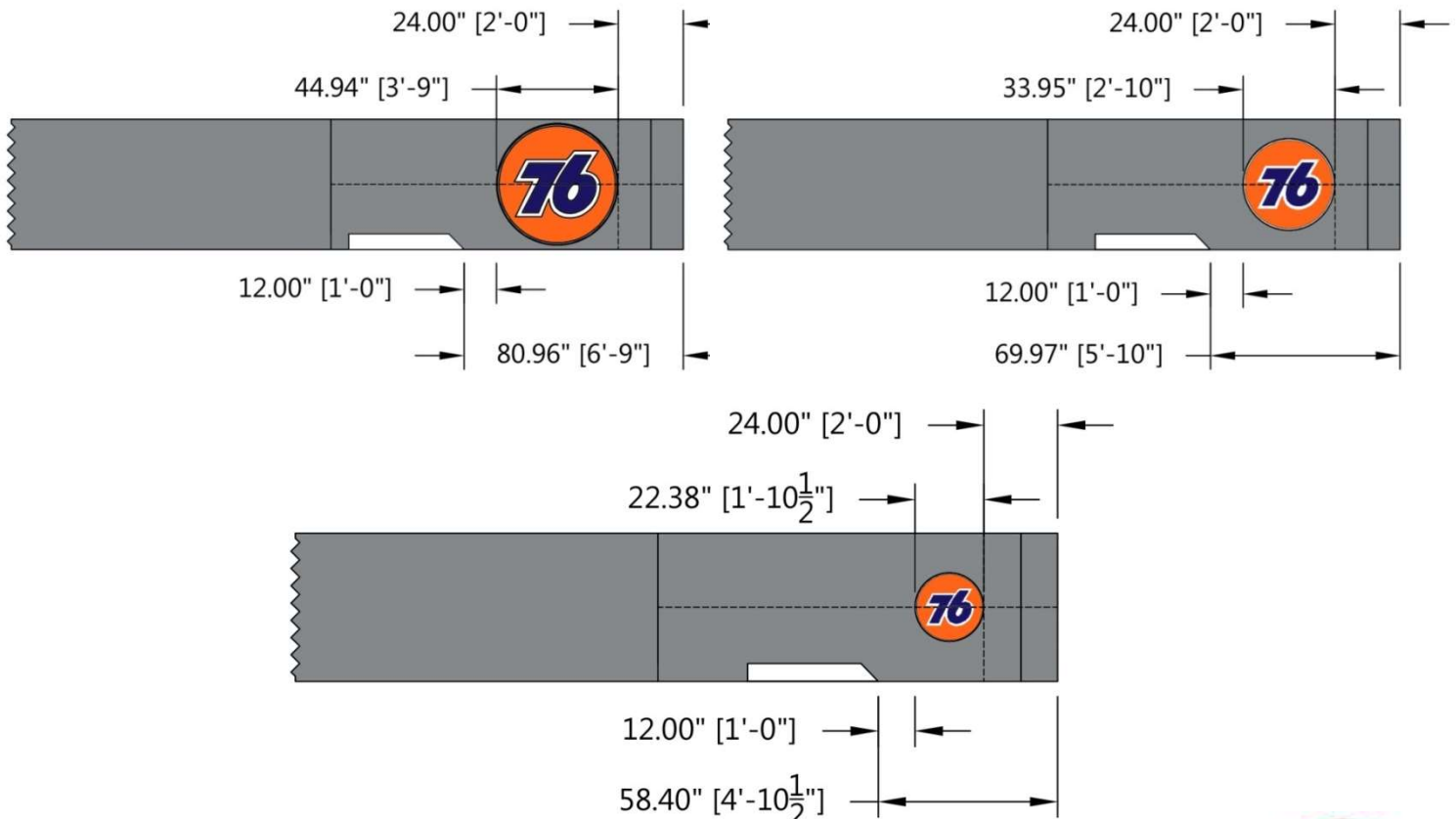
Please use the provided guides in regards to the extrusions for further details.

On the end sections, be sure to file the extrusion points down – not doing so could result in puncturing the flex face
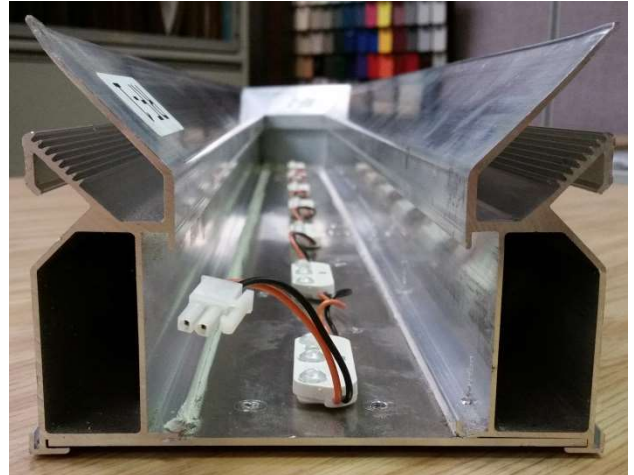
The first wave section to install (bottom tail of wave) will be bottom justified, set 12" distance from the edge of the logo.
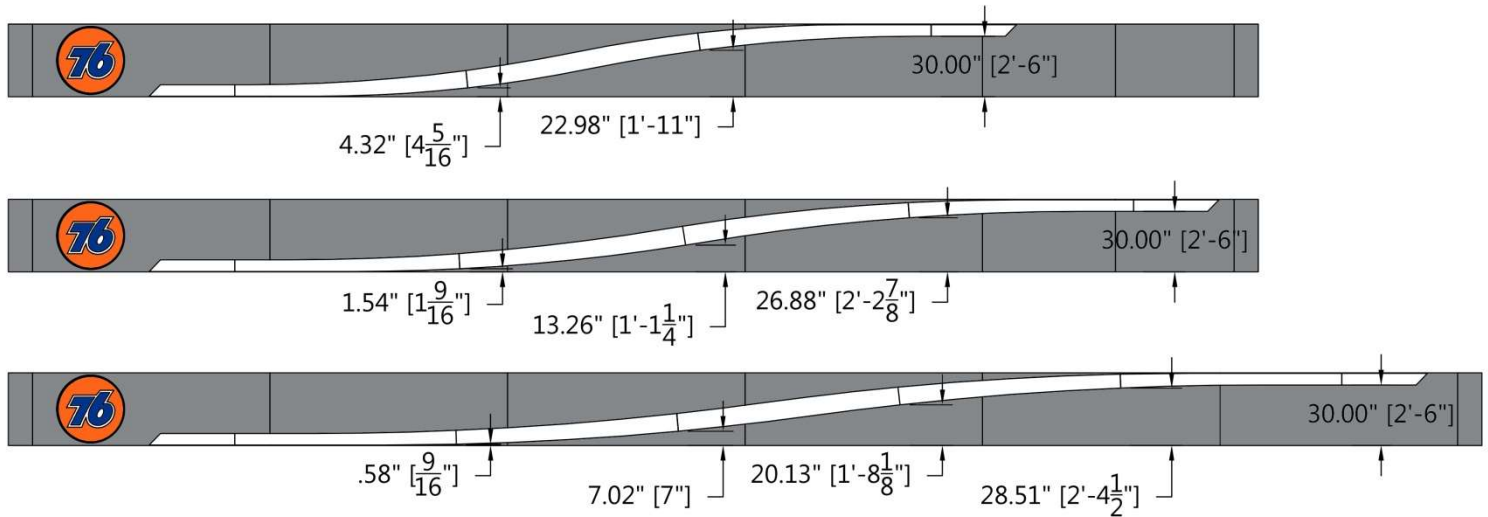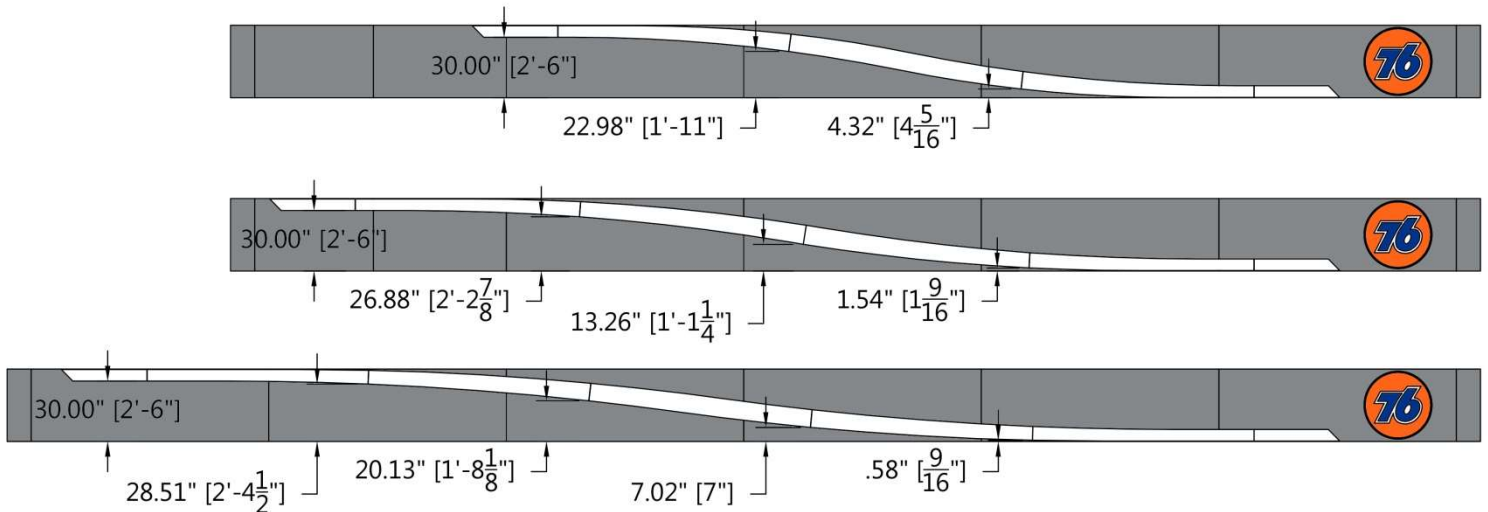
WAVE SECTION TO LOGO PLACEMENT – DWG. 5

24.00" [2'-0"]
44.94" [3'-9"]
12.00" [1'-0"]
80.96" [6'-9"]

24.00" [2'-0"]
33.95" [2'-10"]
12.00" [1'-0"]
69.97" [5'-10"]

24.00" [2'-0"]
22.38" [1'-10½"]
12.00" [1'-0"]
58.40" [4'-10½"]

Wave spacing and placement details are EXTREMELY important. If the cabinet is off by even $^1/_{16}$, this can offset the remainder of the wave.

36" CANOPY WAVES SECTION PLACEMENT – DWG. 6

RIGHT HAND WAVES

30.00" [2'-6"]

22.98" [1'-11"]

4.32" [$4\frac{5}{16}$"]

30.00" [2'-6"]

1.54" [$1\frac{9}{16}$"]   13.26" [1'-$1\frac{1}{4}$"]   26.88" [2'-$2\frac{7}{8}$"]

30.00" [2'-6"]

.58" [$\frac{9}{16}$"]   7.02" [7"]   20.13" [1'-$8\frac{1}{8}$"]   28.51" [2'-$4\frac{1}{2}$"]

LEFT HAND WAVES

30.00" [2'-6"]

22.98" [1'-11"]   4.32" [$4\frac{5}{16}$"]

30.00" [2'-6"]

26.88" [2'-$2\frac{7}{8}$"]   13.26" [1'-$1\frac{1}{4}$"]   1.54" [$1\frac{9}{16}$"]

30.00" [2'-6"]

28.51" [2'-$4\frac{1}{2}$"]   20.13" [1'-$8\frac{1}{8}$"]   7.02" [7"]   .58" [$\frac{9}{16}$"]

48" CANOPY WAVE SECTIONS PLACEMENT – DWG. 7

RIGHT HAND WAVES

5.98" [6"]   32.03" [2'-8$\frac{1}{16}$"]   42.00" [3'-6"]

2.02" [2"]   18.45" [1'-6$\frac{7}{16}$"]   37.38" [3'-1$\frac{3}{8}$"]   42.00" [3'-6"]
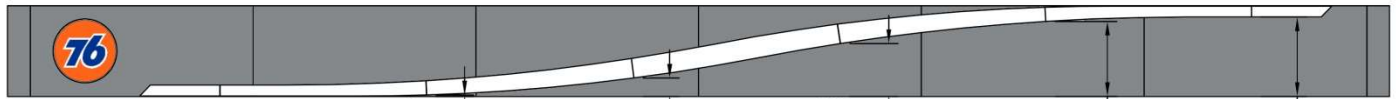
.75" [$\frac{3}{4}$"]   9.70" [9$\frac{11}{16}$"]   27.94" [2'-3$\frac{15}{16}$"]   39.69" [3'-3$\frac{11}{16}$"]   42.00" [3'-6"]

LEFT HAND WAVES
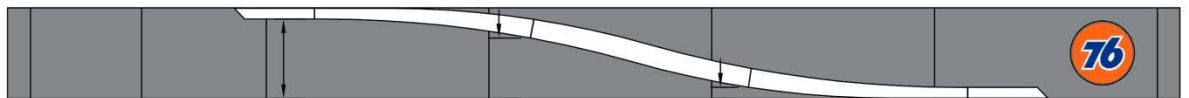
42.00" [3'-6"]   32.03" [2'-8$\frac{1}{16}$"]   5.98" [6"]
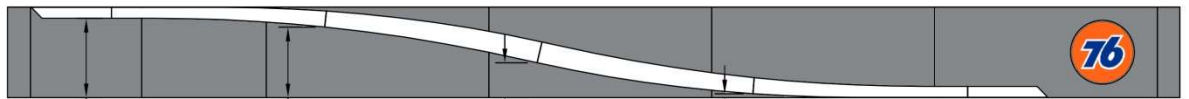
42.00" [3'-6"]   37.38" [3'-1$\frac{3}{8}$"]   18.45" [1'-6$\frac{7}{16}$"]   2.02" [2"]
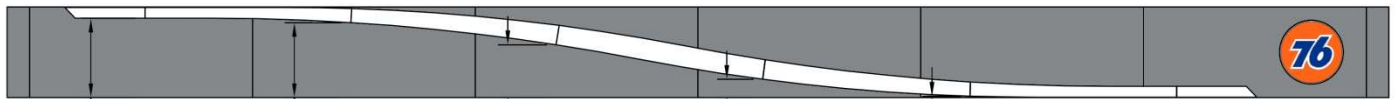
42.00" [3'-6"]   39.69" [3'-3$\frac{11}{16}$"]   27.94" [2'-3$\frac{15}{16}$"]   9.70" [9$\frac{11}{16}$"]   .75" [$\frac{3}{4}$"]

Wave Electrical

Each wave section connects with molex connectors from section to section. The electrical runs from each wave end to a designated midpoint on each wave.

36' RH & LH ELECTRICAL – DWG. 8

A RF

B

C

RF

LED electrical will run from each end to the midpoint, where the two ends will connect to the (1) 60W power supply with (2) cables (male and female).

LF A

B

C LF

45' RH & LH ELECTRICAL – DWG. 9

A RF

B

C

RF D

LED electrical will run from each end to the midpoint, where the two ends will connect to the (2) 60W power supply with (2) cables (female).

LF A

B

C

D LF

53' RH & LH ELECTRICAL – DWG. 10

C B A RF

RF E D

LED electrical will run from each end to the midpoint, where the two ends will connect to the (2) 60W power supply with (2) cables (female).

LF A

B

C

D E LF

LSI Graphic Solutions

When installing the back panel sets, drill a hole through the silver ACM at the designated midpoints on each wave and secure a 7/8" snap bushing in place. The cables for the wave will run through these holes to the power supply that is to be installed on the backside of the canopy fascia at this point.

DO NOT run power from the end of a wave. The power supplies **MUST** be place at the designated midpoints for the power to run properly throughout the wave. Failure to do so will cause issues with the LEDs and electrical.

Attach the wave molex connectors to the molex connectors for the power supply. Secure any loose wires, leaving a drip loop between the ACM and the power supply so water does not run into the wave.

Installation of the clips onto the orange flex face

Clips will need to be installed on the orange flex face before installing on the wave back.
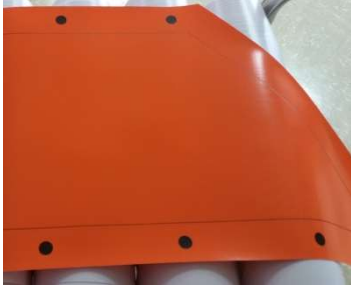
Faces will be marked with a line and dot system, to show designated clip placements on the face. Clips should be placed on center of the dots.

Installers will receive a bag with a designated number of clips per wave size.

Tension Clip Body

Tension Clip Mandrel
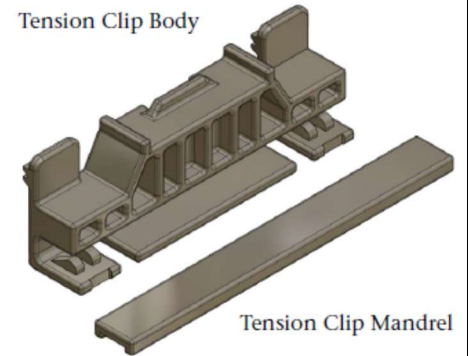
1
Place the mandrel, smooth side up, on the fabric just inside the clip placement line.

NOTE – Tension clips are attached to the fabric graphic side up.

2
Fold the fabric over the mandrel.
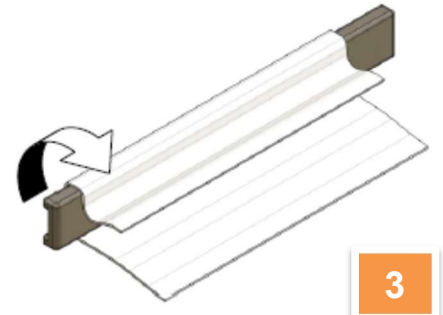
3
Rotate the fabric and mandrel forward by lifting the edge nearest you to stand the mandrel and fabric up on its edge.
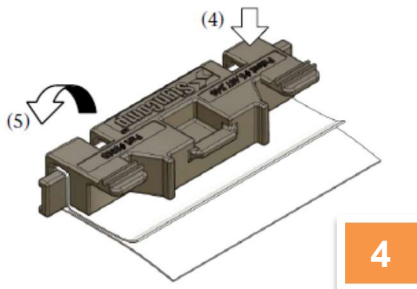
4
With the logo facing toward you, use thumb pressure to drive one end of the clip body down on to the mandrel and fabric.

5
Using palm pressure, drive the remaining end of the clip body down onto the mandrel & fabric.

NOTE – Do not try to drive both ends of the clip body down onto the mandrel & fabric at the same time. Snap one end down then the other end.

6

7
Tension clip position may be adjusted without removing the tension clip from the fabric. Slide the clip mandrel in the direction you wish to move the tension clip. Follow this by sliding the tension clip body. Repeat this procedure until position adjustment is achieved.

The tension clip may be detached from the fabric by pulling the tension clip body straight off and away from the fabric and tension clip mandrel.

Installation of the orange flex face

Tools

| Tension Tool	Bar Clamp (x2)	C-Clamp (x4)
Provided by LSI per CREW	Installer provided	Installer provided

About 4-6' down, attach c-clamps on both sides of the flex face, and 1' further down attach c-clamps on both sides of the extrusion.
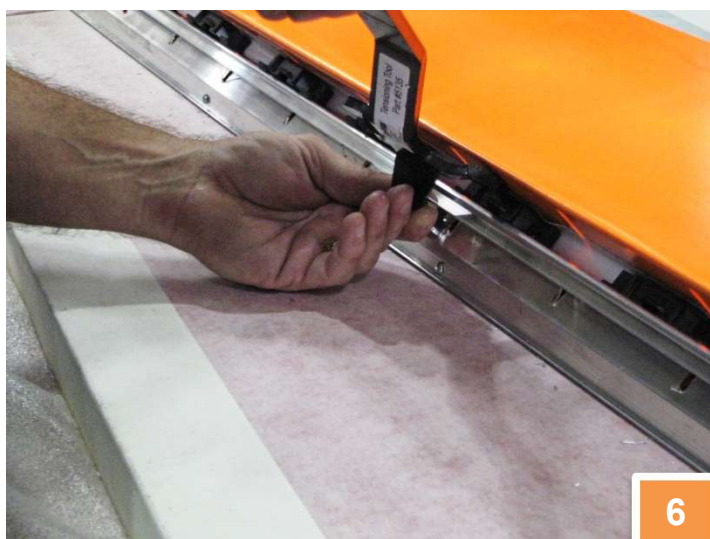

Attach bar clamp between the two c-clamps, both top and bottom, and then tighten the bar clamp until the face is wrinkle free. DO NOT OVERTIGHTEN THE FACE. Make the face taut, but not tight.
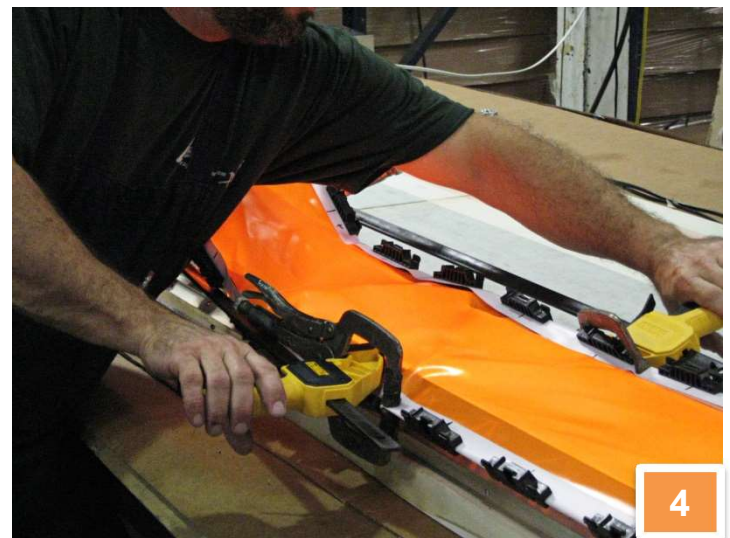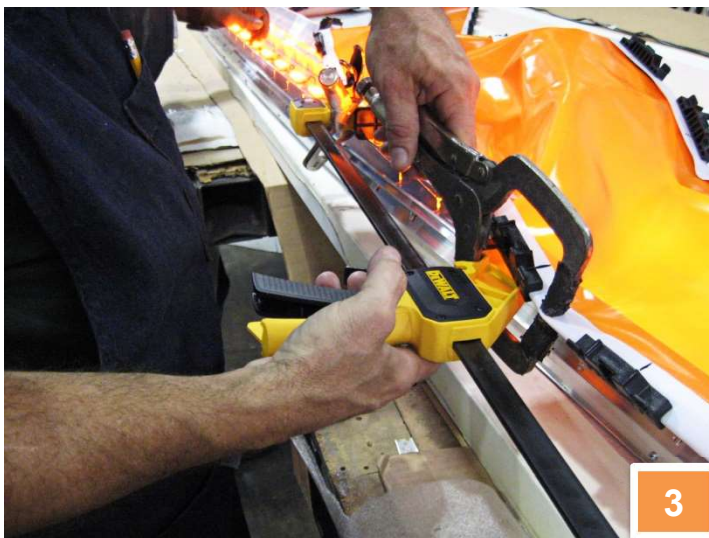
Snap the clips in by hand
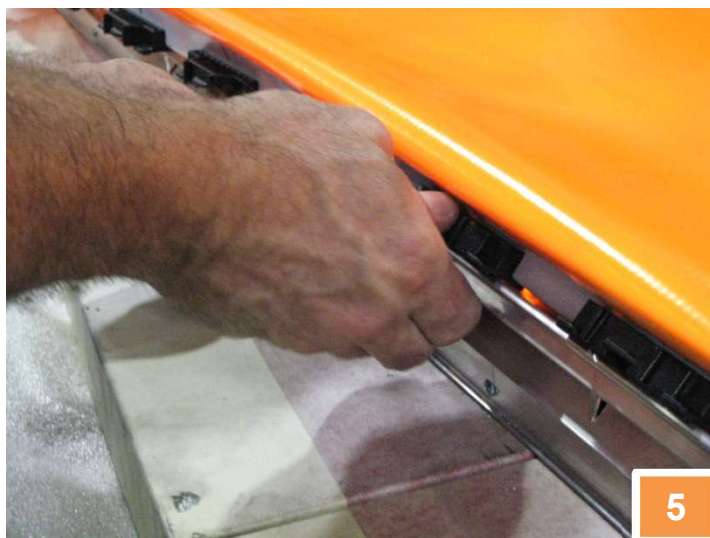
Use the tension tool to finish tightening the face. Be sure to alternate between top and bottom sides to keep the face even and installed properly.

Continue moving down the face repeating the above steps until reaching the end. If there is additional face after all tightening has been completed, clip the face carefully to trim it up.
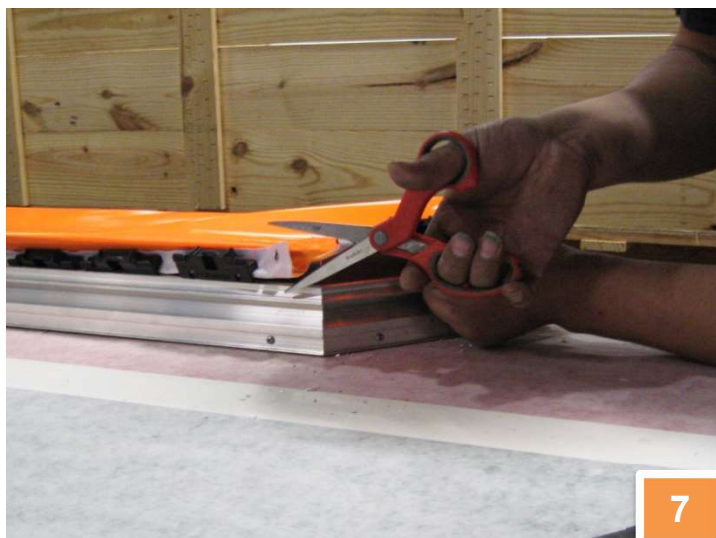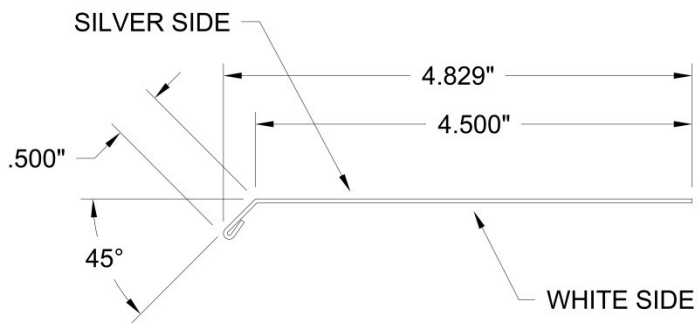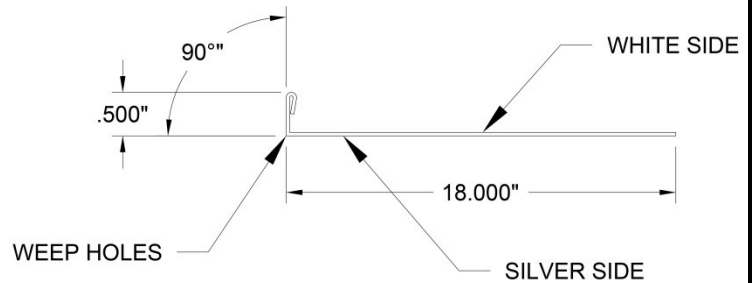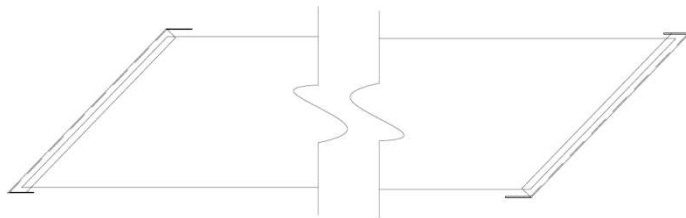
Attaching the trim kit

Hardware

Name	Image	Application	Location
#6x3/8 PPH Drill Screw		Attaching trim to extrusion	Trim panels to extrusion

TOP TRIM – DWG. 11

BOTTOM TRIM – DWG. 12
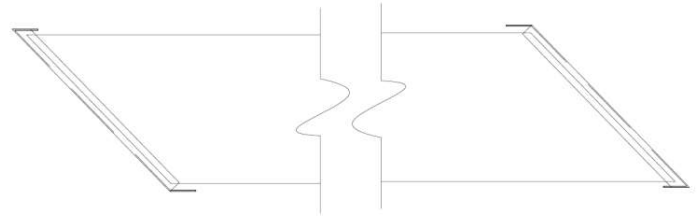
RIGHT HAND END – DWG. 13

LEFT HAND END – DWG. 14

Depending on the size of the wave, installers will receive the following:

- 36' Wave – (5) top trim covers
  (5) bottom trim covers   **(12) covers total**
  (2) end trim covers

- 45' Wave – (6) top trim covers
  (6) bottom trim covers   **(14) covers total**
 (2) end trim covers

- 53' Wave – (7) top trim covers
  (7) bottom trim covers   **(16) covers total**
  (2) end trim covers

The trim kit end caps (left or right, depending on the wave) will be installed first.

The caps will slide into the slot on the outside of the extrusion at the base, fitting over the ends of waves, and be attached using #6x3/8" PPH drill screws in three pre-drilled holes.
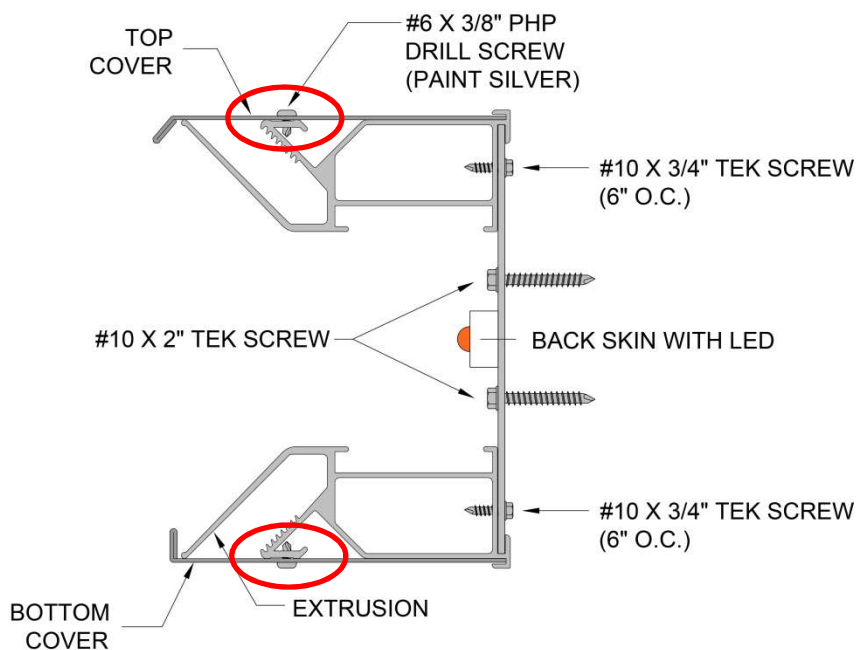
8.377"

4.595"

TOP VIEW
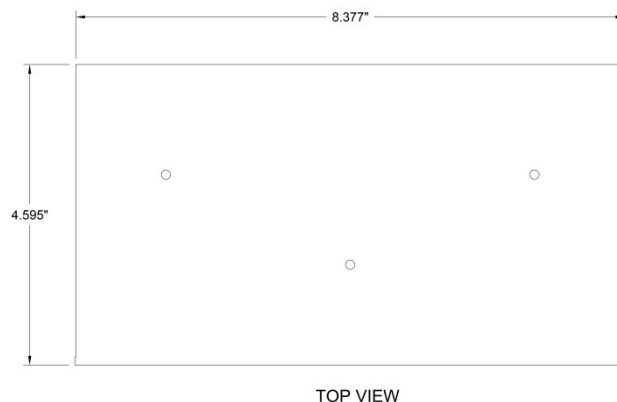
The 96" trim pieces will begin at one end of the wave, overlapping the end caps.

The pieces will slide into the slot on the outside of the extrusion at the base, overlapping from piece to piece to keep out water and prevent streaks on the flex face. Each piece has a notch to allow for the overlap since two trim pieces cannot fit overlapped into the slot.

Attach the top trim pieces using a #6x3/8" PPH drill screw in the pre-drilled holes. The holes should line up to the flange on both the top and bottom extrusions.

If all pre-drilled holes on the trim pieces are not used, they must be caulked in to prevent water and other miscellaneous hazards from getting into the wave and potentially causing current/future issues. However, it is encouraged to use all pre-drilled holes for the best results.

Be sure that the trim kit is attached smoothly and securely to the wave.

TOP COVER

#6 X 3/8" PHP DRILL SCREW (PAINT SILVER)

#10 X 3/4" TEK SCREW (6" O.C.)

#10 X 2" TEK SCREW

BACK SKIN WITH LED

#10 X 3/4" TEK SCREW (6" O.C.)

BOTTOM COVER

EXTRUSION

Wave Overlap

In some instances, there will be more than one wave applied to a side. The overlap for the waves has been pre-determined, and varies by site; **please** check the site specific detailed layout for the overlap dimension.
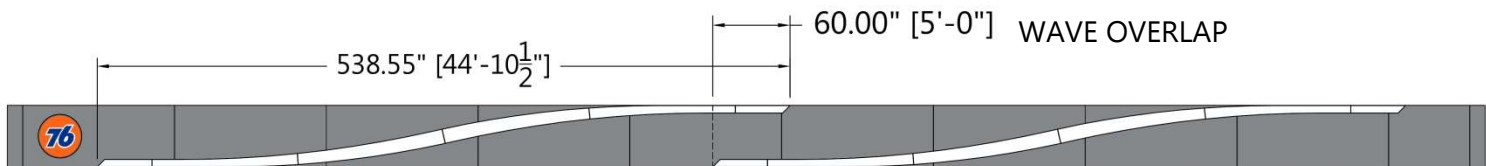
Illuminated Wave:
Proceed to install the first wave as previously instructed in the illuminated wave section.

To determine where the second wave begins, measure from the top of the wave back the dimension of the overlap. Be sure not to scratch or mar the silver ACM.
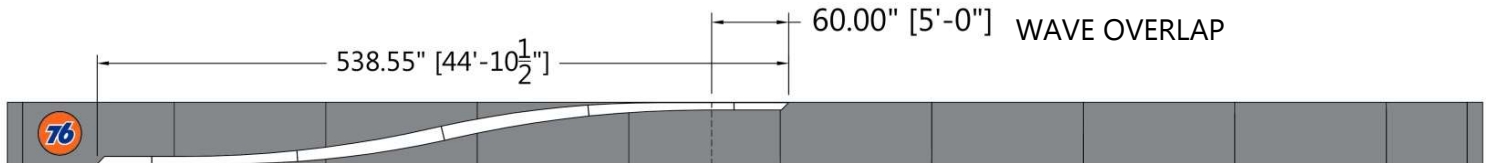
Begin the second wave at the measured distance, and install the second wave same as the first.

If there are more than two waves to be applied, repeat the above steps.