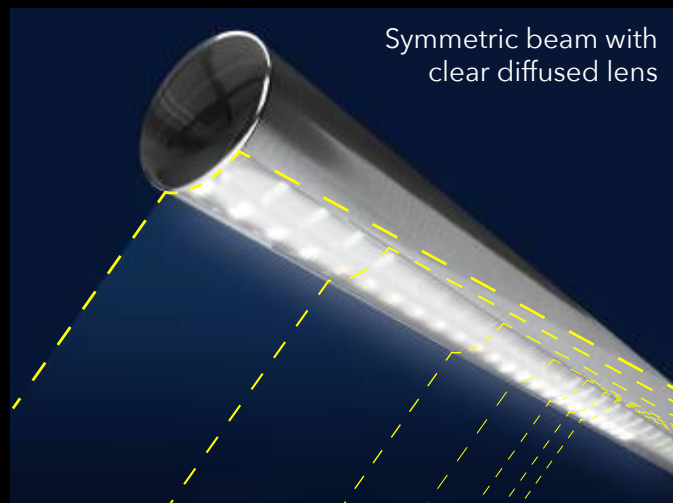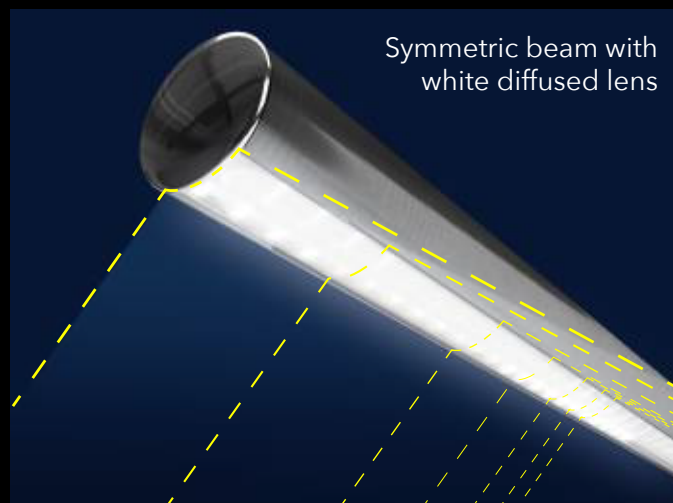**Efficient-Tec International, LLC**
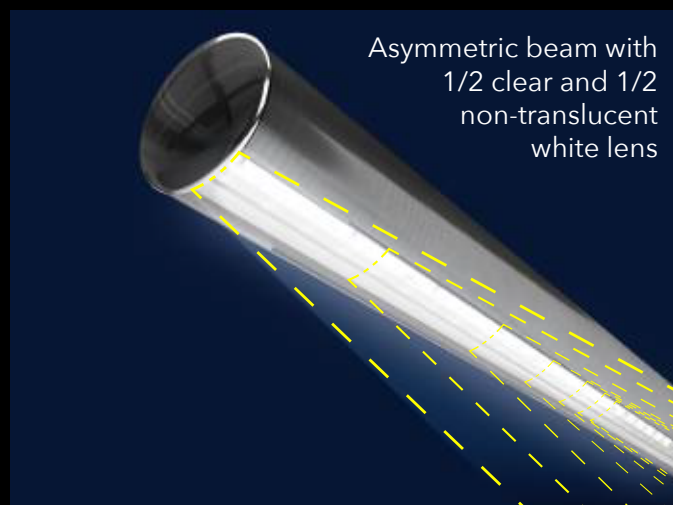
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MATERIAL, POWER, & LIGHTING OPTIONS

Symmetric beam with clear diffused lens

Symmetric beam with white diffused lens

Asymmetric beam with 1/2 clear and 1/2 non-translucent white lens

LENS OPTIONS:

- Clear w/ Prismatic Diffusers
- Opal w/ White Diffusers
- Clear w/ No Diffusion *(Asymmetric)*
- Clear *(Dot System)*

LIGHTING DISTRIBUTION:

- Symmetric or Asymmetric

LIGHTING LEVELS:

LINEAR	DOT SYSTEM

• High Output
    3.87W / 443lm per ft.
• Medium Output
    2.77W / 334lm per ft.
• Low Output
    1.34W / 173lm per ft.
	• 120lm each
	• 100lm/W

COLORS:

LINEAR	DOT SYSTEM
• Warm White 2700K CCT • Warm White 3000K CCT • Linear White 4000K CCT • RGBW • Amber	• Warm White 2700K CCT • Warm White 3000K CCT • White 4000K CCT

GENERAL OPTIONS:

- Illuminated LEDRail®
- Non-Illuminated
- Curved
- Spiral

HANDRAIL OPTIONS:

- 1.67" O.D. Stainless Steel
    (1-¼" Pipe)
- 1.90" O.D. Stainless Steel
    (1-1/2" Pipe)
- 1.50" Square Stainless Steel
- 1.66" O.D. Aluminum
    (1-¼" Pipe)
- 1.90" O.D. Aluminum
    (1-1/2" Pipe)

FINISH OPTIONS:
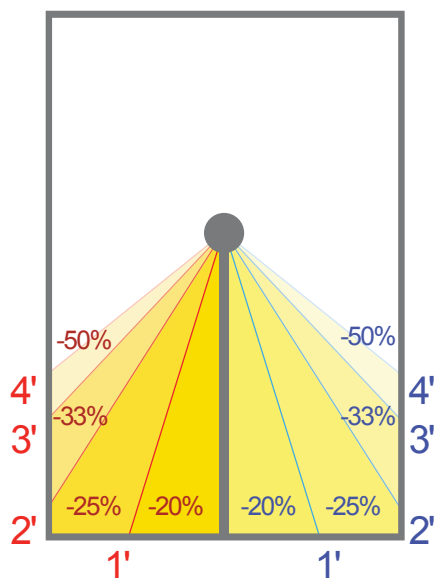
316 STAINLESS STEEL
- w/ #6 *(320 grit)* Satin Finish
- w/ #8 High Polish Finish

ALUMINUM W/ POWDER COAT
- RAL Color
- Custom Colors
- Anodized Effects
- Simulated Wood Grain

Handrail Linearflex®

lumen/ft & lumen/W based upon color temp
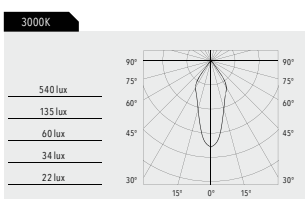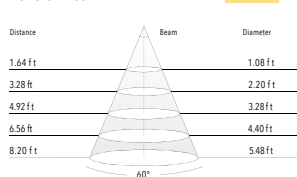
Output		Certification	Source	Distribution	Dimming	CRI	Wattage	CCT	lm/ft	lm/W	IP
LOW LED OUTPUT		cETLus Intertek	LED BUILT IN		DIMMABLE	80 CRI	L.O. 1.34W/ft	2700K CCT	lm/ft 173	lm/W 130	IP 67
		cETLus Intertek	LED BUILT IN		DIMMABLE	80 CRI	L.O. 1.34W/ft	3000K CCT	lm/ft 173	lm/W 132	IP 67
		cETLus Intertek	LED BUILT IN		DIMMABLE	80 CRI	L.O. 1.34W/ft	4000K CCT	lm/ft 173	lm/W 142	IP 67
MEDIUM LED OUTPUT		cETLus Intertek	LED BUILT IN		DIMMABLE	80 CRI	M.O. 2.77W/ft	2700K CCT	lm/ft 334	lm/W 124	IP 67
		cETLus Intertek	LED BUILT IN		DIMMABLE	80 CRI	M.O. 2.77W/ft	3000K CCT	lm/ft 334	lm/W 129	IP 67
		cETLus Intertek	LED BUILT IN		DIMMABLE	80 CRI	M.O. 2.77W/ft	4000K CCT	lm/ft 334	lm/W 136	IP 67
HIGH LED OUTPUT		cETLus Intertek	LED BUILT IN		DIMMABLE	80 CRI	H.O. 3.87W/ft	2700K CCT	lm/ft 443	lm/W 115	IP 67
		cETLus Intertek	LED BUILT IN		DIMMABLE	80 CRI	H.O. 3.87W/ft	3000K CCT	lm/ft 443	lm/W 119	IP 67
		cETLus Intertek	LED BUILT IN		DIMMABLE	80 CRI	H.O. 3.87W/ft	4000K CCT	lm/ft 443	lm/W 126	IP 67

Handrail Dot®

cETLus Intertek | IP66 | IK10 | on/off 0-10V | 316 SS Housing | PC Lens | Ta min -20°C -4°F | Ta max +50°C +122°F

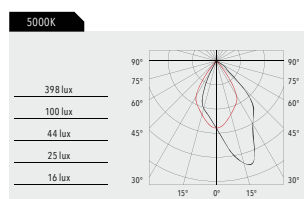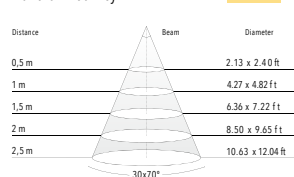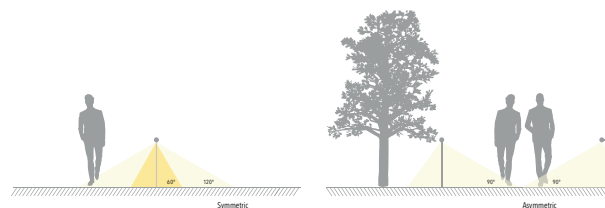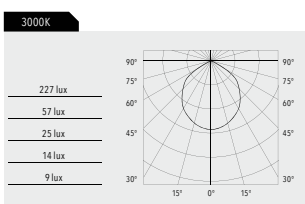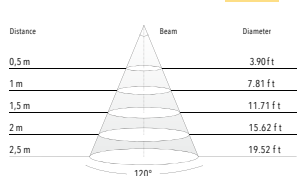| Power	1.5 W (500mA)			
Color temperatures	2700K	3000K	4000K	5000K
Lumens output	60° - 114 lm 120° - 120 lm 90°(asymmetric) - 108 lm	60° - 120 lm 120° - 126 lm 90°(asymmetric) - 114 lm	60° - 136 lm 120° - 143 lm 90°(asymmetric) - 129 lm	60° - 136 lm 120° - 143 lm 90°(asymmetric) - 129 lm
Luminaire efficiency	72 to 80 lm/W	76 to 84 lm/W	86 to 96 lm/W	86 to 96 lm/W
Measures / Weight	.58 in x .59 in / .22 lb			

Handrail Dot® — 60° — 3000K

Distance	Diameter	lux
1.64 ft	1.08 ft	540 lux
3.28 ft	2.20 ft	135 lux
4.92 ft	3.28 ft	60 lux
6.56 ft	4.40 ft	34 lux
8.20 ft	5.48 ft	22 lux

Handrail Dot® — 120° — 3000K

Distance	Diameter	lux
0,5 m	3.90 ft	227 lux
1 m	7.81 ft	57 lux
1,5 m	11.71 ft	25 lux
2 m	15.62 ft	14 lux
2,5 m	19.52 ft	9 lux

Handrail Dot® Asym. — 90° — 5000K

Distance	Diameter	lux
0,5 m	2.13 x 2.40 ft	398 lux
1 m	4.27 x 4.82 ft	100 lux
1,5 m	6.36 x 7.22 ft	44 lux
2 m	8.50 x 9.65 ft	25 lux
2,5 m	10.63 x 12.04 ft	16 lux

Symmetric

Asymmetric

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ROD-INFILL

ROD-INFILL DESIGNS

HORIZONTAL ROD DESIGN	VERTICAL INLINE PICKET DESIGN	APPLICATION:
MODEL NAME: **ALANE**	MODEL NAME: **MARIDA**	**FREE-STANDING**
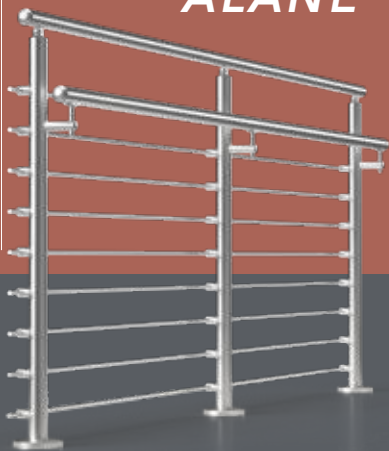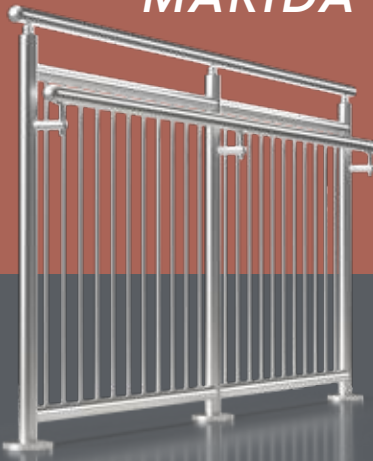
APPLICATION:

FREE-STANDING
- Embed Mount
- Flange Mount
- Fascia Mount
- Base Plate

IP RATING:

IP67

MATERIALS:

POSTS:
- 316 Stainless Steel
- 6061 Aluminum

HANDRAIL:
- 316 Stainless Steel
- 6061 Aluminum *(non-illuminated)*
- 6063 Aluminum *(illuminated)*

CAP RAIL:
- 316 Stainless Steel
- 6061 Aluminum *(non-illuminated)*
- 6063 Aluminum *(illuminated)*

ALANE HORIZONTAL RODS:
- 12mm or 14mm Horizontal 316 Stainless Steel

MARIDA VERTICAL RODS:
- 12mm or 14mm Vertical 6061Aluminum or 316 Stainless Steel Rods

ALANE

This horizontal rail application is accented by multiple 3/8" to 9/16" thickness horizontal solid rods as the infill between posts.

It is available for illuminated and non-illuminated applications. A variety of mounting options can be used including embed, fascia, and base plates.

This design comes in stainless steel alloy 316 standard, as well as aluminum.

A number of finishes can be accommodated to fit the style of your needs.

MARIDA

This design incorporates multiple vertical rods as the infill between posts, creating the classic picket appearance. Infill is available in 3/8" to 9/16" thickness, and in solid or hollow material.

It is available for illuminated and non-illuminated applications. A variety of mounting options can be used including embed, fascia, and base plates.

This design comes in stainless steel alloy 316 standard, as well as aluminum.

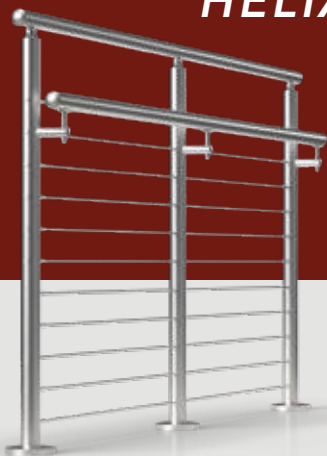A number of finishes can be accommodated to fit the style of your needs.
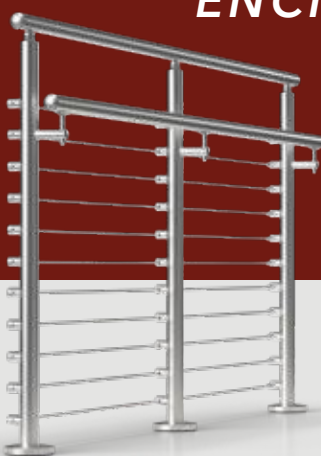
CABLE-INFILL

CABLE-INFILL DESIGNS

CABLE THROUGH-POST DESIGN	OFFSET CABLE DESIGN	APPLICATION:
MODEL NAME:	**MODEL NAME:**	**FREE-STANDING**
HELIA	*ENCIA*	• Embed Mount

MODEL NAME:
HELIA

MODEL NAME:
ENCIA

APPLICATION:
FREE-STANDING
• Embed Mount
• Flange Mount
• Fascia Mount
• Base Plate

IP RATING:
IP67

MATERIALS:

POSTS:
• 316 Stainless Steel
• 6061 Aluminum

HANDRAIL:
• 316 Stainless Steel
• 6061 Aluminum *(non-illuminated)*
• 6063 Aluminum *(illuminated)*

CAP RAIL:
• 316 Stainless Steel
• 6061 Aluminum *(non-illuminated)*
• 6063 Aluminum *(illuminated)*

CABLE:
• 316 Stainless Steel Cable 3/16",
  1×19 In-Fill

HELIA

This is the classic standard of a through-the-post cabling system incorporating a discreetly located cable tensioner inside the end posts.

It is available for illuminated and non-illuminated applications. A variety of mounting options can be used, including embed, fascia, and base plates.

This design comes in stainless steel alloy 316 standard, as well as aluminum.

A number of finishes can be accommodated to fit the style of your needs.

ENCIA

This popular model puts a twist on the standard cabling system by offsetting the cable to the posts by using individual holders at each post for each cable.

This is a very modern and technical design with surface mounted machined hardware. It is available for illuminated and non-illuminated applications.

A variety of mounting options can be used, including embed, fascia, and base plates.

This design comes in stainless steel alloy 316 standard, as well as aluminum. A number of finishes can be accommodated to fit the style of your needs.
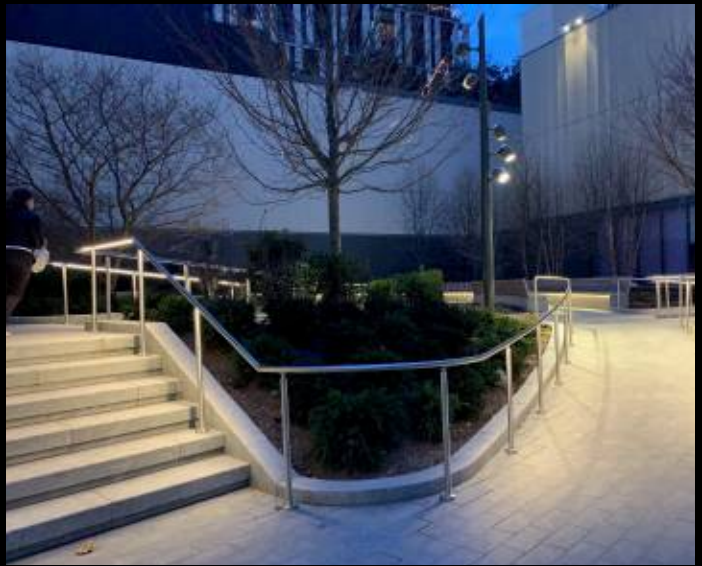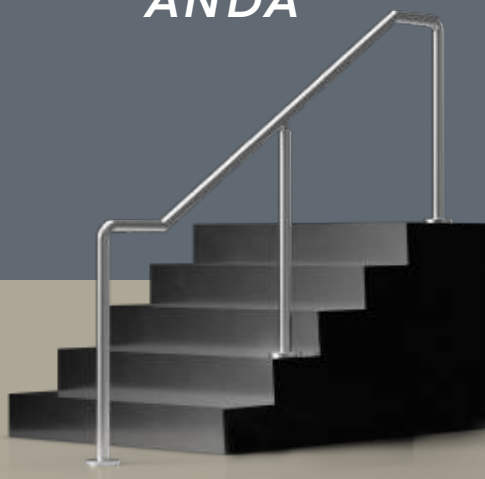
NO-INFILL

NO-INFILL DESIGNS

STANDARD WALL RAIL DESIGN	ONE-LINE RAIL DESIGN	APPLICATION:
MODEL NAME: **MYRIS**	MODEL NAME: **ANDA**	**WALL-MOUNT / FREE-STANDING**

APPLICATION:

WALL-MOUNT / FREE-STANDING
- Embed Mount *(Anda)*
- Flange Mount *(Anda)*
- Fascia Mount *(Anda)*
- Wall Mount *(Myris)*
- Glass Mount *(Myris)*

IP RATING:

IP67

MATERIALS:

POSTS *(Anda)*:
- 316 Stainless Steel
- 6061 Aluminum

HANDRAIL:
- 316 Stainless Steel
- 6061 Aluminum *(non-illuminated)*
- 6063 Aluminum *(illuminated)*

CAP RAIL:
- 316 Stainless Steel
- 6061 Aluminum *(non-illuminated)*
- 6063 Aluminum *(illuminated)*

MYRIS

This is the Efficient-Tec torchbearer as our original design. It uses a simple yet elegant look to use in any wall mount handrail application.

Available for illuminated and non-illuminated applications, this design comes in stainless steel alloy 316 standard, as well as aluminum.

A number of finishes can be accommodated to fit the style of your needs.

ANDA

This popular free-standing, one-line rail design incorporates a sleek and contemporary look with no infill between posts.

It is available for illuminated and non-illuminated applications. A variety of mounting options can be used including embed, fascia, and base plates.

This design comes in stainless steel alloy 316 standard, as well as aluminum.

A number of finishes can be accommodated to fit the style of your needs.

STRUCTURAL GLASS INFILL

STRUCTURAL GLASS INFILL DESIGNS

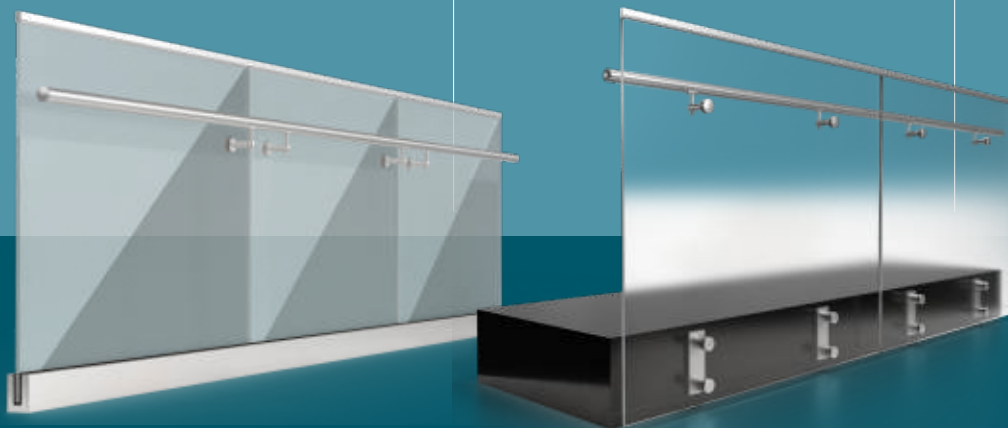| STRUCTURAL GLASS RAIL DESIGN	BOSS-MOUNT RAIL DESIGN	APPLICATION:
MODEL NAME: **SOPHELLE**	MODEL NAME: **BOSS**	**FREE-STANDING /BOSS-MOUNT**

APPLICATION:
FREE-STANDING /BOSS-MOUNT
• Structural Glass

IP RATING:
IP67

MATERIALS:

POSTS:
• 316 Stainless Steel
• 6061 Aluminum

HANDRAIL:
• 316 Stainless Steel
• 6061 Aluminum *(non-illuminated)*
• 6063 Aluminum *(illuminated)*

CAP RAIL:
• 316 Stainless Steel
• 6061 Aluminum *(non-illuminated)*
• 6063 Aluminum *(illuminated)*

GLASS *(Boss):*
• Sania Inline Button Retainer 1/2" or 3/4" Tempered Glass

GLASS *(Sophelle):*
• Felle Standard 1/2" or 3/8" Tempered Glass

SOPHELLE

Structural glass is all the rage, and this system is the most unique on the market.

It is available for illuminated and non-illuminated applications. Fascia, surface, and embed are available for mounting options. Optional handrail can be used.

This design comes in stainless steel alloy 316 standard, as well as aluminum.

A number of finishes can be accommodated to fit the style of your needs. Glass can be etched with a company logo as well.

When incorporating etched glass logos and bottom lighting, nothing is as spectacular to the eye as this system.

BOSS

The most effective way mount structural glass to a stair stringer is the BOSS Rail system.

Mounting buttons come in a variety of sizes for any thickness of glass. Optional glass mount handrail is available for this model.

It is available for illuminated and non-illuminated applications for the optional handrail. This design comes in stainless steel alloy 316 standard, as well as aluminum.

A number of finishes can be accommodated to fit the style of your needs. Glass can be etched with a company logo as well.

GLASS PANEL INFILL

GLASS PANEL INFILL DESIGNS *(Retainer or Clamp)*

GLASS CLAMP FITTING DESIGN	IN-LINE RETAINER DESIGN	DUAL GLASS PANEL RETAINER DESIGN	APPLICATION:
MODEL NAME: **FELLE**	MODEL NAME: **SANIA**	MODEL NAME: **STRIA**	**FREE-STANDING**

APPLICATION: FREE-STANDING
- Embed Mount
- Flange Mount
- Fascia Mount
- Base Plate

IP RATING: IP67

MATERIALS:

POSTS:
- 316 Stainless Steel
- 6061 Aluminum

HANDRAIL:
- 316 Stainless Steel
- 6061 Aluminum *(non-illuminated)*
- 6063 Aluminum *(illuminated)*

CAP RAIL:
- 316 Stainless Steel
- 6061 Aluminum *(non-illuminated)*
- 6063 Aluminum *(illuminated)*

GLASS (Felle):
- Felle Standard 1/2" or 3/8" Tempered Glass

GLASS (Sania):
- Sania Inline Button Retainer 1/2" or 3/4" Tempered Glass

GLASS (Stria):
- Stria Inline Button Retainer 1/2" or 3/4" Tempered Glass

FELLE

This is the classic standard of in line glass clamp design to hold the glass infill panels in .375" or .500" thickness.

It is available for illuminated and non-illuminated applications. A variety of mounting options can be used including embed, fascia, and base plates.

This design comes in stainless steel alloy 316 standard, as well as aluminum.

A number of finishes can be accommodated to fit the style of your needs. Glass can be etched with a company logo as well.

SANIA

This inline retainer design is used with glass infill panels .375" or .500" thickness. The button mounts are attached to the center of the posts, creating an offset glass infill.

It is available for illuminated and non-illuminated applications. A variety of mounting options can be used including embed, fascia, and base plates.

This design comes in stainless steel alloy 316 standard, as well as aluminum.

A number of finishes can be accommodated to fit the style of your needs.

STRIA

This dual retainer design is used with in-line glass infill panels .375" or .500" thickness.

The button mounts are attached to the center of the posts and offset, creating a center mounted glass infill. It is available for illuminated, additional edge illumination, and non-illuminated applications.

A variety of mounting options can be used including embed, fascia, and base plates.

This design comes in stainless steel alloy 316 standard, as well as aluminum.

A number of finishes can be accommodated to fit the style of your needs. Glass can be etched with a company logo as well.

**PATTERNED
METAL
PANEL
INFILL**

PATTERNED METAL PANEL DESIGN

MODEL NAME:
ZARIA

APPLICATION:

FREE-STANDING
- Embed Mount
- Flange Mount
- Fascia Mount
- Base Plate

IP RATING:
IP67

MATERIALS:

POSTS:
- 316 Stainless Steel
- 6061 Aluminum

HANDRAIL:
- 316 Stainless Steel
- 6061 Aluminum *(non-illuminated)*
- 6063 Aluminum *(illuminated)*

CAP RAIL:
- 316 Stainless Steel
- 6061 Aluminum *(non-illuminated)*
- 6063 Aluminum *(illuminated)*

PANEL:
- Specified Pattern Perforated Panel
- Specified Pattern Mesh Panel

ZARIA

This design uses metal infill panels between posts. Hundreds of panel designs are available, from perforated metals to metal meshes and weaves.

It is available for illuminated and non-illuminated applications. A variety of mounting options can be used including embed, fascia, and base plates.

This design comes in stainless steel alloy 316 standard, as well as aluminum.

A number of finishes can be accommodated to fit the style of your needs.

Efficient-Tec International, LLC offers a complete handrail solution for your code compliant projects.

ETIs S3 (stainless steel systems) handrail solutions can meet any requirement, either from our standard line of products or with modication from the in house engineering and fabricating staff.

Your solutions are all here whether using our LED illuminated handrail *(LEDRail™)*, standard guardrail, stairway handrail or spiral staircase handrail.
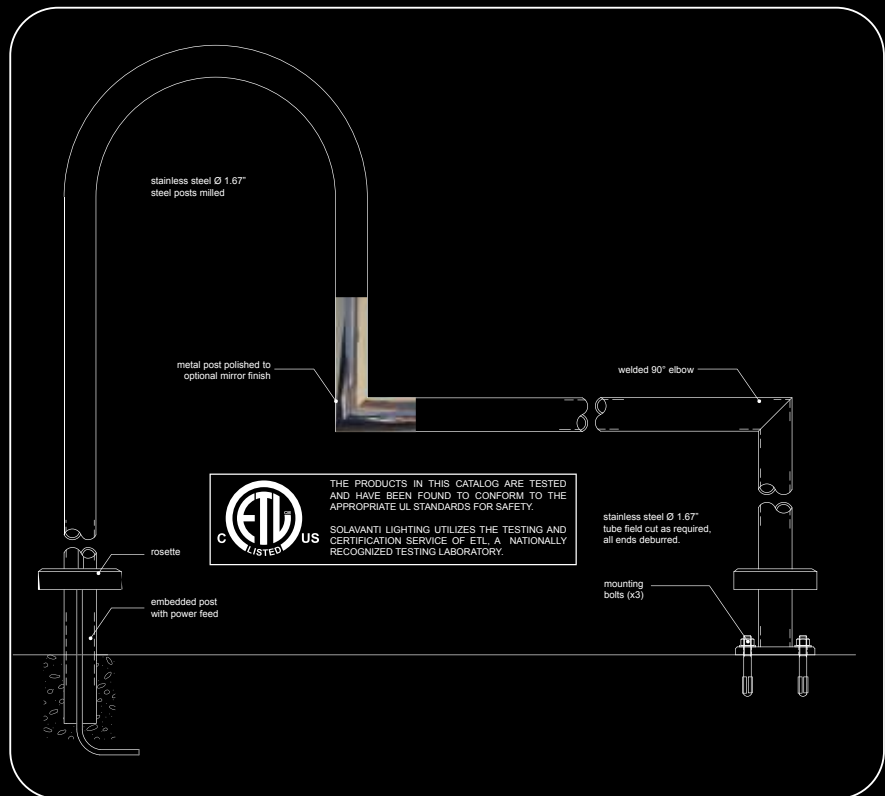
The choices for project compliments are expanded with our standard steel rod, cable or glass guardrail infills.

Our product line gives architects, designer and specifiers multiple options in fittings, mountings and decorative elements that will deliver the quality product demanded by ETI clientele.

We look forward to assisting your next handrail solution!

Sincerely,

Efficient-Tec International, LLC
S3 Handrail Systems

stainless steel Ø 1.67"
steel posts milled

metal post polished to
optional mirror finish

welded 90° elbow

rosette

stainless steel Ø 1.67"
tube field cut as required,
all ends deburred.

embedded post
with power feed

mounting
bolts (x3)

THE PRODUCTS IN THIS CATALOG ARE TESTED AND HAVE BEEN FOUND TO CONFORM TO THE APPROPRIATE UL STANDARDS FOR SAFETY.

SOLAVANTI LIGHTING UTILIZES THE TESTING AND CERTIFICATION SERVICE OF ETL, A NATIONALLY RECOGNIZED TESTING LABORATORY.

C ETL US
LISTED

Handrail Code Compliance

S3 handrails are always built to **ADA**, IBC and IRC codes but can be specified according to any of the listed bulding standards.

I B C
International
Building Code 2012

ICC
International
Code Council

BOCA
Building
Officials Code
Administration

I R C
International
Residence Code 2012

IBCO
International
Conference of
Building Officials

SBCCI
Southern Building
Code Congress

Incorporating S3 handrail into your project:

When requesting a quotation or specifying our handrail products, please provide as much information as possible in order to insure a more accurate specification and quotation. Fully dimensioned plan view and elevation view drawings are requested in order to fully understand the scope of the project.

Upon acceptance of the order, we will prepare detailed approval drawings for field verification and acceptance by the customer.

Once the drawings are verified for accuracy and approved with a customer signature, we will begin the manufacturing process.

Handrails and Guardrails

• *Handrails* provide guidance
• *Guardrails* prevent accidental falls

*Handrails* are located 34˝- 38˝ above stair nosings or ramps.

Guardrails are generally required for ramps, stairs, or landings that are elevated more than 30˝ off the ground. The guardrail heights will vary depending upon local code, but typically are a minimum of 42˝ in height above the ramp, stair, or landing finished floor surface.

Efficient-Tec International, LLC
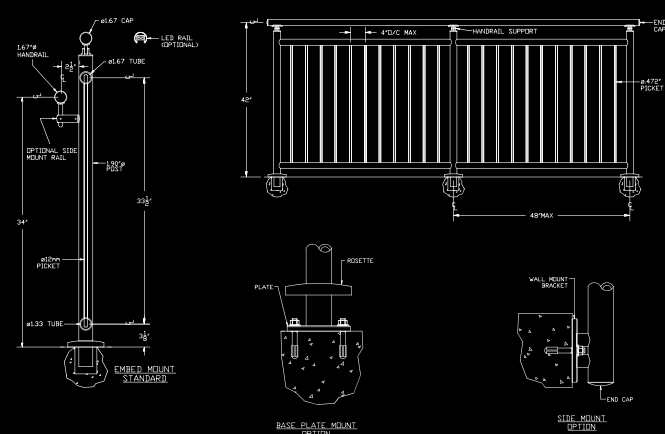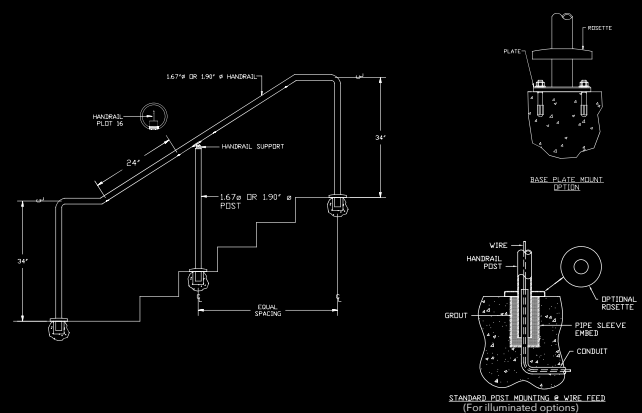*eti-s3.com • 866-356-4458*
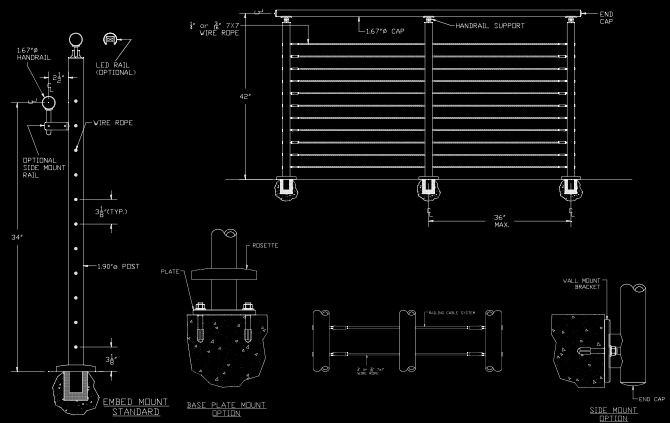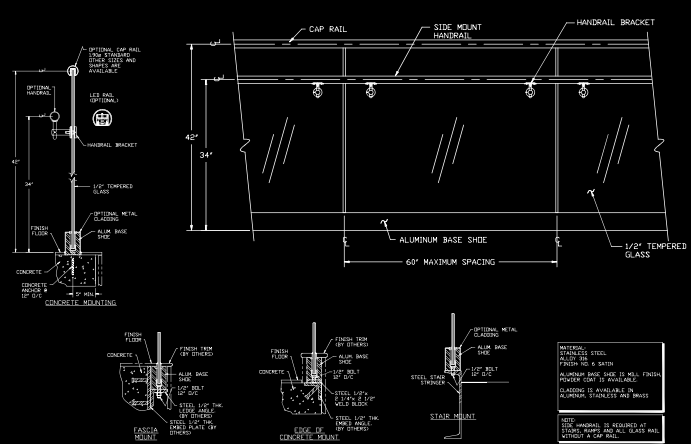
DESIGN DRAWINGS

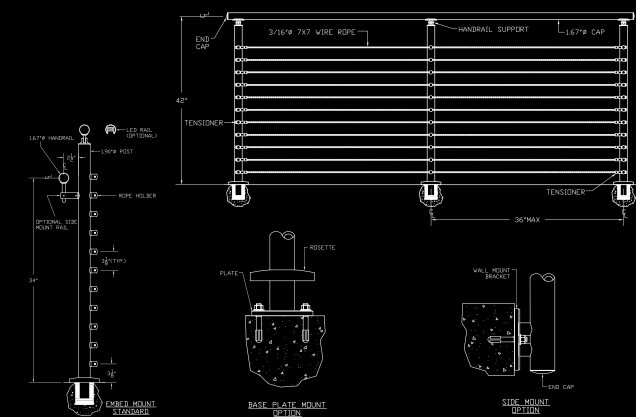## ALANE
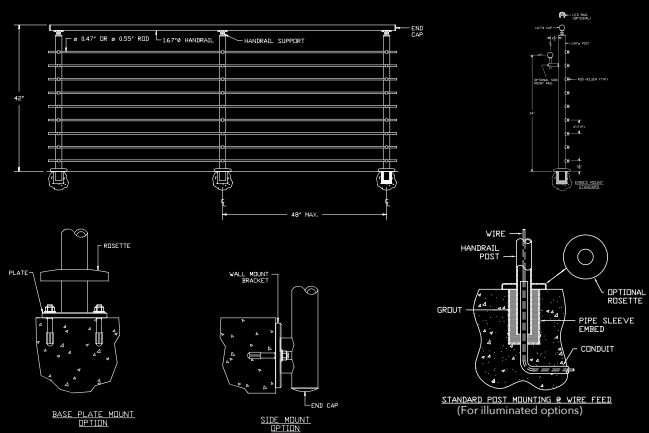
MYRIS
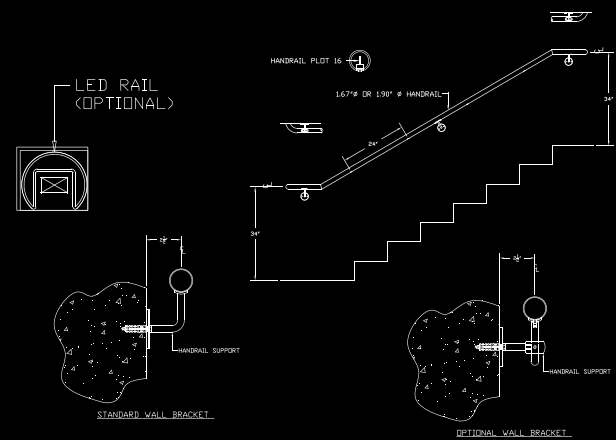
MARIDA
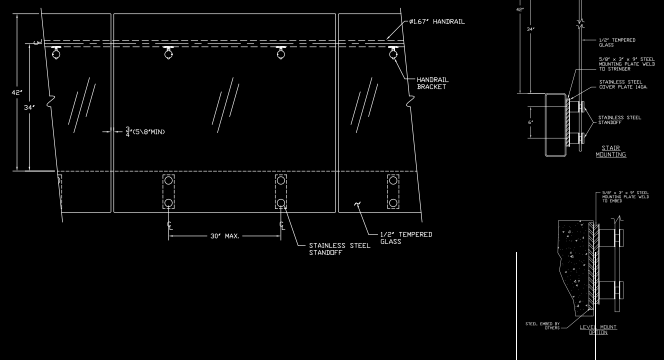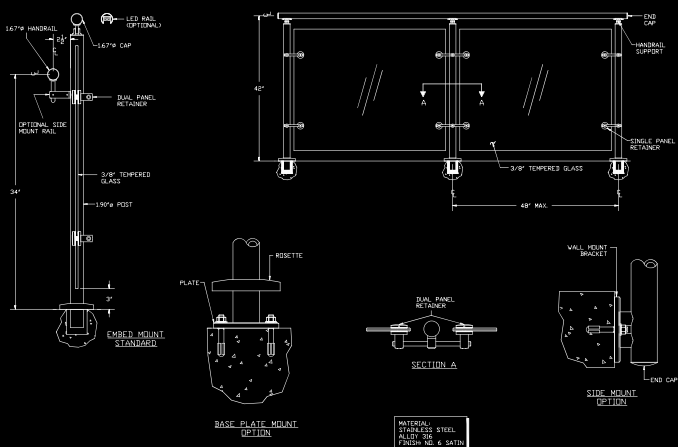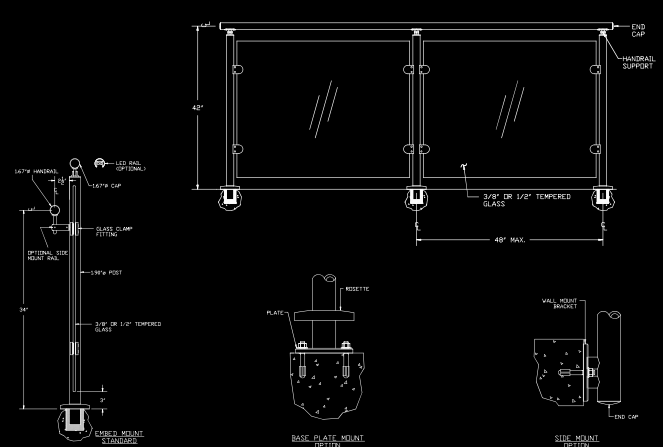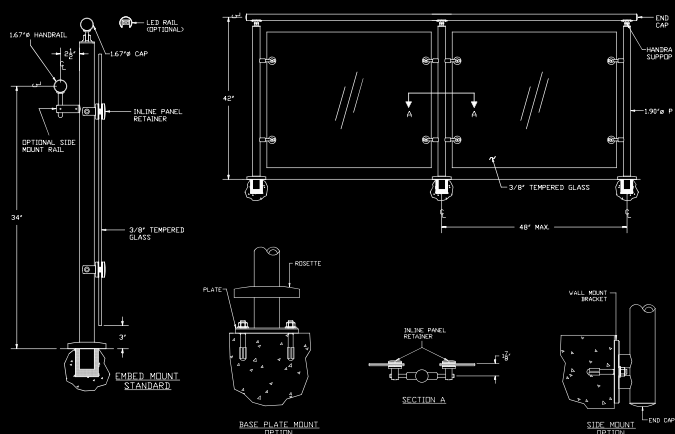

ANDA

HELIA

SOPHELLE

DESIGN DRAWINGS

ENCIA

BOSS

STRIA

FELLE

SANIA

ZARIA