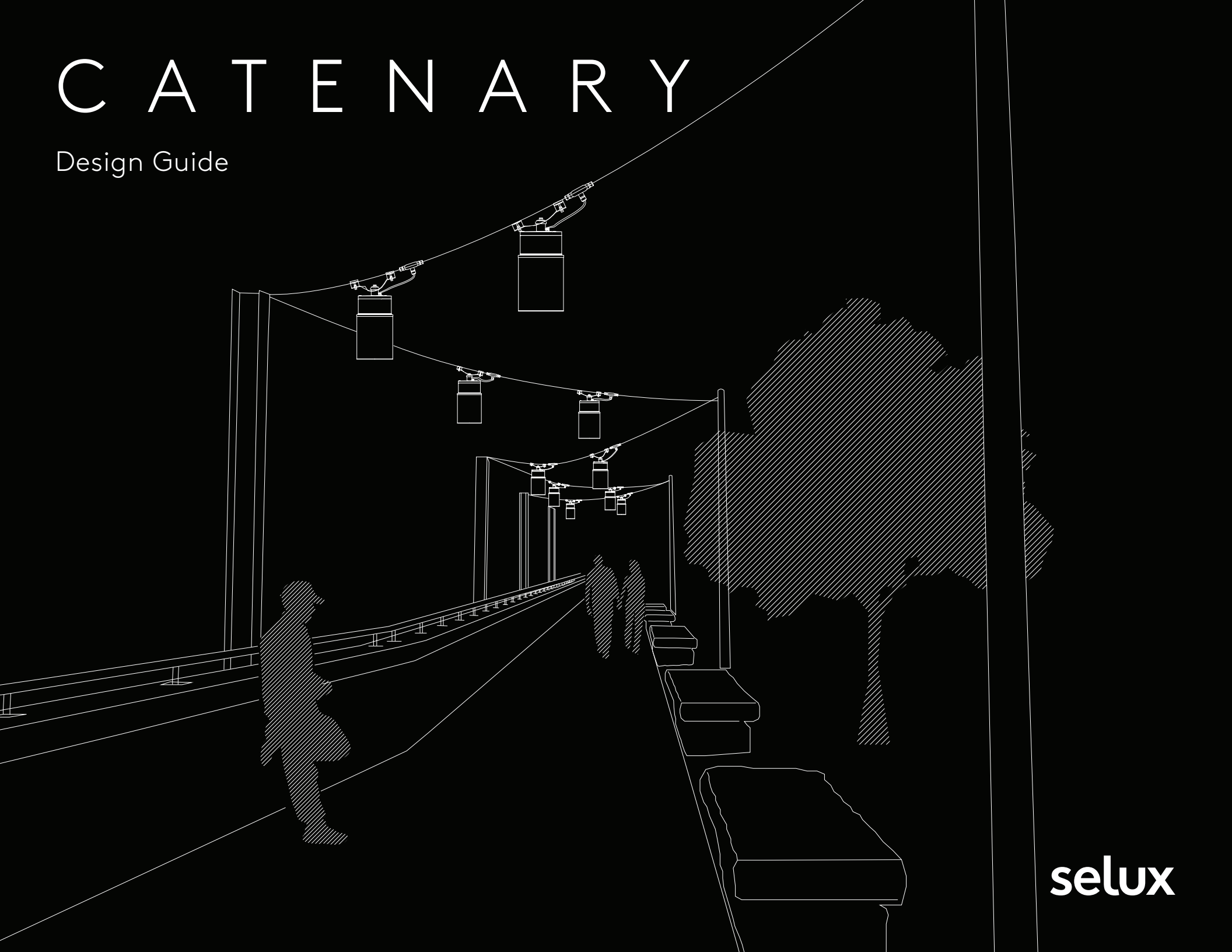# CATENARY

Design Guide

selux

With a diverse product line, Selux catenary
provides solutions customized for individual project needs

Selux has five catenary luminaires that come in various designs, sizes,
and optics, allowing you the design freedom to position the light exactly where it is required.

Peeta Catenary

pages 3-4

Melli Catenary

pages 5-6

Lanova Catenary

pages 7-8

Aya Catenary

pages 9-10
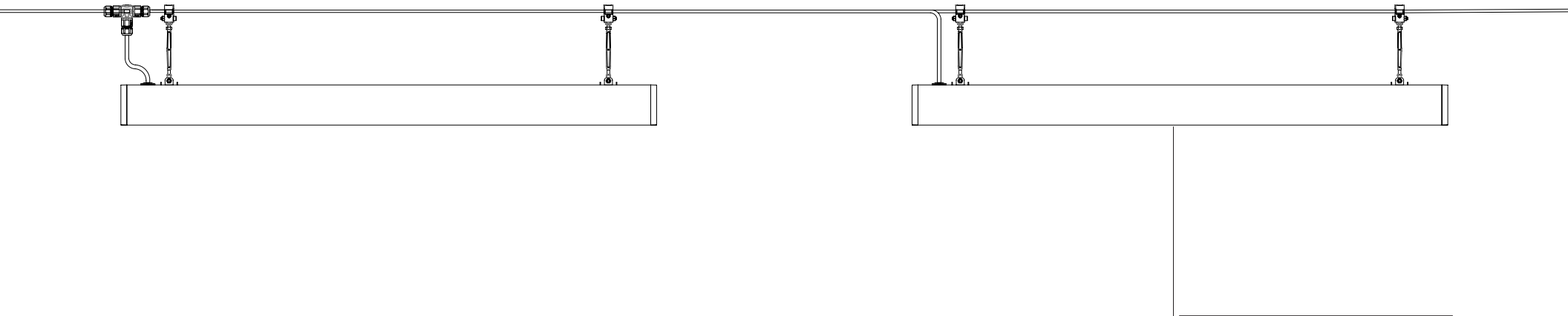
Discera Catenary

pages 11-12

Peeta Catenary

Introducing Peeta, our newest linear catenary fixture and a significant addition to the expanding Selux catenary collection. Peeta empowers you with complete design choice and control for your project, and fully sealing up to 12ft. Featuring a Declare label, Peeta ensures full transparency regarding its materials, underscoring our dedication to responsible product development. Whether installed individually or daisy-chained, Peeta delivers the warm, inviting illumination your space requires.

Catenary installations are often the best choice for various applications, including high-foot-traffic areas, spaces where minimal pole obstruction is desired, decorative or celebratory settings, courtyards, and walkways. Peeta is rated IP65 and IK10, offering excellent protection against dust, water, and impact. Additionally, its 3G rating indicates it can withstand the vibrations typical of transportation applications.
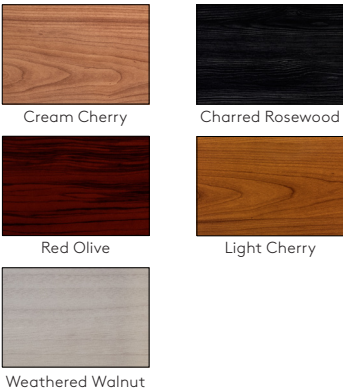
Product Specifications

Mounting:	Catenary - 4ft - 12ft (for other mountings, see Peeta Application Guide or Spec Sheet)
Output:	330 - 1,534lm/ft · up to 115lm/W
CCT:	2700K · 3000K · 3500K · 4000K · 80+ or 90+ CRI minimum
Shielding:	LED Optimized White Lens · LMO optics - 20° Wall Washer · 5° Wall Grazer · Narrow Beam · Batwing
Options:	Runs · Faux Wood Finish · Integral Cold Weather Emergency Battery Pack · Emergency Circuit Wiring · Joiners and unlit Corner Hubs · 3G Rating · BABAA Compliance

Refer to luminaire specification sheet or installation instructions for various wiring scenarios.

Peeta is available in our standard aluminum finishes, custom RAL, or Faux Wood.

Faux Wood Finish:

Cream Cherry

Charred Rosewood

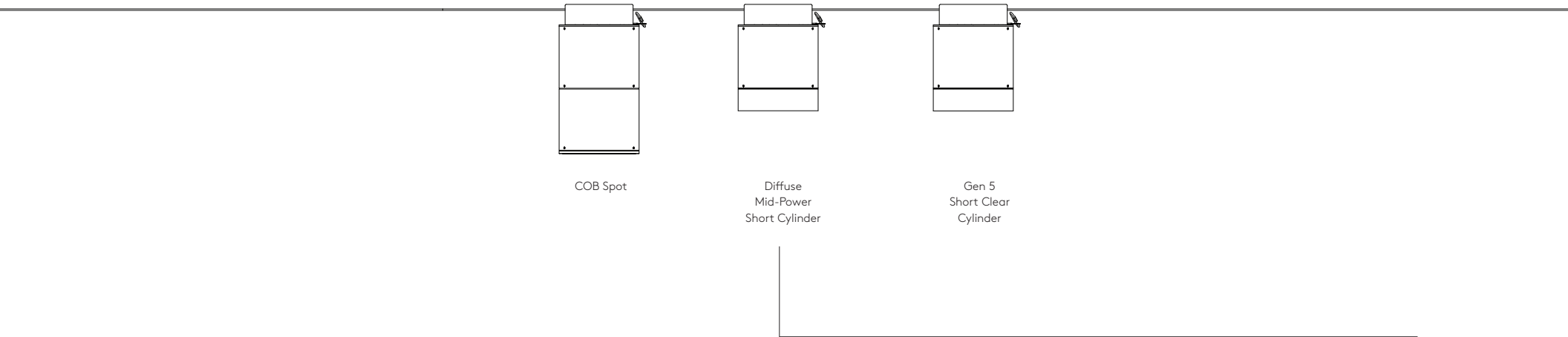Red Olive

Light Cherry

Weathered Walnut

Melli Catenary

Melli is a medium scale architectural indoor/outdoor luminaire family that transforms for applications that require strict precise roadway lighting, soft diffuse light, or even focused spot distributions. With Melli, the same form factor is implemented throughout the entire family - mix and match optics with any of the five mounting types for an aesthetically cohesive design. The Melli range excels at illuminating spaces such as plazas, shopping centers, pedestrian areas, or any space requiring high end site, facade, pendant, or catenary lighting.

COB Spot

Diffuse
Mid-Power
Short Cylinder

Gen 5
Short Clear
Cylinder

Melli is available in
a wide variety:
Gen5 with short glass
Gen 5 with long glass
Diffused with short glass
Diffused with long glass
Spot COB

Product Specifications

Mounting: Catenary
                 (for other mountings, see Melli Application Guide or Spec Sheet)

Light Engine: Gen 5: Type I · Type II · Type III · Type IV · Type V round

Diffuse: Short Diffuse · Long Diffuse

Spot COB: Spot 9° · Spot 20° · Flood 40° · Food 80°

Optics: Gen 5: up to 3,254lm

Diffuse: up to 3,362lm

Spot COB: up to 2,908lm

CCT: 2700K · 3000K · 3500K · 4000K · 5000K · 80 CRI minimum

Options: Hexagonal Louver · Spread Lens · Color Filter · Motion Sensor ·
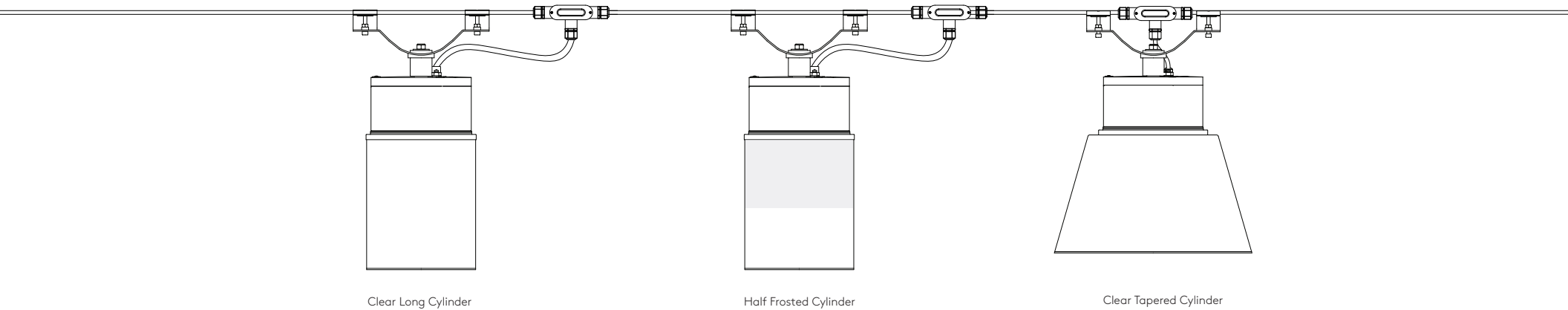   House-Side Shield

Refer to luminaire specification sheet or installation instructions for various wiring scenarios.

Lanova Catenary

Lanova by Selux is an attractive LED luminaire perfect for a designer needing improved visual guidance and purposeful light. Lanova allows you the design freedom to position the light exactly where it is required with a luminous focal point or a dramatic shadow. It creates the perfect ambiance—a modest light during the day transforms to a functional and energizing light by nightfall. Lanova creates excellent visibility and enhanced safety and security in large public areas such as parks, plazas, and campus squares.

Lanova catenary and pendant systems deliver a wide range of looks and optical options. The two optical system options include the Gen5 technical versions (Type I, Type II, Type III, Type IV, Type V Round, and Type V Square) and a diffuse ambiance version.

Clear Long Cylinder

Half Frosted Cylinder

Clear Tapered Cylinder

Product Specifications

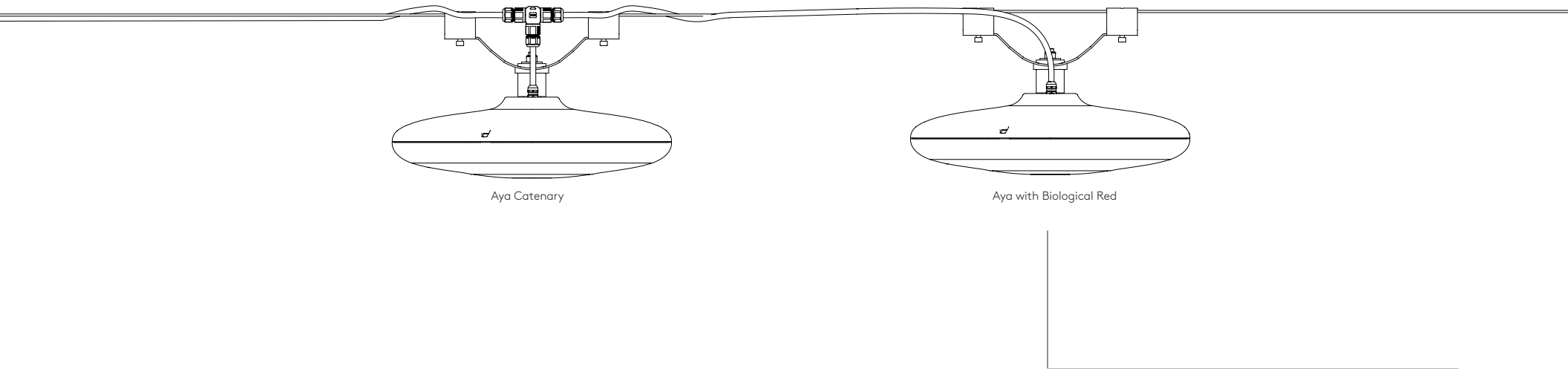|	
Mounting:	Catenary (for other mountings, see Lanova Application Guide or Spec Sheet)
Light engine:	GEN5
Output:	1,300lm - 4,500lm nominal
CCT:	3000K · 4000K · 3-Step Binning · 80+ CRI minimum
Distributions:	Type I · Type II · Type III · Type III Wide · Type IV, · Type V Round · Type V Square · Type V Rectangular · Diffuse Bowl
Options:	Dimming · Hi-Lo Switching, House Side Shield · Mid-Run Connector · Clear Long Cylinder · ½ Frosted Cylinder · Clear Tapered Cylinder

Refer to luminaire specification sheet or installation instructions for various wiring scenarios.

Lanova has wide range of looks and optical options. Create a pleasing ambience with the illuminated diffuser, or meet difficult lighting requirements with Gen5 technical optics.

Aya Catenary

Selux Aya Catenary is a refined LED luminaire designed to deliver precise, comfortable illumination for outdoor environments. Suspended elegantly on cables, Aya Catenary directs light exactly where it's needed—enhancing way finding while preserving surrounding darkness for a visually balanced and dramatic effect. Its recessed optics minimize glare and ensure DarkSky compliance, protecting night skies and reducing light pollution. Available with Biological Red technology, Aya Catenary supports healthier nighttime environments by minimizing the impact on human circadian rhythms and local ecosystems—offering both visual comfort and environmental balance. Selux collaborates closely with designers to engineer tailored Aya Catenary solutions that blend performance, beauty, and environmental responsibility for every project.

Aya Catenary

Aya with Biological Red

Product Specifications

Aya is available with Biological Red technology, that supports healthier nighttime environments by minimizing the impact on human circadian rhythms and local ecosystems.

Mounting: Catenary
                (for other mountings, see Aya Application Guide or Spec Sheet)

Output: High Output - 7850lm · Low Output - 1820lm · up to 118lm/W

CCT: 2200K · 2700K · 3000K · 3500K · 4000K · 5000K ·
                Biological Red · 80 CRI minimum

Optics: Symmetric Round (SR) · Symmetric Wide (SW) · Asymmetric (AS)

Options: DALI-2 Dimming

Refer to luminaire specification sheet or installation instructions for various wiring scenarios.
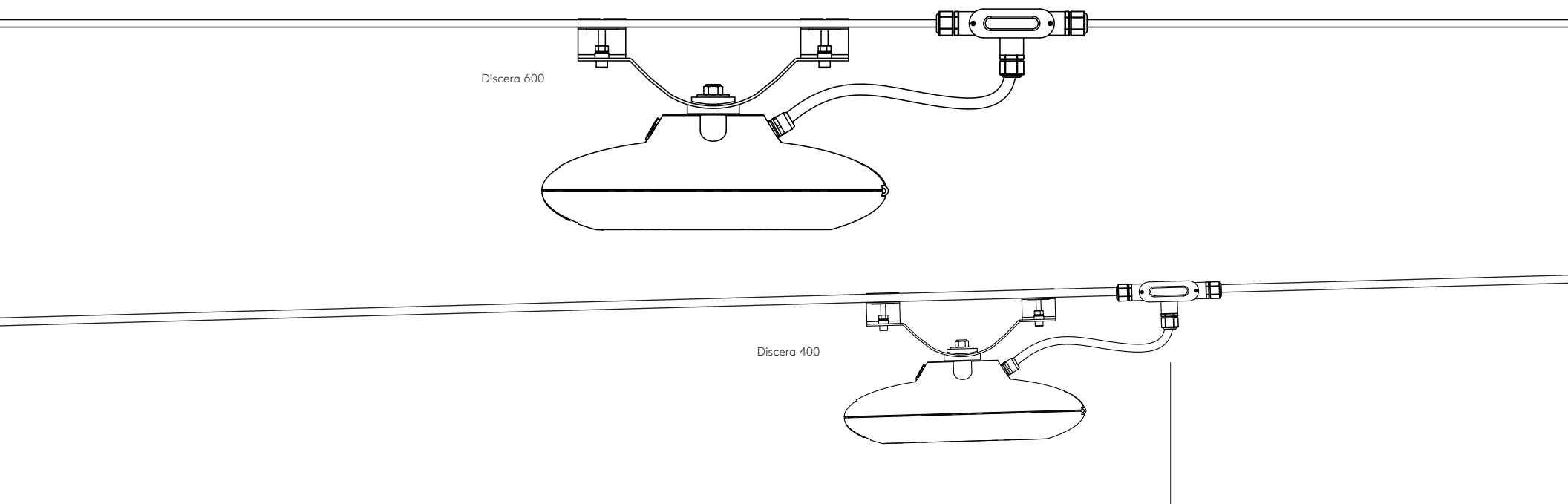
Discera Catenary

Discera Catenary is a sleek LED fixture perfect for any designer needing improved visual guidance and precise placement of light. Suspending the Discera Catenary on cables allows light to be focused where it is needed, leaving other places in shadow, creating a beautiful and dramatic effect. The recessed optics in the Discera shield the light source for more comfortable viewing. Having the choice of housing size, distribution, and output level allows the luminaire to be applied in a very tailored way.

Discera Catenary can be used to guide pedestrians, providing a sense of safety and security. Selux will work with you to engineer an elegant and unique solution for your project.

Discera 600

Discera 400

Discera is equipped with a Mid-Run Splice Connector, provided catenary applications with multiple luminaires in a run, enabling connection of line cords to the luminaires.

Product Specifications

Mounting: Catenary
                  (for other mountings, see Discera Application Guide or Spec Sheets)

Light engine: GEN5

Output: 3,300lm - 13,400lm nominal

CCT: 2700K · 3000K · 4000K · 3-Step Binning · 80+ CRI

Distributions: Type I · Type II · Type III · Type III Wide · Type IV · Type V Round

Options: Dimming · House Side Shield · Diffuse Flat Glass · Mid-Run Connector

Refer to luminaire specification sheet or installation instructions for various wiring scenarios.

What Can Selux Provide?

Selux can offer the complete solution. By submitting a completed Catenary Design Guide Form, Selux will build a catenary package fully engineered with supporting poles, cables, cords, and luminaires. Anchoring catenary systems to buildings or structures not provided by Selux will have to be evaluated by the on-site Professional Engineer (PE).

Catenary suspended luminaires require additional materials for proper installation for the lighting system. These additional materials include structural tension cable for luminaire suspension and fittings for attachment to the building structure or structural masts/poles and cable ends. Stainless steel is recommended due to its resistance to corrosion, strength, long life, and aesthetic appearance. Reference the luminaire weight and EPA on product specification sheet.

Westgate Oxford, Oxford, Great Britain - Photographer Tom Niven, Amphitype

Clevis Assembly & Adjustable Turnbuckles
Manual adjustment is provided by rotating the adjusting sleeve.

Stainless Steel Structural Tension Cable
Offers the best combination of strength and stiffness for static structures. As spans and loads increase, the cables get larger in diameter (the number of strands increases).

Poles & Anchor Points
Selux can provide mounting points for poles or anchored brackets to buildings or structures. Selux can provide calculations and size the poles appropriately on a project-specific basis. Brackets to structure must be evaluated by on-site PE.

Professional Engineer Stamped Drawings
Selux can provide stamped drawings (if required) for a fee. It is important to identify this at the early stages of the project so the cost can be included in the budget. Stamped drawings may extend the lead time.

*Selux does not provide structural design and engineering of building attachment or pole foundation, catenary system installation, or building cable attachment details.

General Questions
often asked

How much cable sag can be expected in a cable span?

As a rule of thumb, plan on a sag of 3% of the cable span for each cable length. For example, if you had a 33' cable span, the maximum vertical displacement, or sag would be approximately 12".

What is the typical process when requesting a budget estimate?

Once Selux has obtained all of the project information needed, it will typically take one to two weeks (dependent on design complexity) for preliminary budgets.

Is geographic location important in catenary design?

Geographic location is critical when designing your project. Wind loads and other loads factor into the cabling and pole requirements.

Where can catenary luminaires be used?

Catenary lighting is suitable for numerous outdoor settings, both public and private, such as downtown districts, parks, commercial zones, school grounds, streets, plazas, public squares, pedestrian routes, paths, and transportation areas.

Riverfront Park, Troy, New York - HyExposure Photography

800 Fifth Avenue, Seattle, Washington · Photographer: Aron Leitz

800 Fifth Avenue, Seattle, Washington - Photographer: Aron Leitz

Gansevoort Peninsula, New York, NY - Photographer: HyExposure

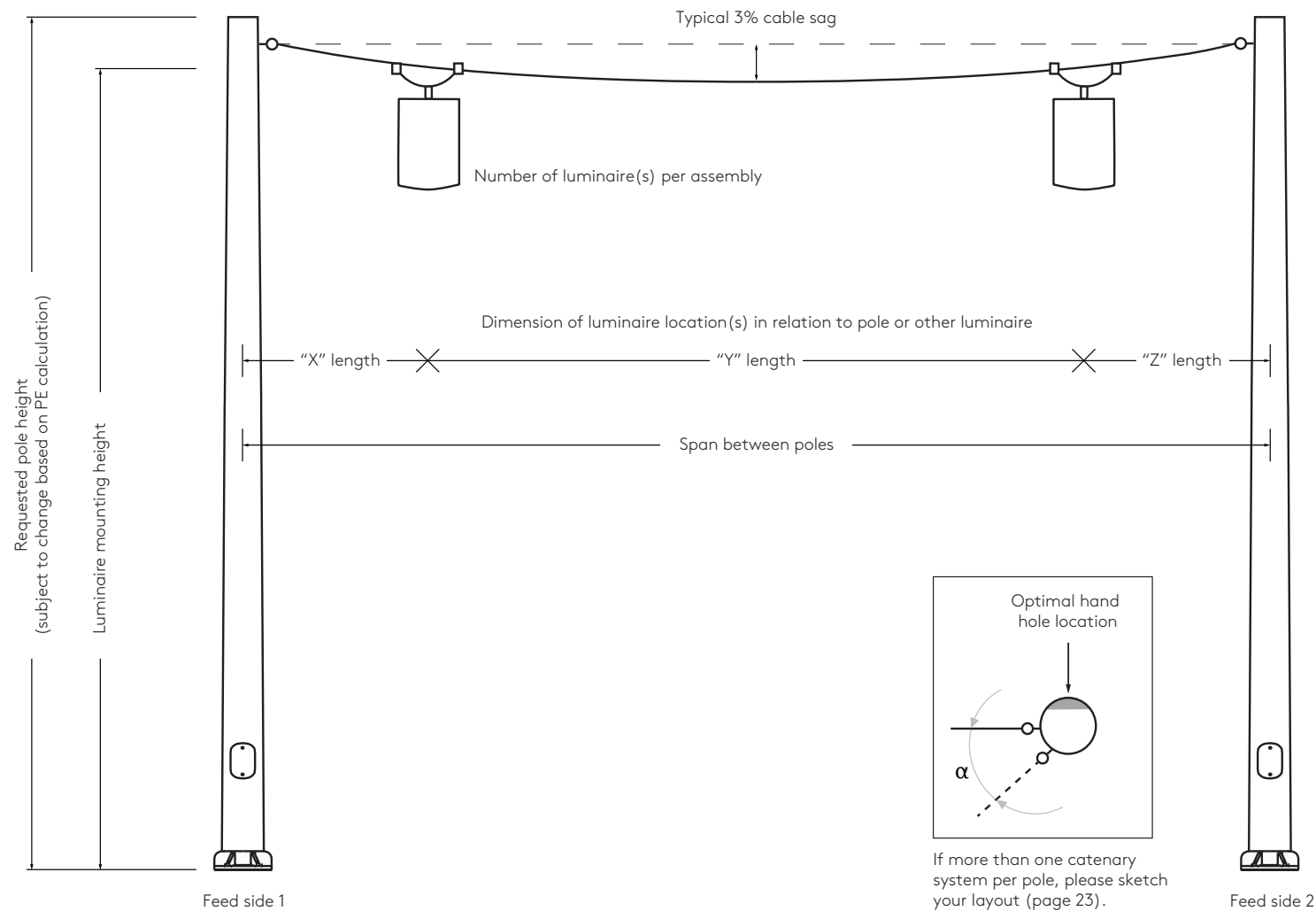Wellesley College Science Complex, Wellesley, Massachusetts - Photographer: Dave Burk
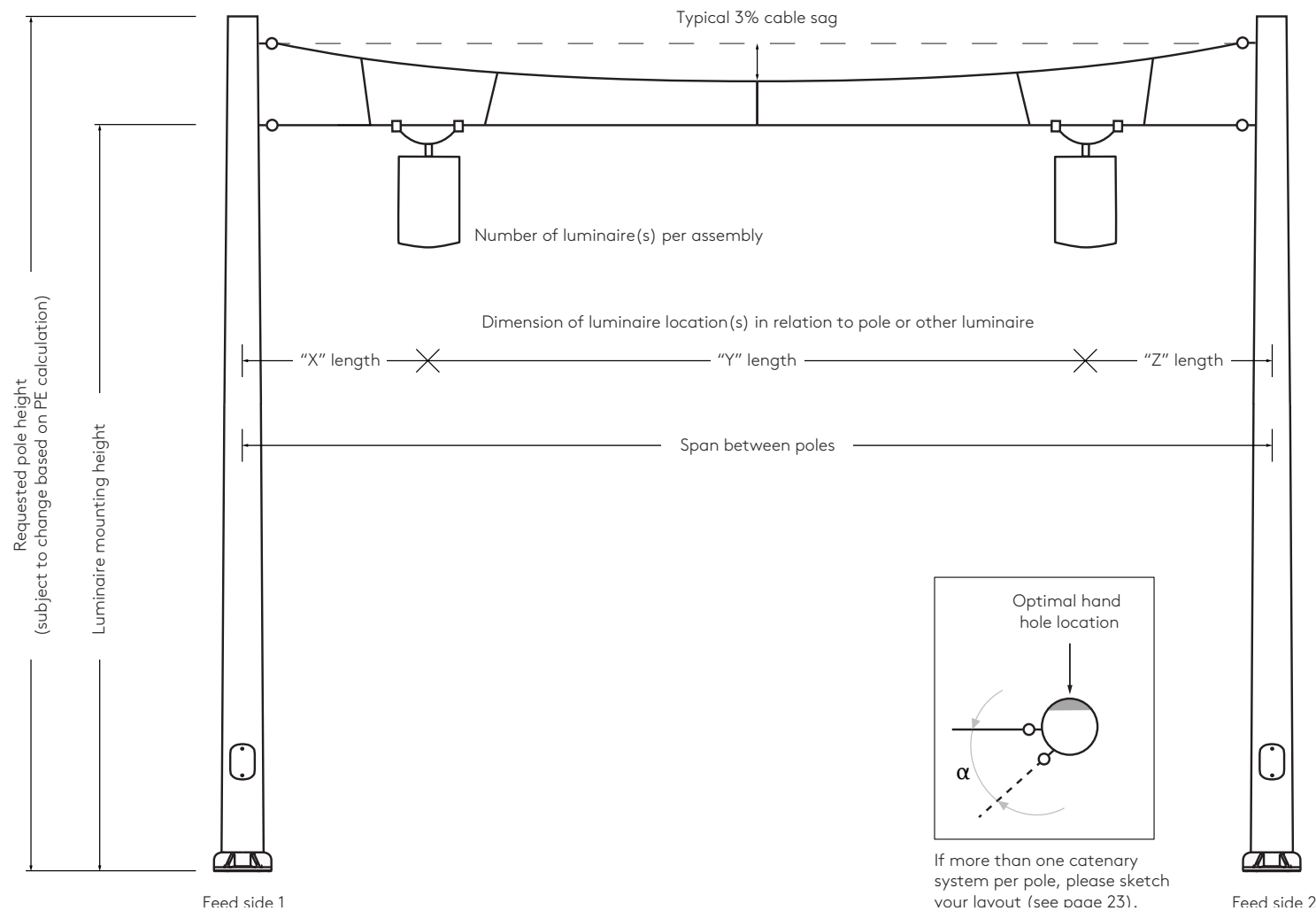
Lincoln ParkLong Beach, CA   Photographer: Dave Burk

Lanova Catenary

Single Wire Catenary Suspension
Pole to Pole (Type A)

Typical 3% cable sag

Number of luminaire(s) per assembly

Dimension of luminaire location(s) in relation to pole or other luminaire

"X" length   "Y" length   "Z" length

Span between poles

Requested pole height
(subject to change based on PE calculation)

Luminaire mounting height

Feed side 1

Feed side 2

Optimal hand hole location

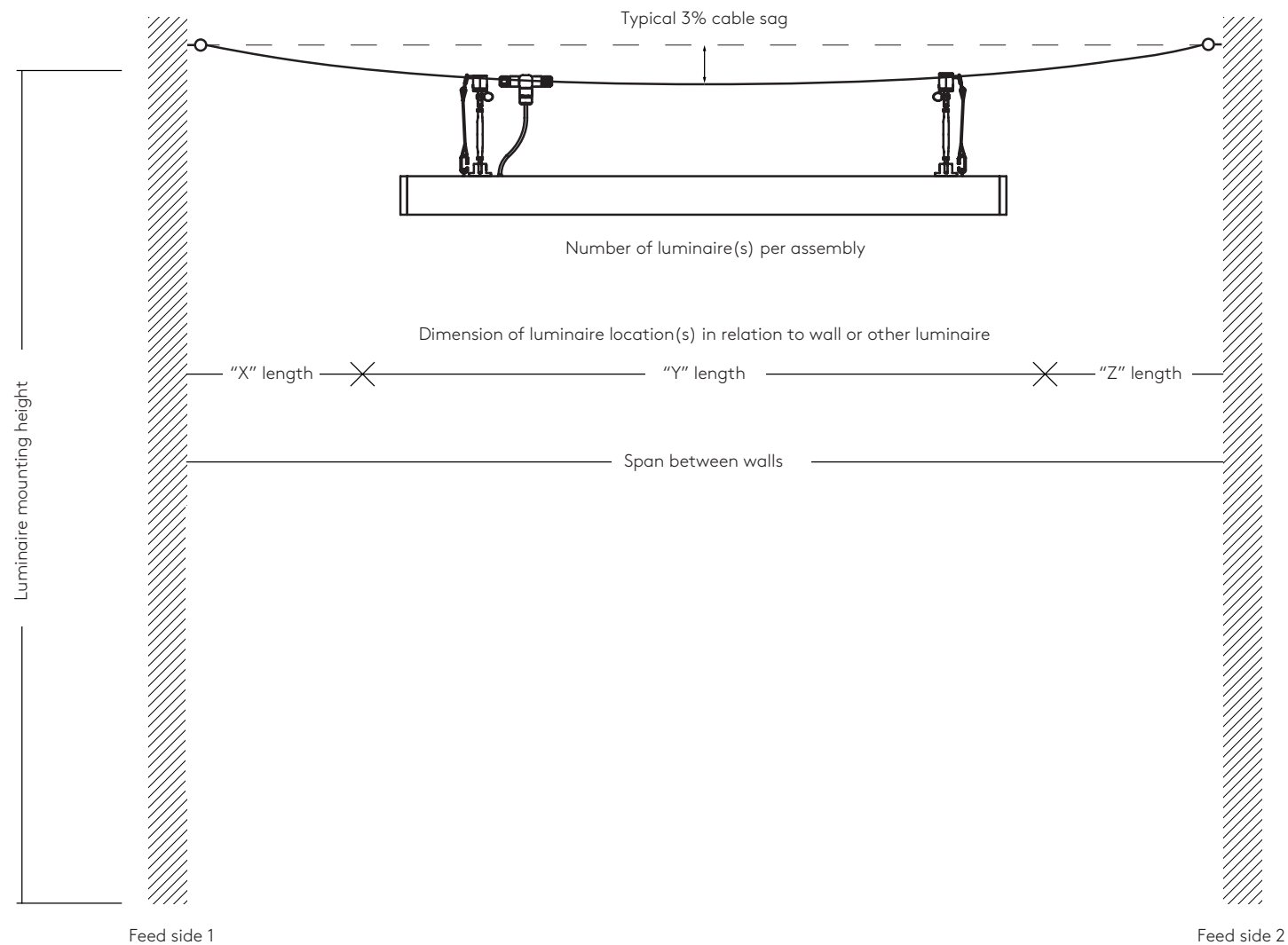α

If more than one catenary system per pole, please sketch your layout (page 23).

Disclaimer: Selux to provide catenary suspension kit, poles and anchor bolts appropriate for configuration. Calculation of foundation by others. Catenary cable system must be on level horizontal plane; if the project requires varying cable mounting heights, please consult the factory.

Double Wire Catenary Suspension
Pole to Pole (Type B)

Typical 3% cable sag

Number of luminaire(s) per assembly

Dimension of luminaire location(s) in relation to pole or other luminaire

"X" length — "Y" length — "Z" length

Span between poles

Requested pole height
(subject to change based on PE calculation)

Luminaire mounting height

Optimal hand
hole location

α

If more than one catenary
system per pole, please sketch
your layout (see page 23).

Feed side 1

Feed side 2

Disclaimer: Selux to provide catenary suspension kit, poles and anchor bolts appropriate for configuration. Calculation of foundation by others. Catenary cable system must be on level horizontal plane; if the project requires varying cable mounting heights, please consult the factory.

Single Wire Catenary Suspension
Wall to Wall (Type C)

Typical 3% cable sag

Number of luminaire(s) per assembly

Dimension of luminaire location(s) in relation to wall or other luminaire

"X" length   "Y" length   "Z" length

Span between walls
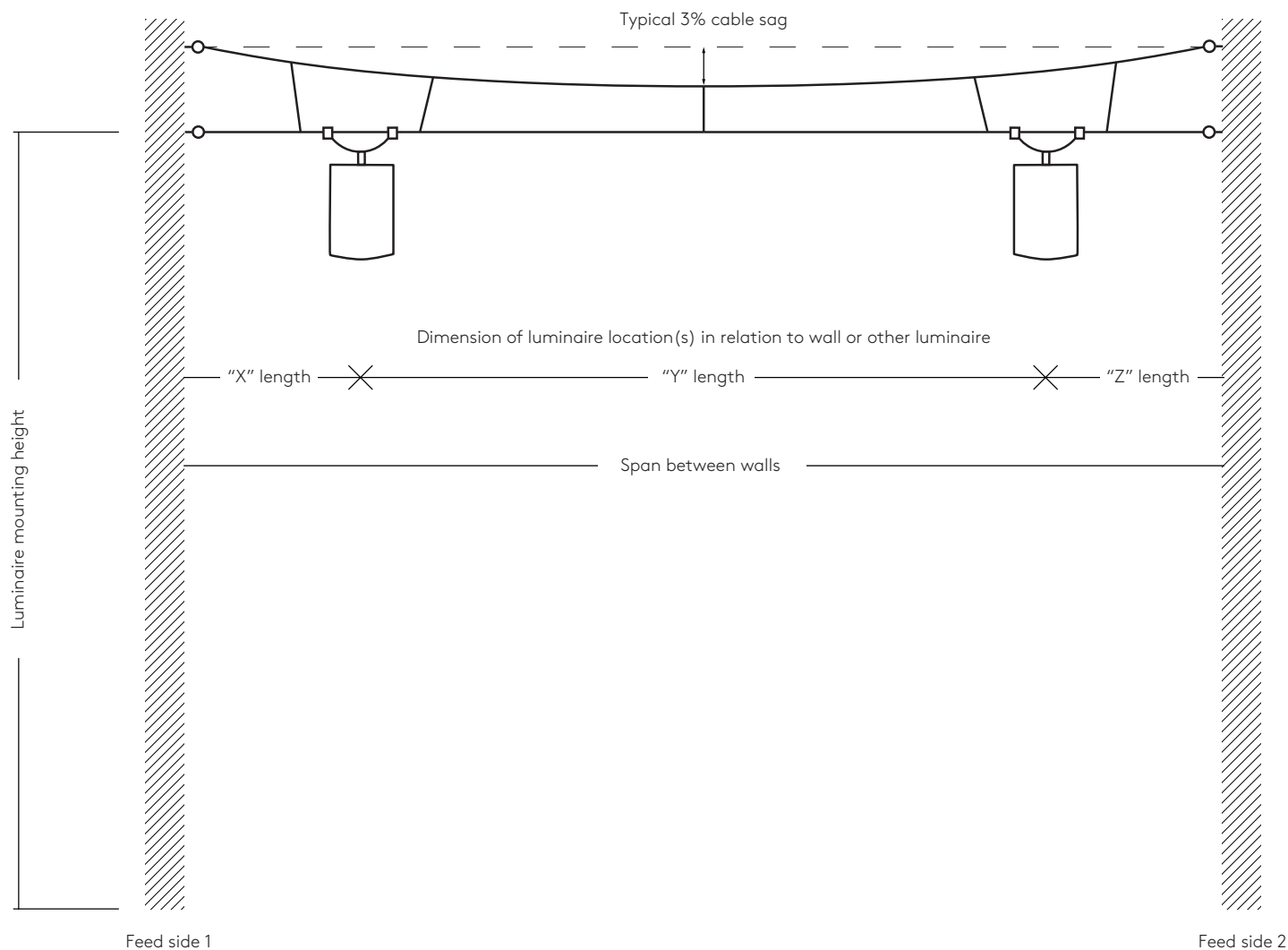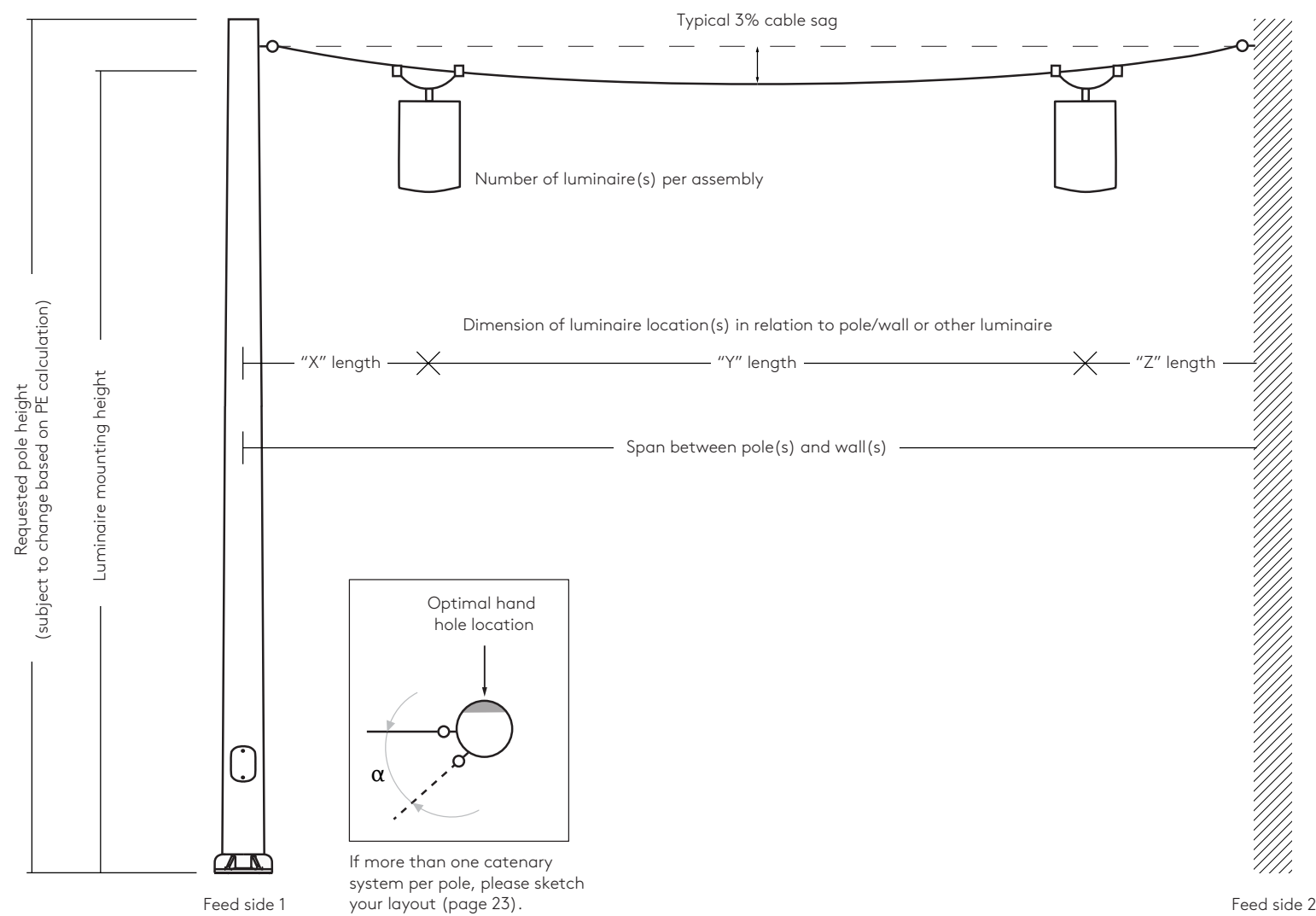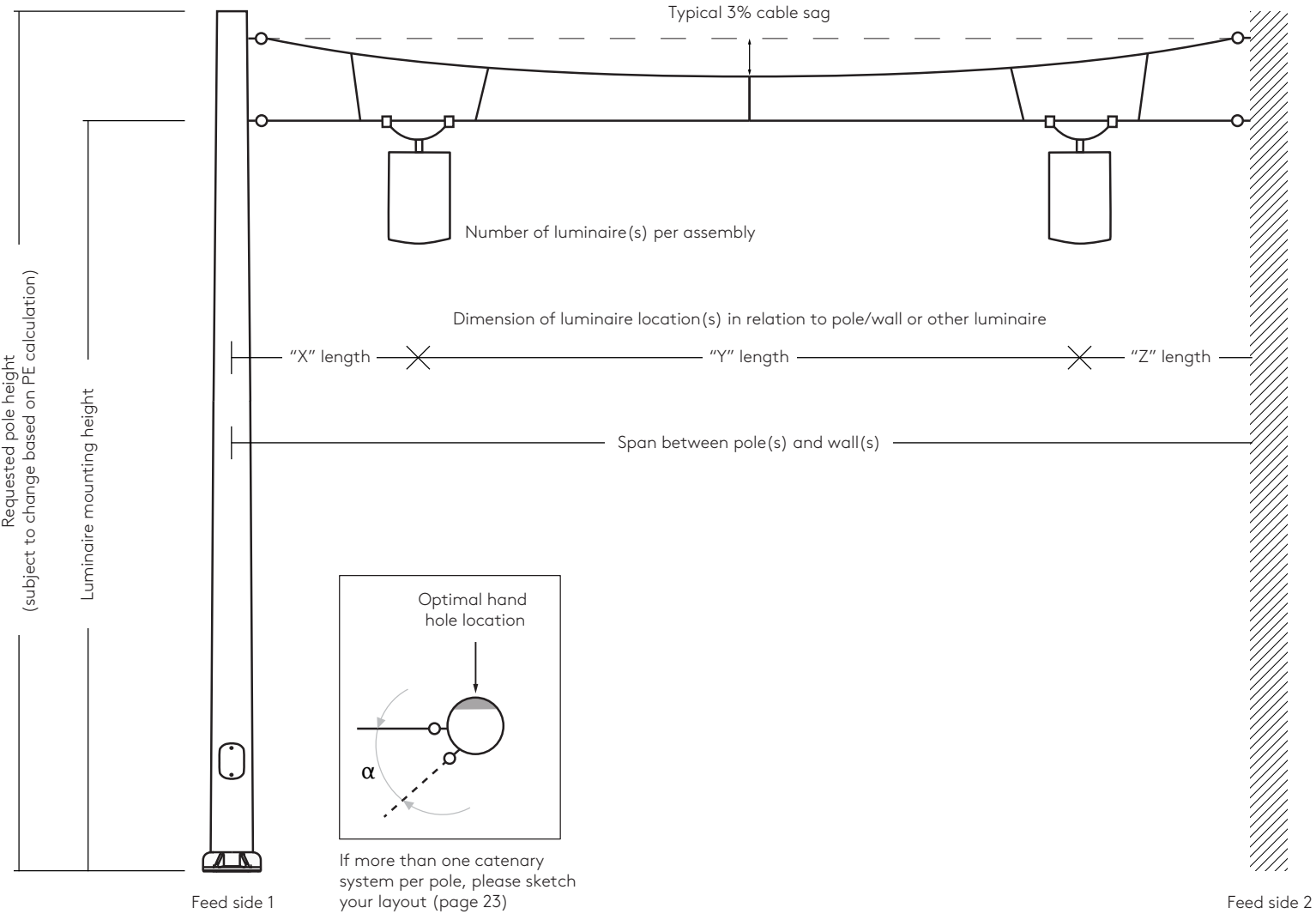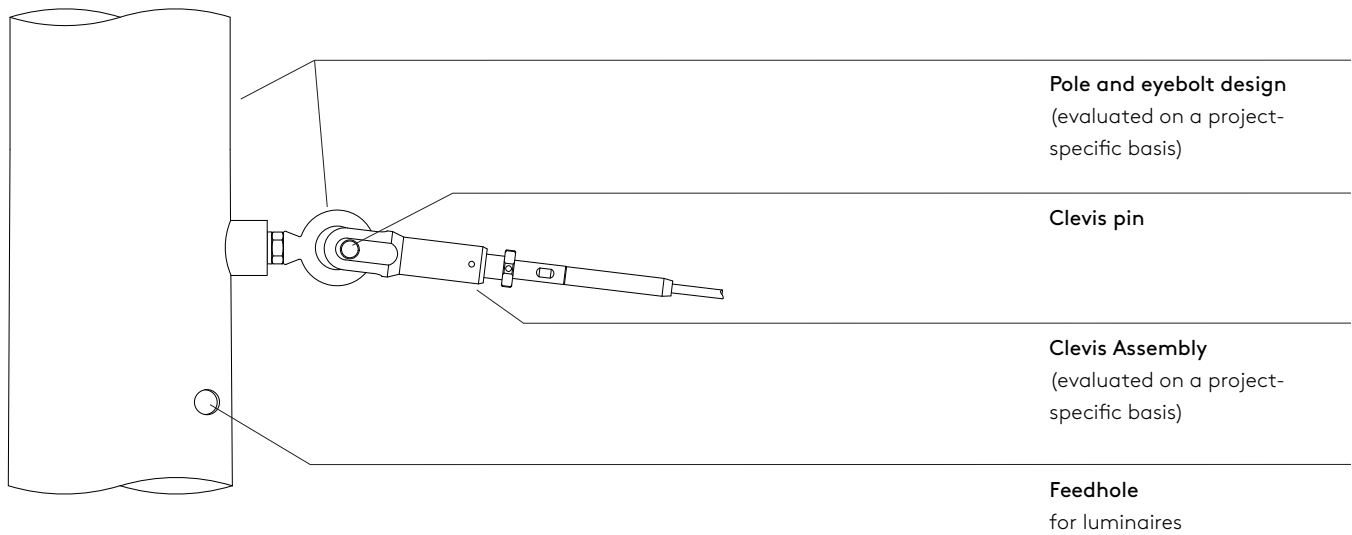
Luminaire mounting height

Feed side 1

Feed side 2

Disclaimer: Selux to provide catenary suspension kit and wall mounting plates. Mounting holes in wall plate based on structural integrity of wall plate. Static calculation and specification of mounting hardware by others. Confirm size of mounting hardware by others before approval drawings are issued. Catenary cable system must be on level horizontal plane; if the project requires varying cable mounting heights, please consult the factory.

Double Wire Catenary Suspension
Wall to Wall (Type D)

Typical 3% cable sag

Dimension of luminaire location(s) in relation to wall or other luminaire

"X" length —————⨯————— "Y" length —————⨯————— "Z" length

Span between walls

Luminaire mounting height

Feed side 1

Feed side 2

Disclaimer: Selux to provide catenary suspension kit and wall mounting plates. Mounting holes in wall plate based on structural integrity of wall plate. Static calculation and specification of mounting hardware by others. Confirm size of mounting hardware by others before approval drawings are issued. Catenary cable system must be on level horizontal plane; if the project requires varying cable mounting heights, please consult the factory.
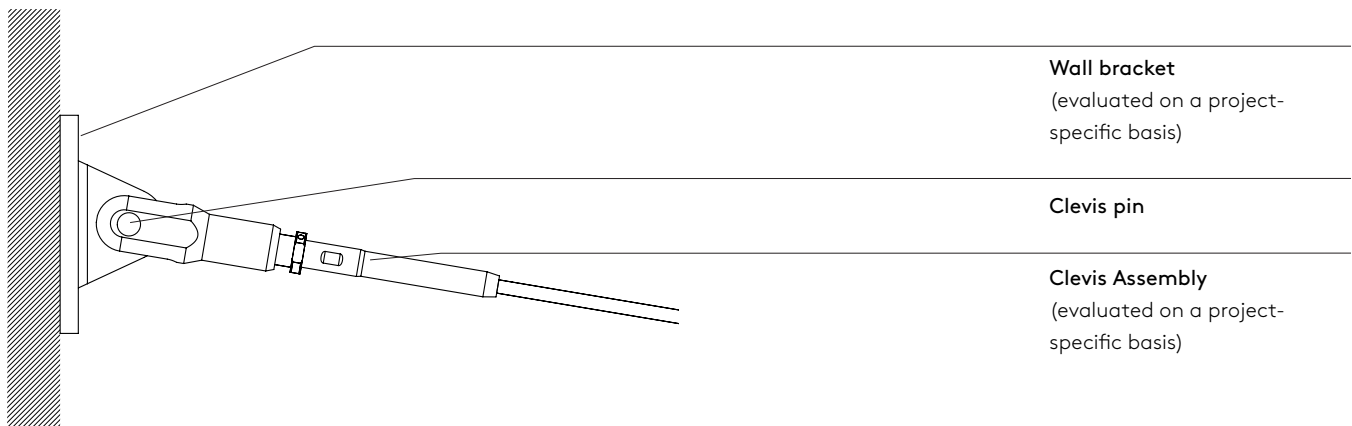
Single Wire Catenary Suspension
Pole to Wall (Type E)

Typical 3% cable sag

Number of luminaire(s) per assembly

Dimension of luminaire location(s) in relation to pole/wall or other luminaire

"X" length   "Y" length   "Z" length

Span between pole(s) and wall(s)

Requested pole height
(subject to change based on PE calculation)

Luminaire mounting height

Optimal hand hole location

α

If more than one catenary system per pole, please sketch your layout (page 23).

Feed side 1

Feed side 2

Double Wire Catenary Suspension
Pole to Wall (Type F)

Typical 3% cable sag

Number of luminaire(s) per assembly

Dimension of luminaire location(s) in relation to pole/wall or other luminaire

"X" length   "Y" length   "Z" length

Span between pole(s) and wall(s)

Requested pole height
(subject to change based on PE calculation)

Luminaire mounting height

Optimal hand
hole location

α

If more than one catenary
system per pole, please sketch
your layout (page 23)

Feed side 1

Feed side 2

Example Pole Anchor Detail

Pole and eyebolt design
(evaluated on a project-specific basis)

Clevis pin

Clevis Assembly
(evaluated on a project-specific basis)

Feedhole
for luminaires

Example Wall Anchor Detail

Wall bracket
(evaluated on a project-specific basis)

Clevis pin

Clevis Assembly
(evaluated on a project-specific basis)

Selux will size and provide

pole or wall anchor details

On a project-specific basis, Selux will size and provide pole or wall anchor details. These details are completely dependent on the catenary system and its application. To the left are generic anchor details from previous projects.

T-Mobile Call Center Facility - Kris Decker/Firewater Photography

At time of order for the catenary system,

Selux will need the following in order to process the solution

Building-to-Building
Applications

1   Completed Catenary Design Guide request form
2   Confirmed site and catenary span dimensions
3   Expected wind speed for the project location
4   Relative building movements from site professional engineer – will the walls move independently from each other (how much movement) or will the building be considered as one unit?
5   Site Plan (CAD Required)

Building-to-Pole
Applications

1   Completed Catenary Design Guide request form
2   Confirmed site and catenary span dimensions
3   Expected wind speed for the project location
4   Relative building movements from site professional engineer – will the walls move independently from each other (how much movement) or will the building be considered as one unit?
5   Site Plan (CAD Required)

Pole-to-Pole
Applications

1   Completed Catenary Design Guide request form
2   Confirmed site and catenary span dimensions
3   Expected wind speed for the project location
4   Site Plan (CAD Required)

Catenary Design Guide Form

By submitting a completed Catenary Design Guide Form, Selux will build a catenary package fully engineered with supporting poles, cables, cords, and luminaires. Anchoring catenary systems to buildings or structures not provided by Selux will have to be evaluated on a case-by-case basis.

Date: _____ Customer: _____ Project: _____

Project location: _____ ☐ Exterior application ☐ Interior application

Catenary configuration type: _____ No. of luminaire(s) per span: _____

Dimension(s) of fixture location(s) in relation to pole: _____

Luminaire catalog #: _____ Luminaire mounting height: _____

Span between pole(s) or structure (provide dimensions): _____

Requested pole height: _____

Requested hand hole location: ☐ Optimal location ☐ Per specification: _____

Sketch Your Design

On the following page, sketch your catenary system or provide Selux with a CAD file for review and pricing purposes. If PE stamped drawing is required, please contact the factory for pricing. Confirm mounting elevation and environmental conditions at time of order. Selux to be provided with confirmed catenary span dimensions before approval drawings can be issued. Submit your catenary design to Selux Lighting Solutions at LightingSolutions@selux.com or to your Regional Sales Manager.

Sketch Your Design

01/2026