INSTALLATION | SYSTEMS

Between us, ideas become reality™

DC FLEXZONE™ SUSPENSION SYSTEM

Architectural Design Guide

Acoustical drawings, details, and specification information

Armstrong®

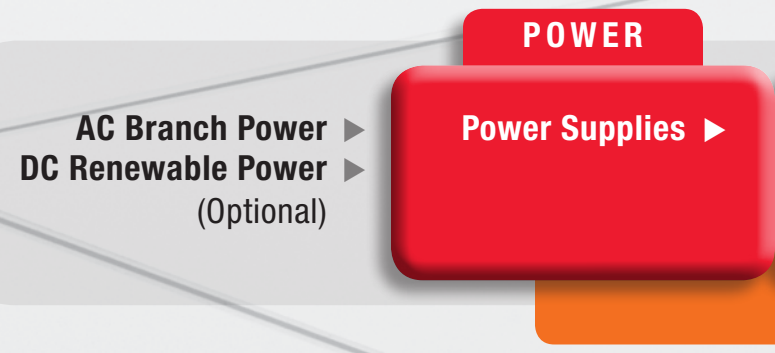
Space Flexibility

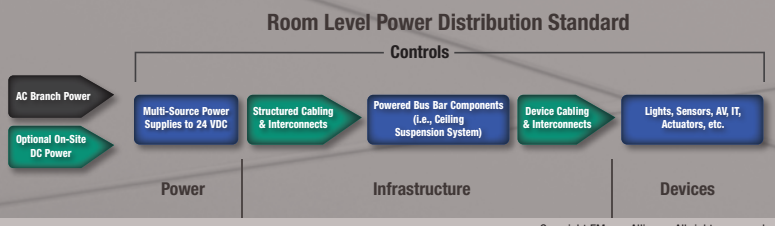
DC FlexZone™ is the only ceiling suspension system that provides an infrastructure for the delivery of low-voltage direct current (DC) power based on the EMerge Alliance® standard. Since DC FlexZone enables safe power distribution through the suspension system, this allows the repurposing and reconfiguration of a space without the need to rewire.

DC FlexZone is available in two popular 9/16" profiles – Suprafine® and Silhouette® 1/4" Reveal. Suspension system mains have electrical conductors on the bulb of the suspension system. Additionally, Silhouette has a conductor in the 1/4" slot reveal, allowing for added flexibility to power devices from below.

DC FlexZone Ceiling Suspension Systems are designed for use with compatible power, infrastructure, lighting, and control products. Compatible products are available from other members of the EMerge Alliance, several of whom are called out here as "DC FlexZone Compatible Partners."

These EMerge Alliance Registered components should be specified as part of the power distribution, lighting, and electrical systems.





Visit emergealliance.org for more information on their platform of DC power distribution standards.

System / Component Relationships

EMerge Alliance Registered® & Related Product Categories (for Building Applications of EMerge 24VDC Occupied Space Standard)	**Specified by Elect. Engineer / Lighting Designer** (Div 16/26)	**Purchased by Electrical Contractor**	**Installed by Electrical Contractor**	**Specified by Architect / Interior Designer** (Div 9)	**Purchased by Acoustical Contractor**	**Installed by Acoustical Contractor**
9/16" Ceiling Suspension System (Armstrong DC FlexZone™ – Suprafine Exposed Tee or Silhouette 1/4" Slot Reveal)				●	●	●
Acoustical Ceiling Tile (i.e. Armstrong Ultima® 1912HRC)				●	●	●
AC-DC Power Supplies, DC–DC Power Supplies	●	●	●			
Power Feed Cables	●	●	●			
24VDC Lighting Fixtures LED or Fluorescent with Connectors and / or Load Device Cable Assemblies	●	●	●			
24VDC Ballasts or Drivers for Lighting Fixtures	●	●	●			
Controls (Wireless or Wired)	●	●	●			

INFRASTRUCTURE

PERIPHERALS

Structured Cabling & Interconnects ▶

Powered Bus Bar Components (DC FlexZone Suspension System) ▶

Device Cabling & Interconnects ▶

Lights, Sensors, etc. ▼

CONTROLS

DC FLEXZONE Compatible Partners*

POWER ▶
- Nextek Power Systems
- ROAL Electronics

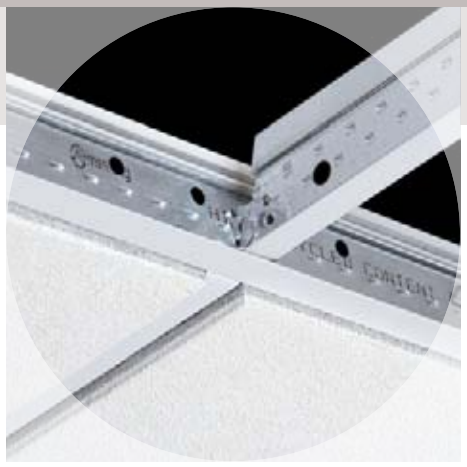
INFRASTRUCTURE ▶
- TE Connectivity

PERIPHERALS ▶
- Acuity Brands
- Cooper Lighting
- Focal Point
- JLC tech
- Osram Sylvania
- Philips Day-Brite
- Philips Lightolier

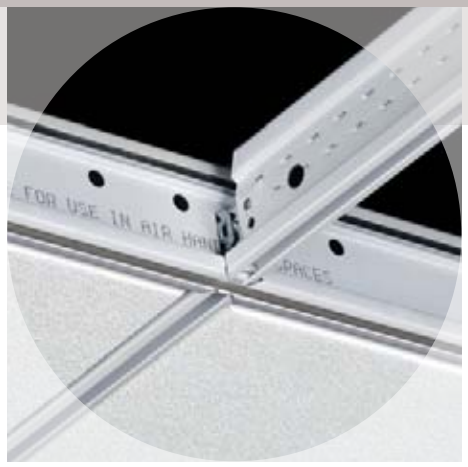
CONTROLS ▶
- Acuity Brands
- Crestron Electronics
- Encelium

* See DC FlexZone Electrical Design Guide (CS-4325) for information on power distribution system design and sample layouts referencing the types of electrical products referenced above.

DC FLEXZONE™ Suspension System Intersections



DC FlexZone–Suprafine® Main and Cross Tee Intersection

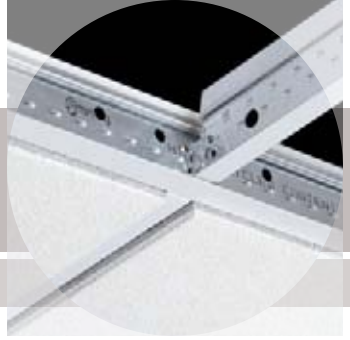


DC FlexZone–Silhouette® Main and Cross Tee Intersection

This brochure provides the acoustical drawings, details, and specification information for DC FlexZone Suspension Systems.

In this Brochure:

DC FLEXZONE™– SUPRAFINE®
Suspension System Overview



DC FlexZone–Suprafine offers the same durability and stability of standard Suprafine with the added benefit of a Class 2 electrical circuit available on the bulb. DC FlexZone–Suprafine mains come in 4 different lengths, are made from high recycled content steel, and meet D, E, F Seismic Design requirements.

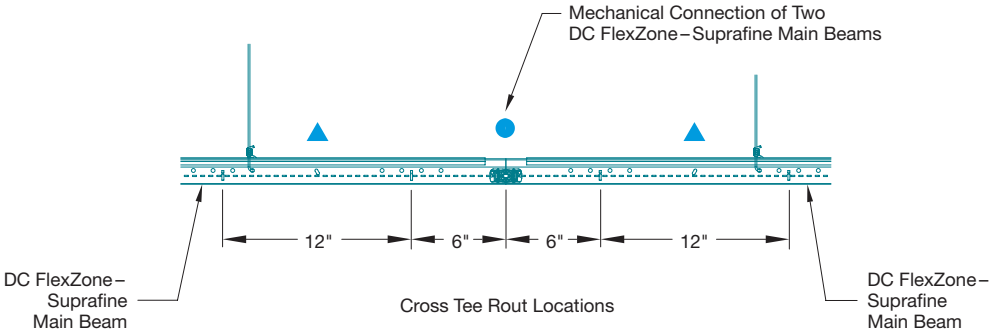
These main beams integrate with standard cross tees, moldings and accessories for Suprafine Suspension Systems and are installed acoustically as part of the overall ceiling system. Electrical connections to the conductors on the DC mains are made subsequently by qualified electricians.

Important Design and Installation Considerations:

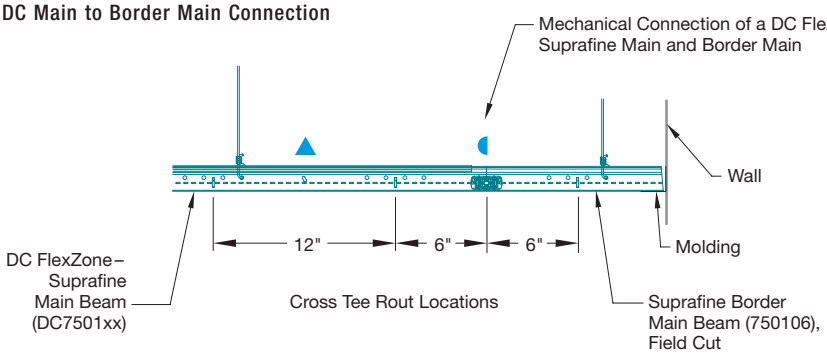
- Do not cut the DC Main Beams, use Border Mains at the perimeters.
- Reflected ceiling plans should indicate orientation, location, and length of DC powered mains and field-cut border mains.
- Rout holes on DC Suprafine main beams are 6" from each end and 12" on center, which is different than standard (non-DC) Suprafine mains.

How to Show DC Mains and Border Mains on the RCP

DC Main to DC Main Connection



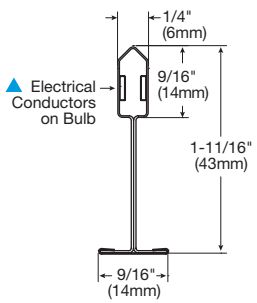
DC Main to Border Main Connection



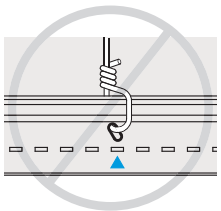
Drawing Key

- ▲ Power Key Slot on the Bulb for Electrical Connection to the Grid
- ◗ End of DC FlexZone Main Beam Connected to Border Main
- ● Mechanical Connection of Two DC FlexZone Main Beams

NOTE: Electrical conductors on the DC mains are not connected.



DC Suprafine Main Beam Profile

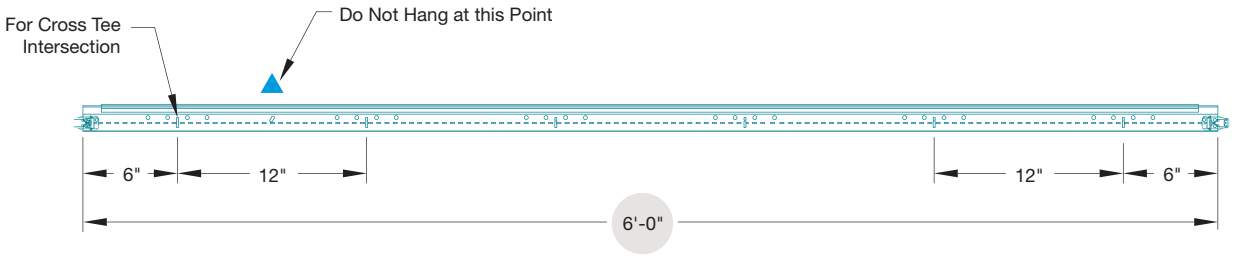


Do not use power key slots for hanger wire.

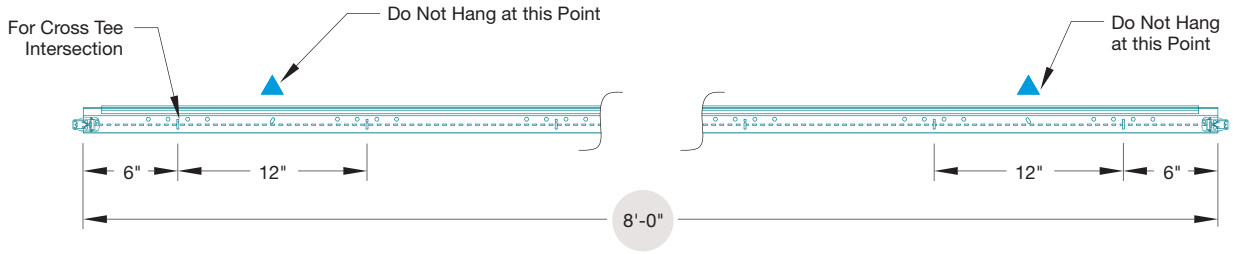
DC FLEXZONE™– SUPRAFINE®
Suspension System Overview

Powered Mains

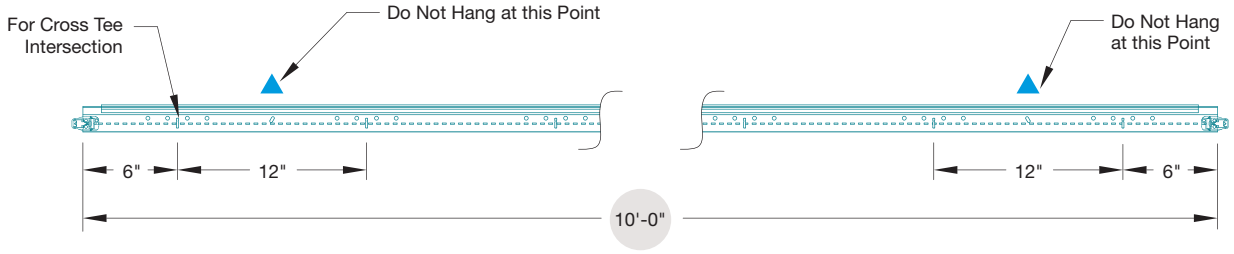
DC750106 – 6' HD Main, Routs 12" OC, First Rout 6" from end



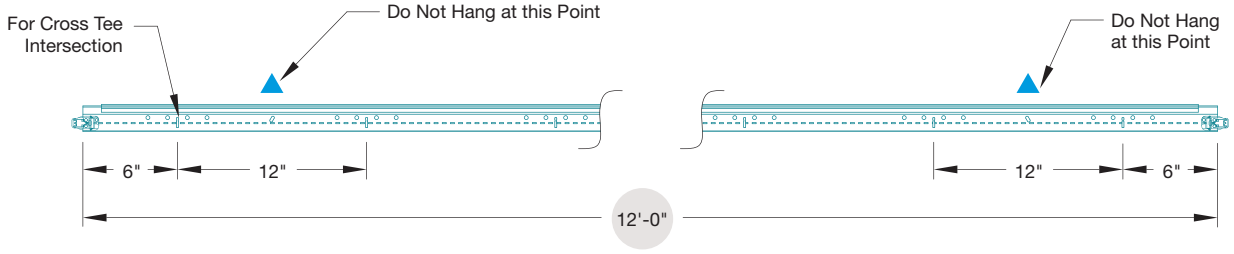
DC750108 – 8' HD Main, Routs 12" OC, First Rout 6" from end



DC750110 – 10' HD Main, Routs 12" OC, First Rout 6" from end

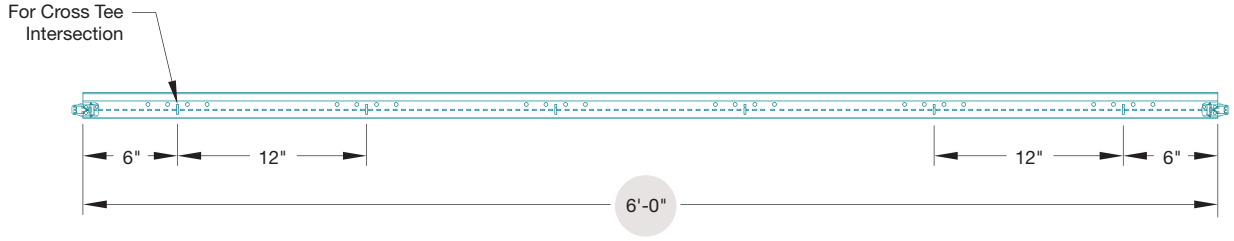


DC750112 – 12' HD Main, Routs 12" OC, First Rout 6" from end



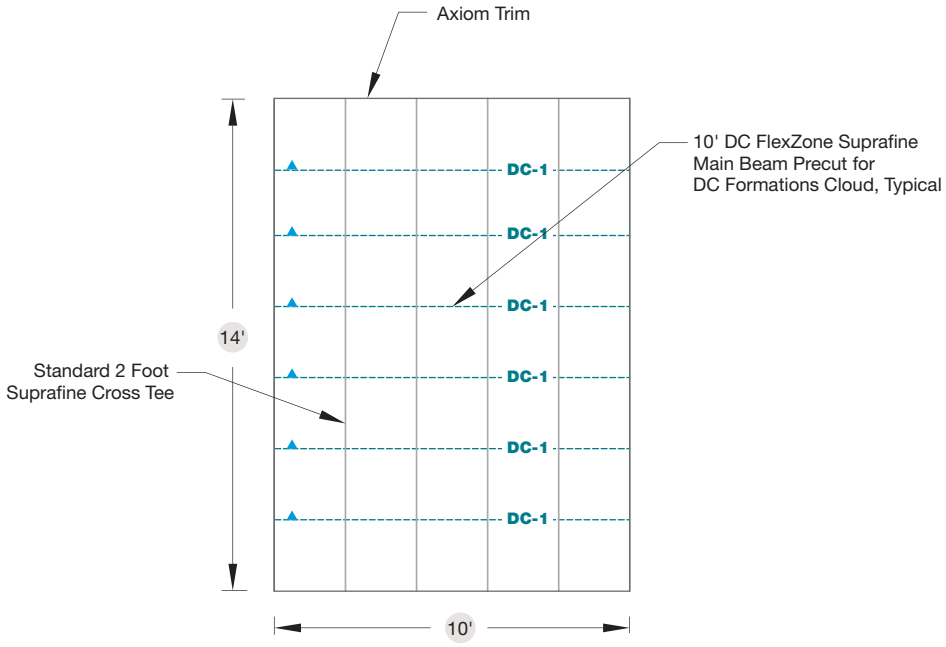
Non-Powered Border Main

750106 – 6' HD Main, Routs 12" OC, First Rout 6" from end (Steel only, no conductors)



DC FLEXZONE™– SUPRAFINE® Suspension System

10' x 14' DC FlexZone Formations Cloud*



* See Formations™ with DC FlexZone Suspension Systems brochure (CS4618) for more information on layouts, cloud sizes, trim options and compatible lighting and control options.

48 different pre-engineered DC FlexZone clouds are available through the normal Formations ordering process

Formations Squares and Rectangles with Ultima® Tegular Panels and Axiom® for Formations Vector® 4" and 6" Trim

KEY SELECTION ATTRIBUTES

- Pre-engineered acoustical cloud systems featuring DC FlexZone suspension system, Axiom® extruded aluminum trim, and compatible DC lighting and control system.
- Ideal for open plenum spaces or acoustically challenged space. Clouds reduce acoustical reverberation time and noise levels while increasing speech intelligibility.
- Formations cloud kits include aircraft cables and StrongBack™ suspension system for reduced suspension visibility and improved floating visual.

TYPICAL APPLICATIONS

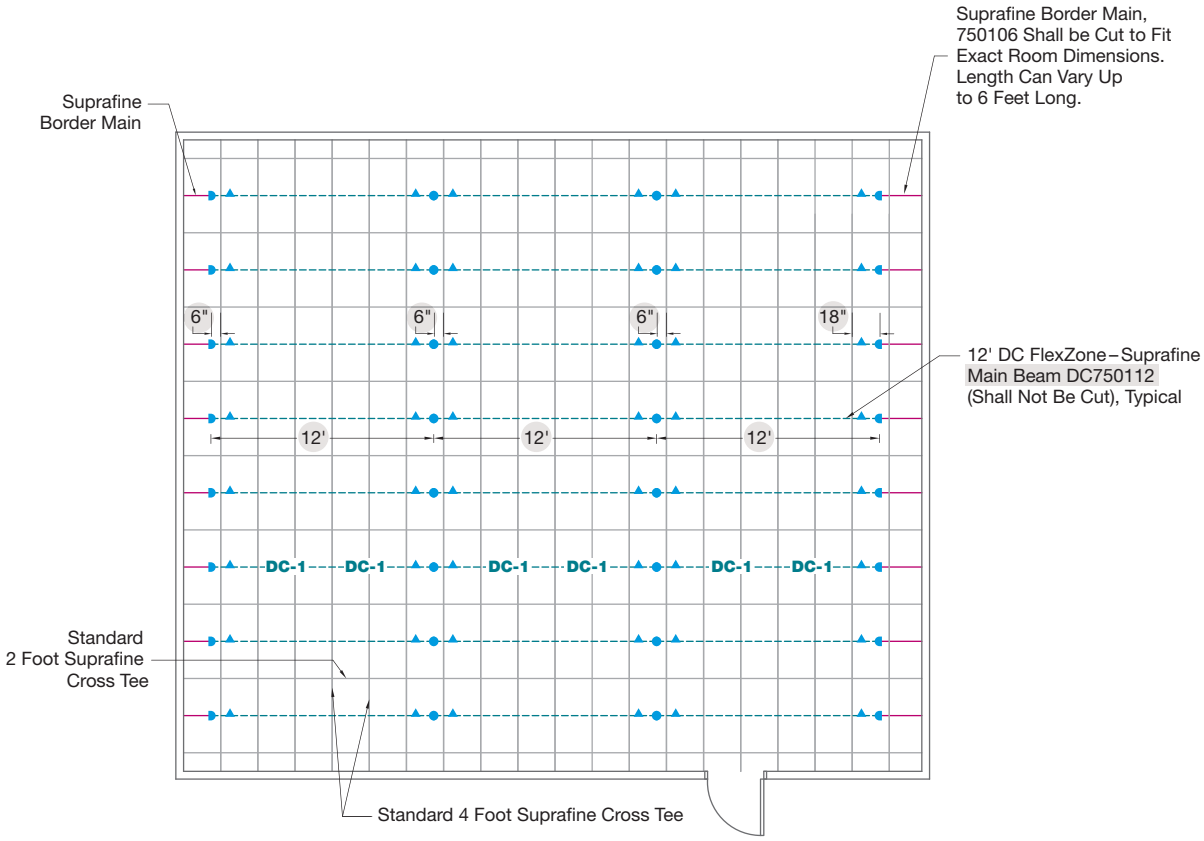
- Sustainable buildings of all types
- Offices
- Retail
- Lobbies
- Open plenum spaces

EASY TO CREATE CUSTOM-LOOK CLOUDS!

1) Select your cloud size
2) Select your ceiling panel and suspension system
3) Select your Axiom trim
4) Select your cloud kit
5) Order your ceiling panels and DC FlexZone compatible lighting and controls

DC FLEXZONE™– SUPRAFINE® Suspension System

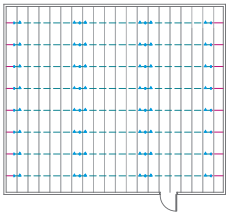
Sample 2' x 2' Open Office Layout



Drawing Key

- DC-1 DC-1 — DC FlexZone–Suprafine Main Beam (1 circuit available)
- Border Main Beam
- Cross Tee
- Electrical Power-in Location (Bulb) on DC FlexZone Main
- End of DC FlexZone Main Beam Connected to Border Main
- Mechanical Connection of Two DC FlexZone Main Beams

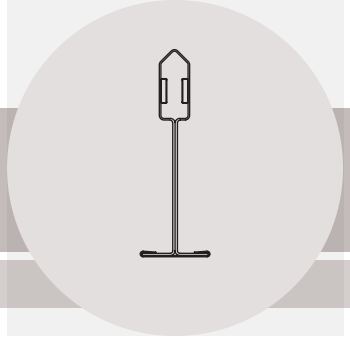
New DC FlexZone–Suprafine Suspension System Components		
DC FlexZone Main Beams	**Quantity (Pieces)**	**Quantity (Cartons)**
DC750112	24	3
Non-Powered Border Mains	**Quantity (Pieces)**	**Quantity (Cartons)**
750106	8	1

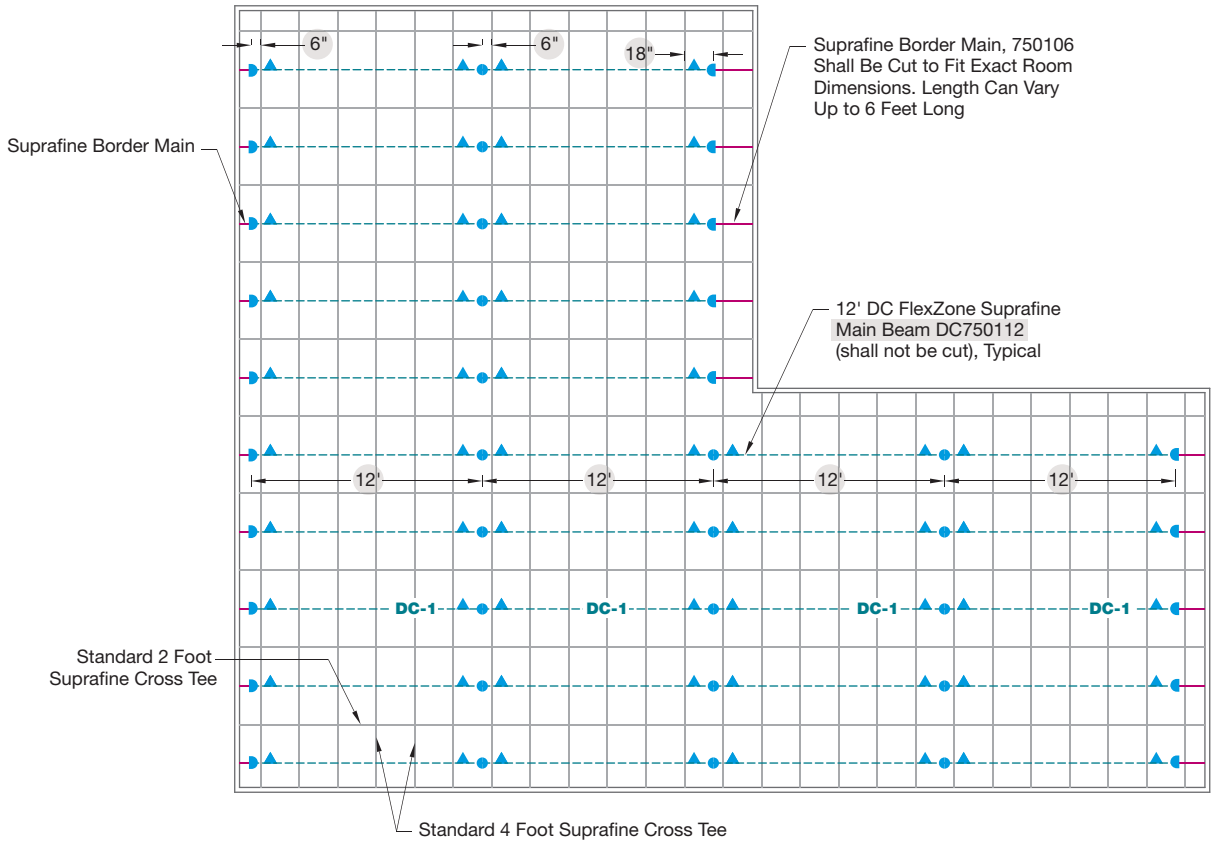


◀ Note: A 2' x 4' layout of the application above would use the same number of DC FlexZone main beams but fewer cross tees.

DC FLEXZONE™– SUPRAFINE® Suspension System

Sample 2' x 2' Large Room Layout





Drawing Key

New DC FlexZone – Suprafine Suspension System Components		
DC FlexZone Main Beams	Quantity (Pieces)	Quantity (Cartons)
DC750112	30	3
Non-Powered Border Mains	Quantity (Pieces)	Quantity (Cartons)
750106	10	1

DC FlexZone – Suprafine Main Beam (1 circuit available) — DC-1 — DC-1

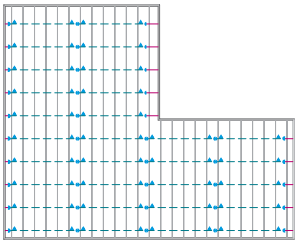
Border Main Beam

Cross Tee

Electrical Power-in Location (Bulb) on DC FlexZone Main

End of DC FlexZone Main Beam Connected to Border Main

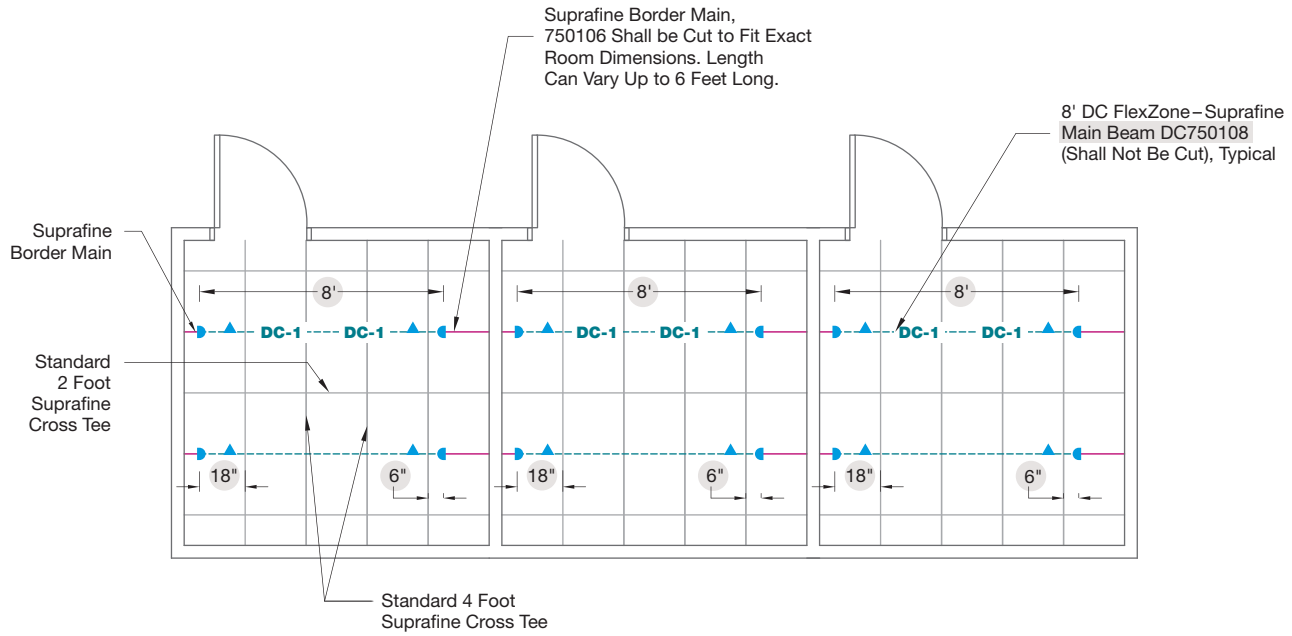
Mechanical Connection of Two DC FlexZone Main Beams



Note: A 2' x 4' layout of the application above would use the same number of DC FlexZone main beams but fewer cross tees.

DC FLEXZONE™– SUPRAFINE® Suspension System

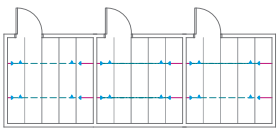
Sample 2' x 2' Private Office Layout



Drawing Key

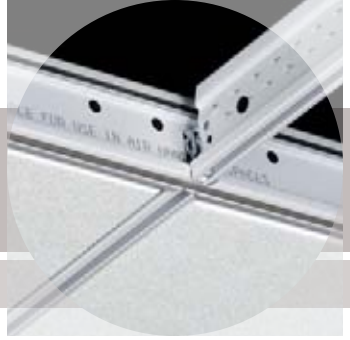
- DC-1 DC-1 — DC FlexZone–Suprafine Main Beam (1 circuit available)
- Border Main Beam
- Cross Tee
- Electrical Power-in Location (Bulb) on DC FlexZone Main
- End of DC FlexZone Main Beam Connected to Border Main
- Mechanical Connection of Two DC FlexZone Main Beams

New DC FlexZone–Suprafine Suspension System Components		
DC FlexZone Main Beams	Quantity (Pieces)	Quantity (Cartons)
DC750108	6	1
Non-Powered Border Mains	Quantity (Pieces)	Quantity (Cartons)
750106	6	1



◀ Note: A 2' x 4' layout of the application above would use the same number of DC FlexZone main beams but fewer cross tees.

DC FLEXZONE™– SILHOUETTE®
Suspension System Overview



DC FlexZone–Silhouette provides the same clean, crisp visual as standard Silhouette but with the added benefit of two Class 2 circuits – one on the bulb and one in the slot reveal. DC FlexZone–Silhouette mains come in 4 different lengths, are made from high recycled content steel, and meet D, E, F Seismic Design requirements.

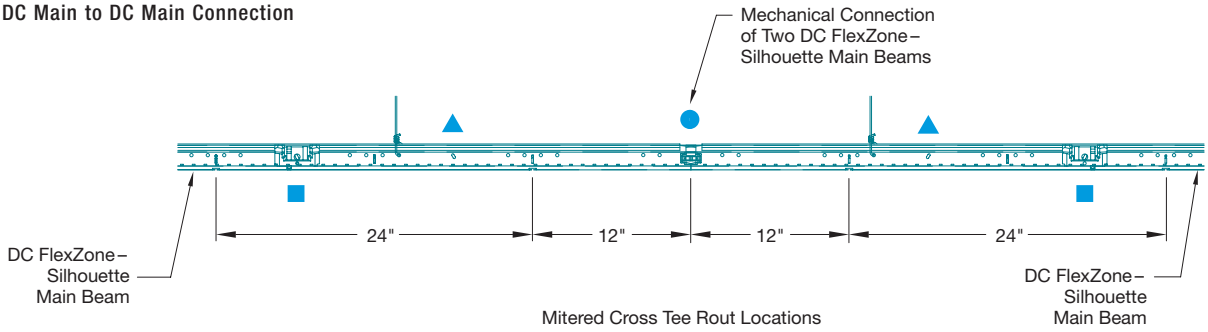
These main beams integrate with standard cross tees, moldings and accessories for Silhouette 1/4" Reveal Suspension Systems and are installed acoustically as part of the overall ceiling system. Electrical connections to the conductors on the DC mains are made subsequently by qualified electricians.

Important Design and Installation Considerations:

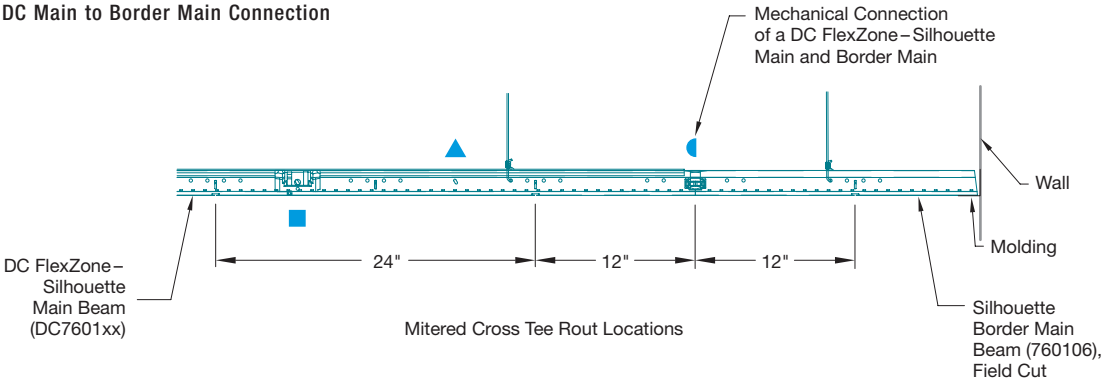
- Do not cut the DC Main Beams, use Border Mains at the perimeters.
- Reflected ceiling plans should indicate orientation, location, and length of DC powered mains and field-cut border mains.

How to Show DC Mains and Border Mains on the RCP

DC Main to DC Main Connection



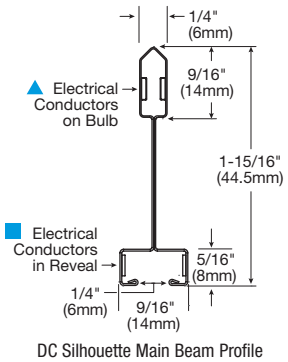
DC Main to Border Main Connection



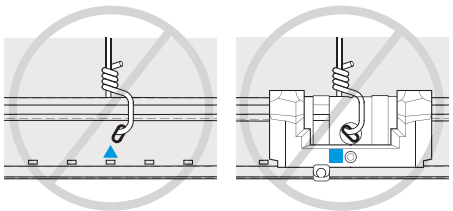
Drawing Key

- ▲ Power Key Slot on the Bulb for Electrical Connection to the Grid
- ■ Power Key Slot for Electrical Connection to Bottom Reveal Area of Grid
- ◗ End of DC FlexZone Main Beam Connected to Border Main
- ● Mechanical Connection of Two DC FlexZone Main Beams

NOTE: Electrical conductors on the DC mains are not connected.



DC Silhouette Main Beam Profile

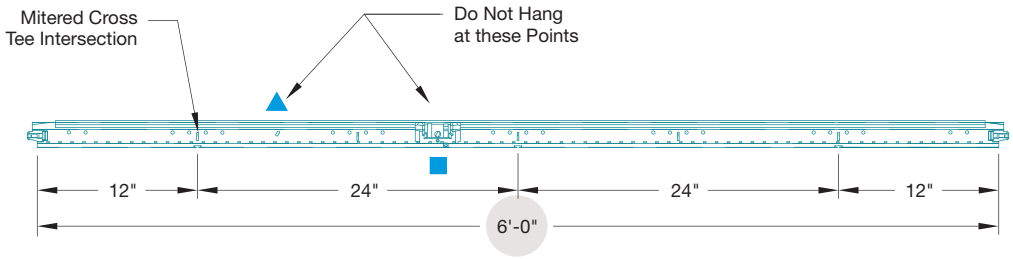


Do not use power key slots for hanger wire.

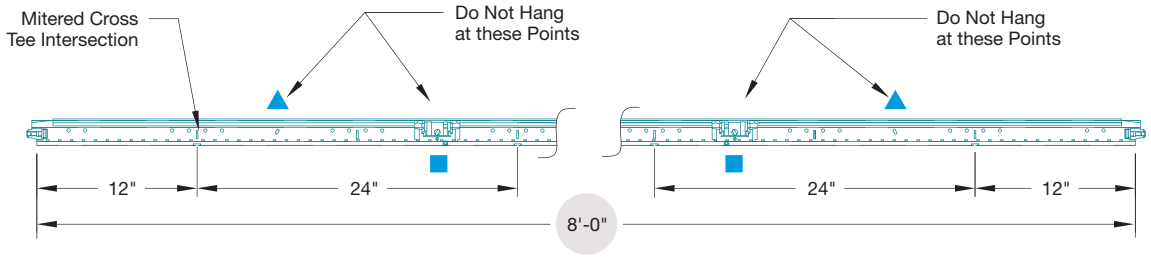
DC FLEXZONE™– SILHOUETTE®
Suspension System Overview

Powered Mains

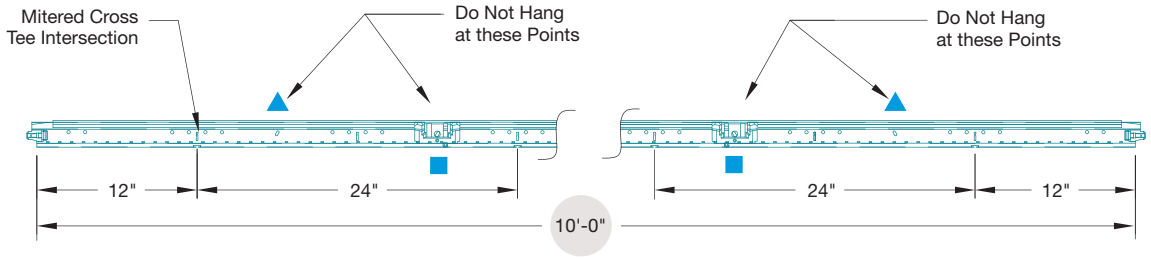
DC760106 – 6' HD Main, Routs 12" OC, Notched 24" OC



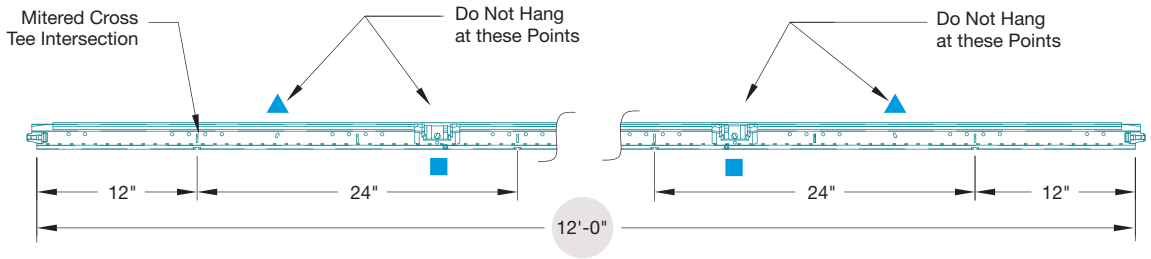
DC760108 – 8' HD Main, Routs 12" OC, Notched 24" OC



DC760110 – 10' HD Main, Routs 12" OC, Notched 24" OC

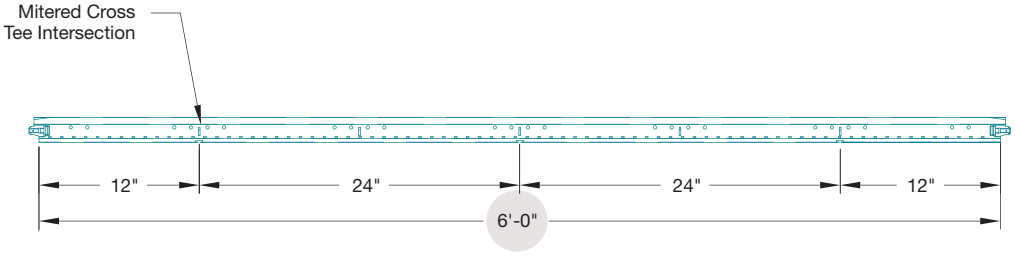


DC760112 – 12' HD Main, Routs 12" OC, Notched 24" OC



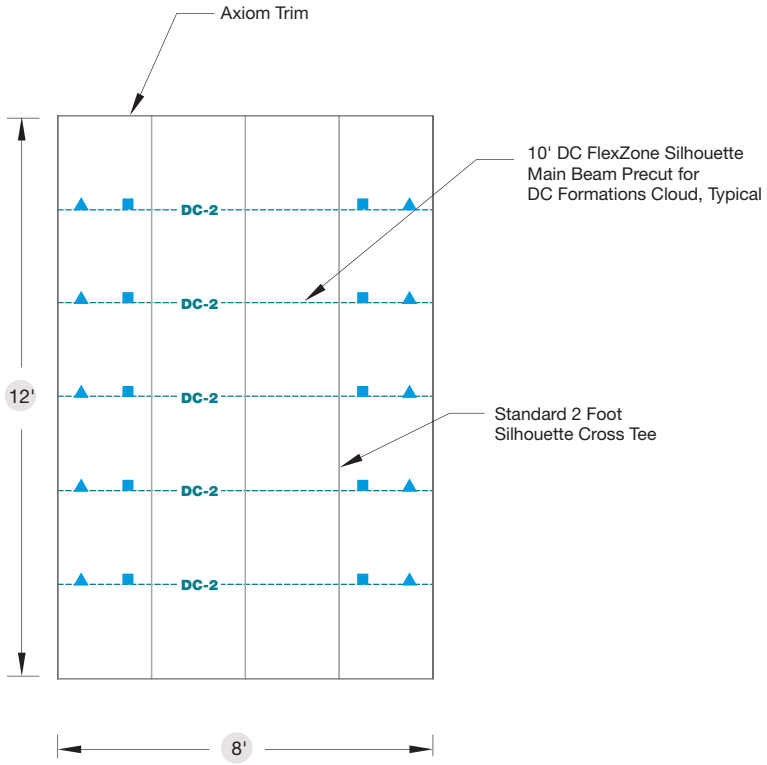
Non-Powered Border Main

760106 – 6' HD Main, Routs 12" OC, Notched 24" OC (Steel only, no conductors)



DC FLEXZONE™– SILHOUETTE® Suspension System

8' x 12' DC FlexZone Formations Cloud*



* See Formations™ with DC FlexZone Suspension Systems brochure (CS4618) for more information on layouts, cloud sizes, trim options and compatible lighting and control options.

48 different pre-engineered DC FlexZone clouds are available through the normal Formations ordering process

Formations Squares and Rectangles with Ultima® Tegular Panels and Axiom® for Formations Vector® 4" and 6" Trim

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- Pre-engineered acoustical cloud systems featuring DC FlexZone suspension system, Axiom® extruded aluminum trim, and compatible DC lighting and control system.
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- Retail
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EASY TO CREATE CUSTOM-LOOK CLOUDS!

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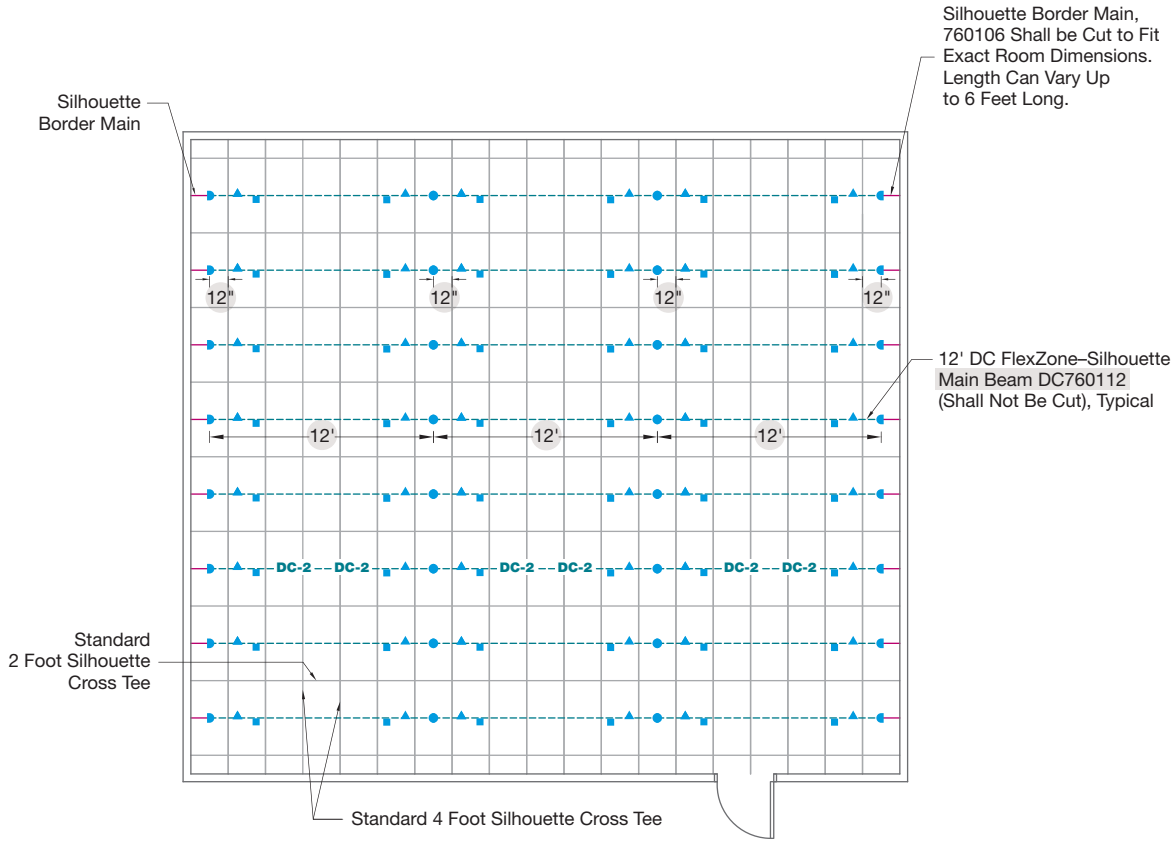
3) Select your Axiom trim
4) Select your cloud kit
5) Order your ceiling panels and DC FlexZone compatible lighting and controls

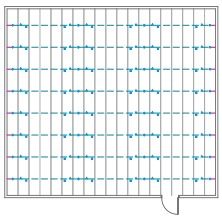
DC FLEXZONE™– SILHOUETTE® Suspension System

Sample 2' x 2' Open Office Layout



Drawing Key

- DC-2 DC-2 — DC FlexZone–Silhouette Main Beam (2 separate circuits available)
- Border Main Beam
- Cross Tee
- Electrical Power-in Location (Bulb) on DC FlexZone Main
- Electrical Power-in Location (Reveal) on DC FlexZone–Silhouette Main
- End of DC FlexZone Main Beam Connected to Border Main
- Mechanical Connection of Two DC FlexZone Main Beams

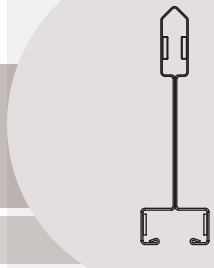


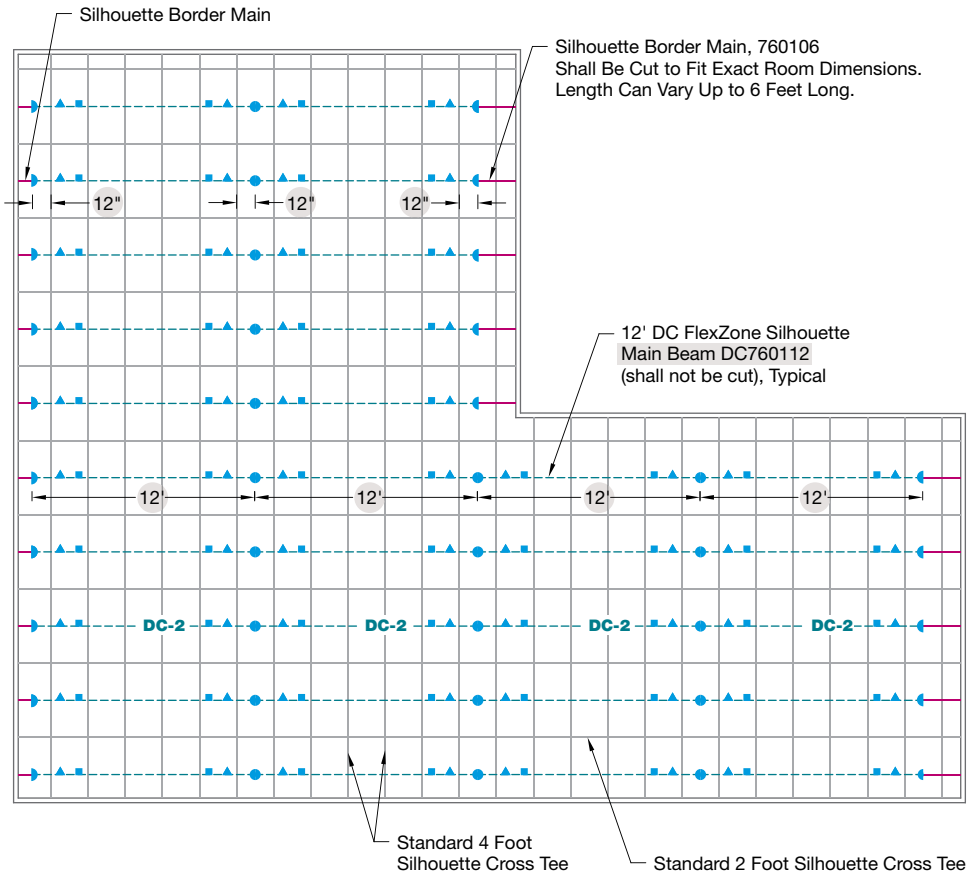
New DC FlexZone – Silhouette Suspension System Components		
DC FlexZone Main Beams	Quantity (Pieces)	Quantity (Cartons)
DC760112	24	3
Non-Powered Border Mains	Quantity (Pieces)	Quantity (Cartons)
760106	8	1

◀ Note: A 2' x 4' layout of the application above would use the same number of DC FlexZone main beams but fewer cross tees.

DC FLEXZONE™– SILHOUETTE® Suspension System

Sample 2' x 2' Large Room Layout





Drawing Key

New DC FlexZone – Silhouette Suspension System Components		
DC FlexZone Main Beams	Quantity (Pieces)	Quantity (Cartons)
DC760112	30	3
Non-Powered Border Mains	Quantity (Pieces)	Quantity (Cartons)
760106	10	1

DC FlexZone–Silhouette Main Beam (2 separate circuits available) — DC-2 DC-2

Border Main Beam

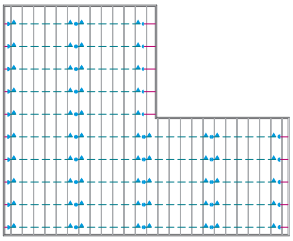
Cross Tee

Electrical Power-in Location (Bulb) on DC FlexZone Main

Electrical Power-in Location (Reveal) on DC FlexZone-Silhouette Main

End of DC FlexZone Main Beam Connected to Border Main

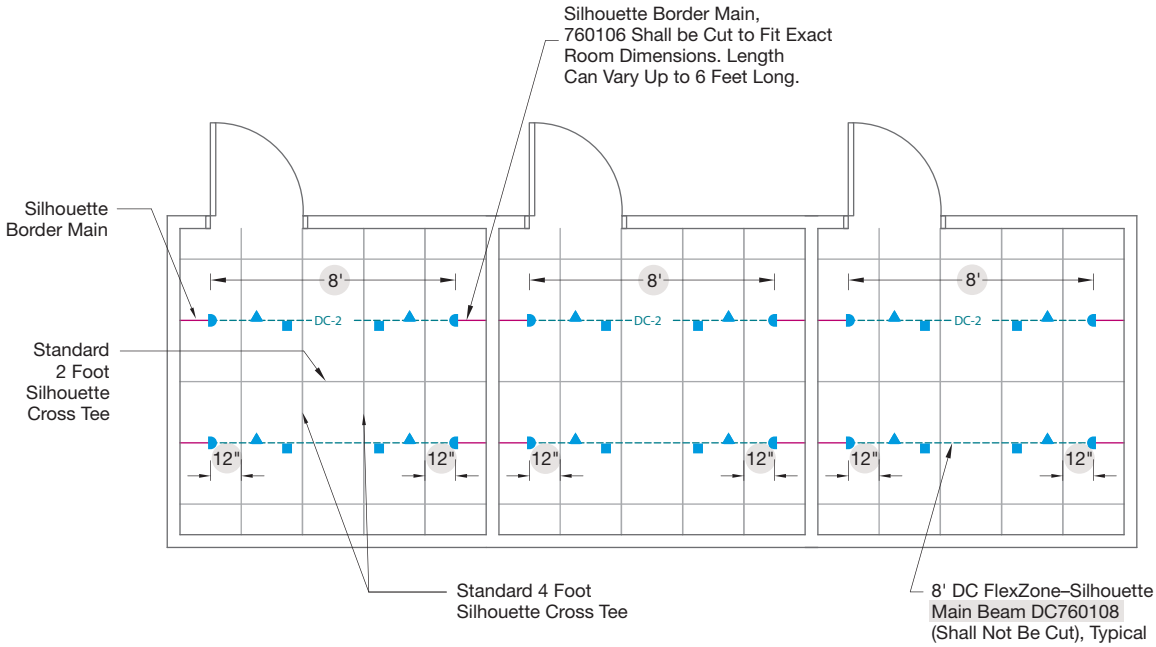
Mechanical Connection of Two DC FlexZone Main Beams



Note: A 2' x 4' layout of the application above would use the same number of DC FlexZone main beams but fewer cross tees.

DC FLEXZONE™– SILHOUETTE® Suspension System

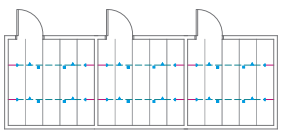
Sample 2' x 2' Private Office Layout



Drawing Key

- DC-2 DC-2 — DC FlexZone–Silhouette Main Beam (2 separate circuits available)
- Border Main Beam
- Cross Tee
- Electrical Power-in Location (Bulb) on DC FlexZone Main
- Electrical Power-in Location (Reveal) on DC FlexZone–Silhouette Main
- End of DC FlexZone Main Beam Connected to Border Main
- Mechanical Connection of Two DC FlexZone Main Beams

New DC FlexZone – Silhouette Suspension System Components		
DC FlexZone Main Beams	Quantity (Pieces)	Quantity (Cartons)
DC760108	6	1
Non-Powered Border Mains	Quantity (Pieces)	Quantity (Cartons)
760106	6	1



◀ Note: A 2' x 4' layout of the application above would use the same number of DC FlexZone main beams but fewer cross tees.

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- Standard product information
- Real-time selection and specifications tools
- Online catalog
- DC FlexZone Overview Brochure
- DC FlexZone Specification Sheets & CAD Drawings
- Installation Instructions and Acoustical Contractor Tip Sheets
- Please see Electrical Design Guide (CS-4325) for design information on how to connect DC FlexZone Suspension Systems to EMerge Alliance® Registered and DC FlexZone Compatible power, infrastructure, lighting, and control products.

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- TechLine – Technical information, detail drawings, CAD design assistance, installation information, other technical services – 8 a.m. to 5:30 p.m. EST, Monday through Friday. FAX 1-800-572-8324 or email: techline@armstrong.com
- Product literature and samples – Express service or regular delivery

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