

Eaton's GEIS Group

Overview | Branding | Core Competencies | Solutions

CROUSE-HINDS & **B-LINE**
SERIES SERIES

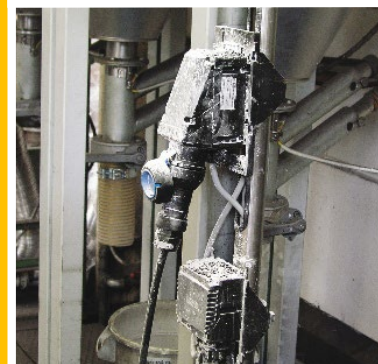
An aerial photograph of an industrial complex. In the foreground, there is a large, multi-story brick building with a flat roof. To the left of this building, a tall, narrow brick chimney stands prominently. The facility is surrounded by greenery and trees. In the background, there are more industrial structures and a power line tower. The sky is clear and blue.

Introduction to the Eaton's Global Energy Infrastructure Solutions Group (GEIS)

- Leading global supplier of electrical and mechanical products for oil & gas, industrial and commercial markets
- 125+ years in operation
- ~5,000 employees
- 28 global manufacturing locations
- Group Headquarters: Syracuse, NY

Group Headquarters: Syracuse, NY

Since 1897, Eaton's Crouse-Hinds series & B-Line series products have been enhancing **efficiency, safety and reliability** for our customers with developments in **productivity** & labor savings, **energy savings**, and **embedded intelligence**.



Eaton's Electrical Sector



Power distribution
and circuit protection



Power quality, backup
power & energy storage



Control and automation



Life safety & security

GEIS



Structural solutions



Harsh & hazardous
environments solutions

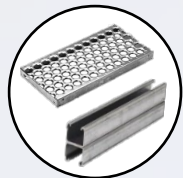
B-LINE SERIES & **CROUSE-HINDS** SERIES

Capabilities essential to the effective delivery
of electric power and current energy needs.

Solutions for Hazardous Area, Harsh Industrial & Commercial Applications



Cable Tray & Ladder Systems



Safety Gratings & Support Products



Visual and Audible Signaling



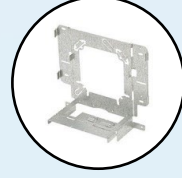
EX Power Distribution & Control



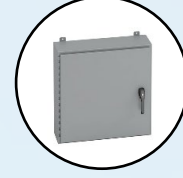
Lighting



Electrical Fittings



Spring Steel Fasteners



Electrical Enclosures



Steel Outlet Boxes



HMI Workstations



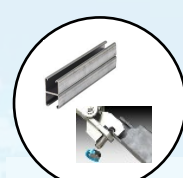
Wire & Cable Mgmt



Plugs & Receptacles



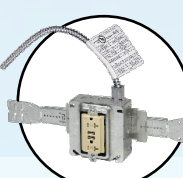
Process Instrumentation



Strut Systems & Seismic Bracing



Hubs



Pre-fabrication Solutions



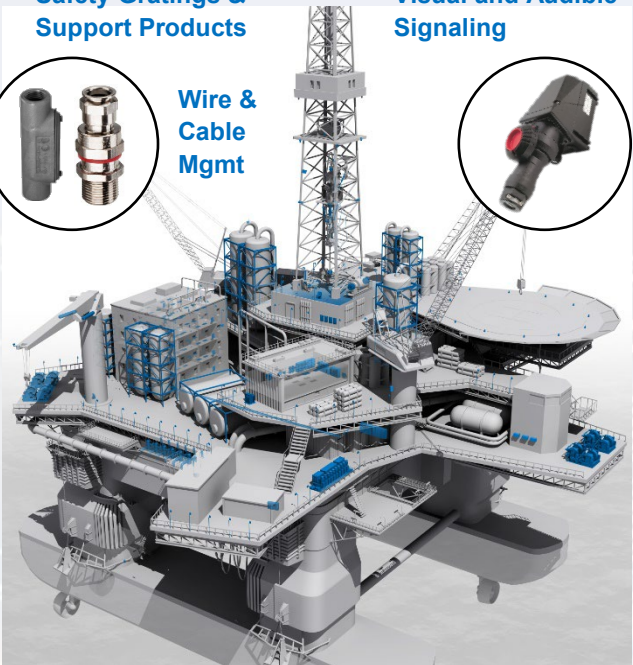
Cable Tray & Ladder Systems



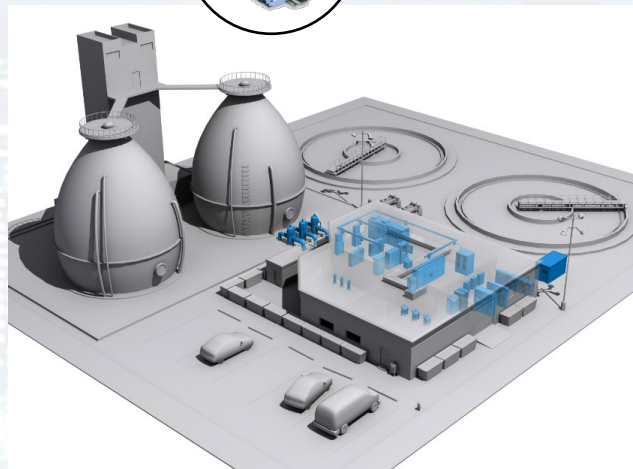
CCTV



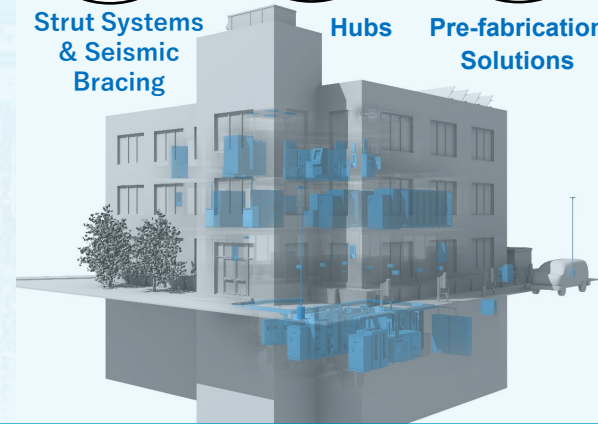
Communications



Global Oil & Gas, Chemical



Heavy Industrial



Construction

A full suite of low voltage electrical and electro-mechanical solutions delivering safety and reliability in high-risk areas along with productivity & labor savings, energy savings, and built-in intelligence

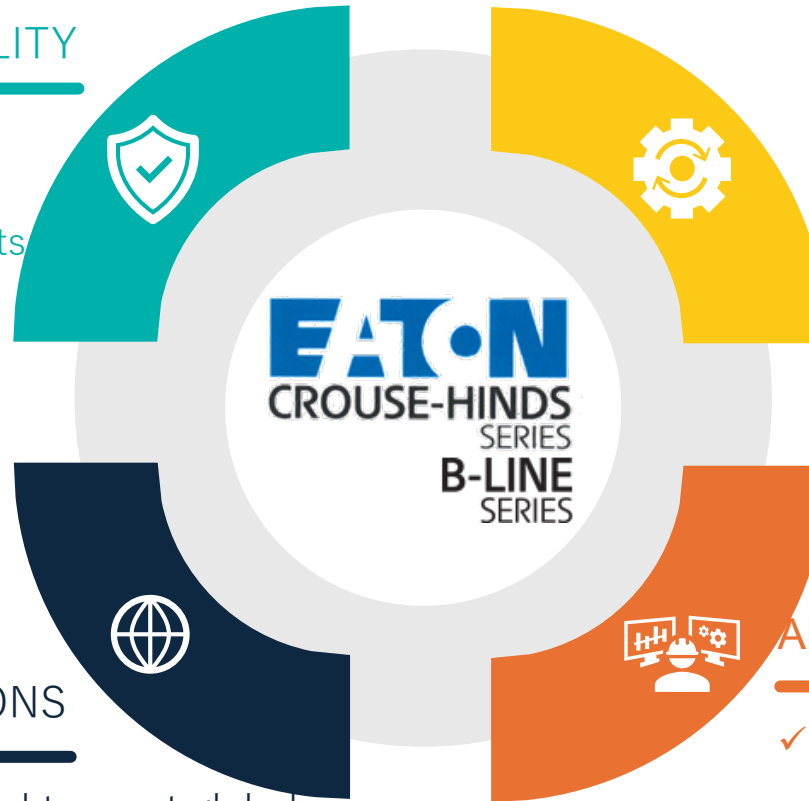
Comprehensive product portfolio delivering dependable service, labor savings and reduce installed costs

Our Core Competencies



SAFETY & RELIABILITY

- ✓ Protecting people & assets while ensuring critical reliability
- ✓ Performance in complex environments extreme temperatures, humidity, corrosion, wind, vibration and shock



INNOVATION



- ✓ Differentiation through innovative solutions to solve customer challenges
- ✓ Digital technologies to solve evolving customer needs and enhance the customer experience



GLOBAL SOLUTIONS

- ✓ Breadth of portfolio designed to meet global specifications and supporting regulatory expertise
- ✓ Manufacturing and commercial support to serve global customers locally

APPLICATION EXPERTISE



- ✓ Greater than 125 years of harsh & hazardous experience
- ✓ Trusted partner for the design of solutions enduring conditions while delivering the lowest installed cost

Eaton's B-Line Series

Overview | Product Portfolio | Solutions

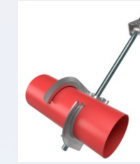
B-LINE
SERIES

About B-Line

- Committed to the success of its customers through **Manufacturing, Engineering and Service**
- Global footprint
- A proved industry leader with ~ 70 years experience
- Industry involvement
 - NEMA – 5VE Member
 - NEMA – 5FG Member
 - Cable tray institute (CTI) A founding member
 - B-Line is one of the drafting units of NEMA standards for cable tray



Crouse-Hinds Electric company formed, manufactures trolley car lamps



B-Line acquires Tolco seismic bracing & fire protection solutions

Crouse-Hinds, B-Line, Oil & Gas integrate into one group



B-Line business founded, manufacturing cable tray & strut



B-Line acquires GS Metals, maker of Safety grating and Flextray



Cooper joins the Eaton family



Global Energy Infrastructure Solutions group formed

Our Products Perform Reliably Under the Most Demanding Conditions Imaginable



Broad diversification covering **industrial** and **commercial** markets.

Petrochemical
Power Generation
Energy Exploration
Wastewater Treatment

Manufacturing
Marine / Shipbuilding
Metals & Mining
Pharmaceutical

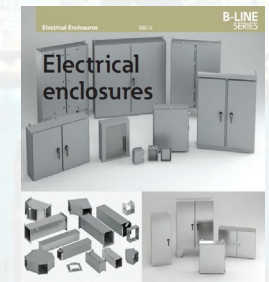
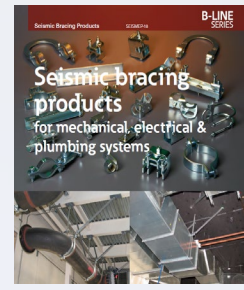
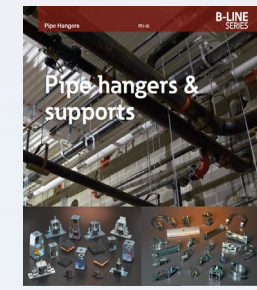
Offshore / Onshore Drilling
Alternative Fuels
Food Processing
Commercial Construction

Eaton's B-Line Product Portfolio

□ Eaton's B-Line Business is a leading manufacturer of quality support systems and enclosures for the electrical, mechanical and communications industries.

Products:

- Cable Tray Systems & Supports (Cable Management)
- Bolted Framing (Strut Systems)
- Electrical Panel & Disconnect Enclosures
- Wireways
- Cabinets & Electronic Enclosures
- DataComm Equipment Supports (Cable Runway)
- Meter Mounting Equipment
- Fasteners & Fixing Systems
- Pipe Hangers & Mechanical Supports
- Safety Gratings
- Seismic Bracing
- Railcar Products
- Electrical Rough In Pre-Fab System from Ruff-IN



Eaton's B-Line Global Footprint



Codes & Standards



Global Certified Manufacturer

B-Line Plant

- Full range product manufacturing capability
- Global manufacturing center serving multiple industries
- Global certified manufacturers

CSA  ^{US}
Canadian Certification


National Electrical Manufacturers Association

UL 
Certification for
the United States

 **DNV**
Det Norske Veritas
Certificate

IEC 
International Certification

 **NEC**
National Electrical Code








FOUNDED 1862


BUREAU
VERITAS
FOUNDED 1828

Eaton's B-Line APAC and Middle East Plant Locations

B-LINE
SERIES



Suzhou city, Jiangsu province, China



Selangor, Malaysia



Suzhou city, Jiangsu province, China



Gyeong Name, Korea



Dammam, Kingdom of Saudi Arabia

Expert of Cable Management & Mechanical Support

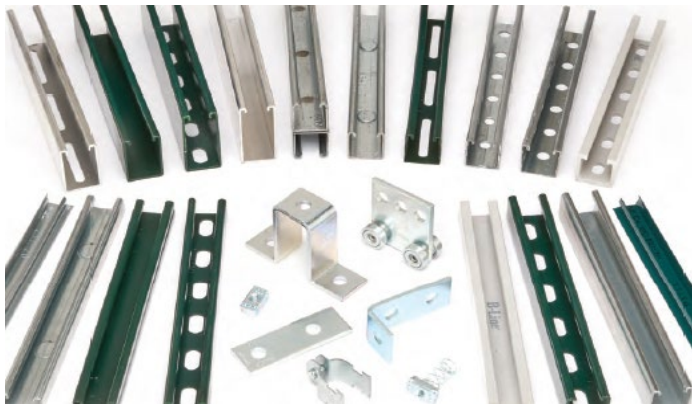
Ladder Tray



FLEXTRAY®



Strut System



Seismic Bracing



Cable Support Systems Product Portfolio

B-LINE
SERIES

SS & HDG Ladder



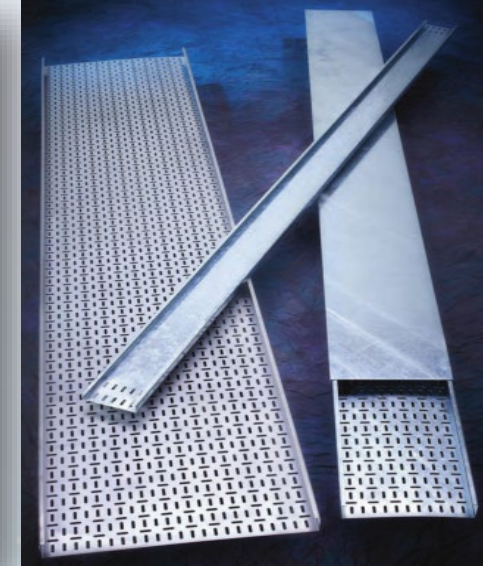
FRP Ladder & Tray



Aluminum Ladder



Cable Tray



Strut Systems



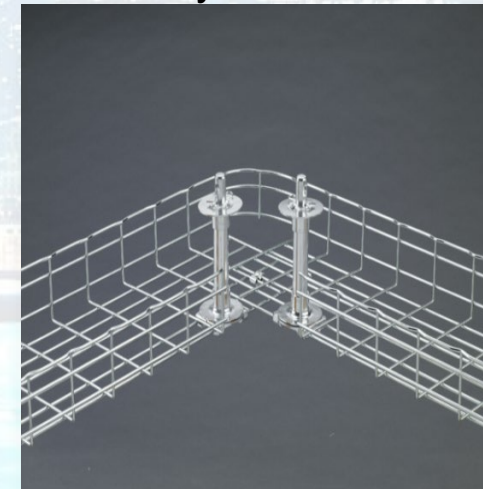
Strut Accessories



Cable Cleats



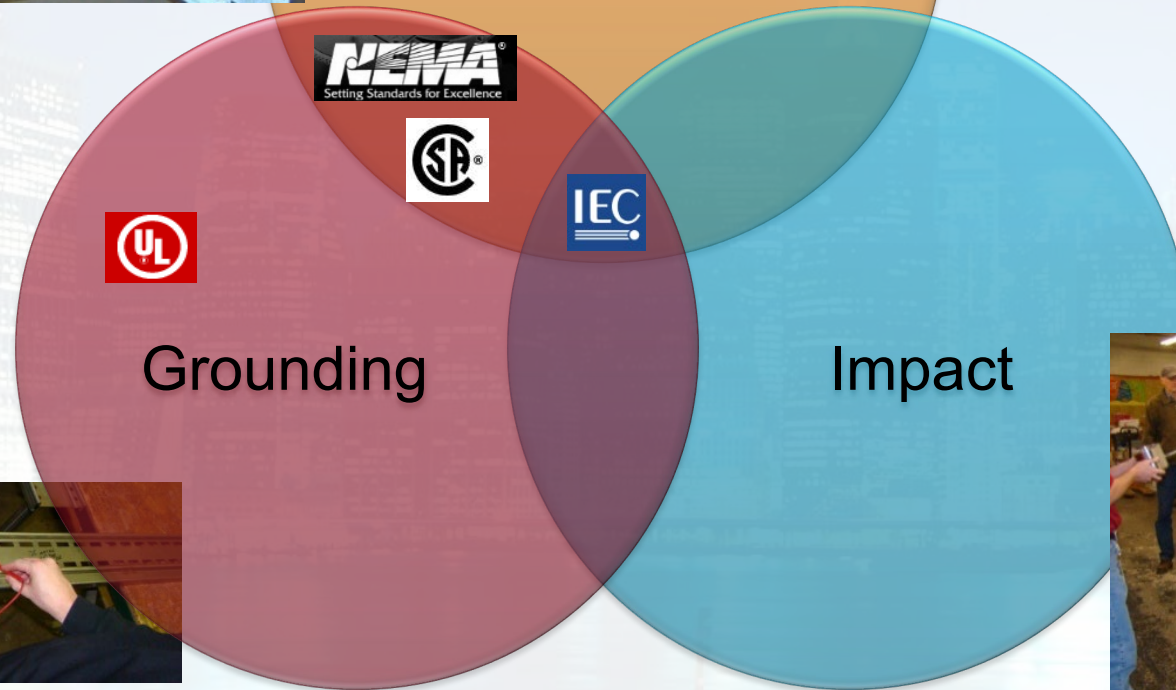
FlexTray Wire Basket



Extensive Product Testing



Load



Structural Steel Saving Solutions : Reduce Cable Support System Cost

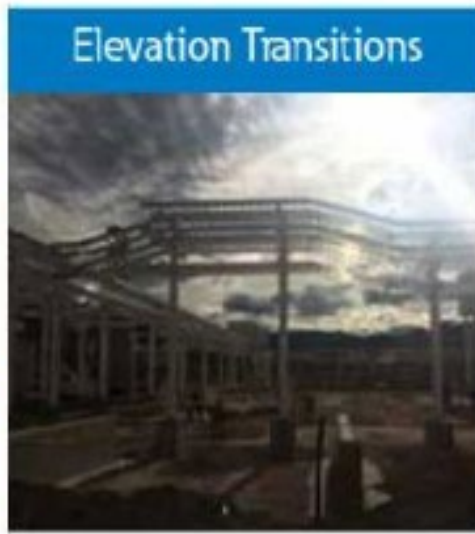
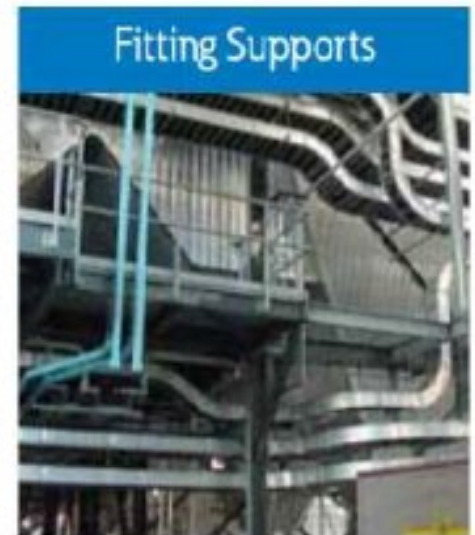
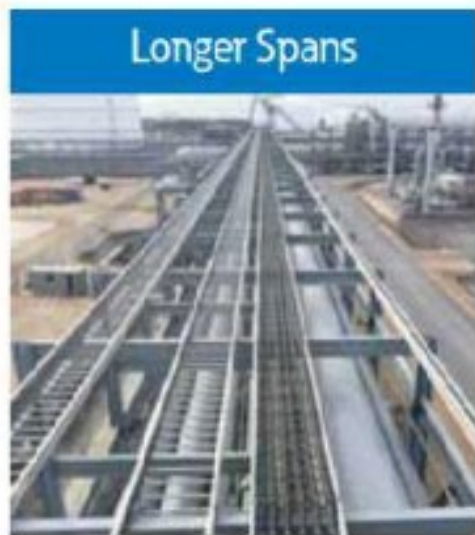
Structural steel savings

B-LINE SERIES

Engineers guide to structural steel savings with B-Line series cable ladder system



De-risking Solutions



Proven to reduce system design hours, material content, installation time and project costs

Secure your next Big Project with B-Line's Engineering Services

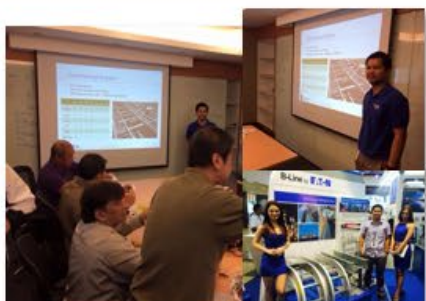
Discovery
(Idea Generation)

Pre-FEED
(Preliminary Budgetary Justification)

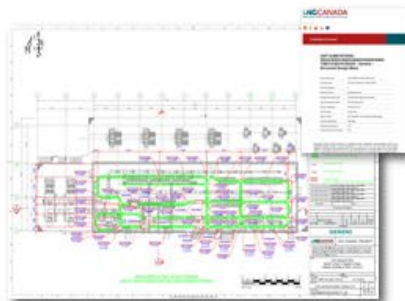
FEED
(Detailed Budg. & Eng Scope: 20%)

Detailed Design
(Full Eng Execution: 20-70%)

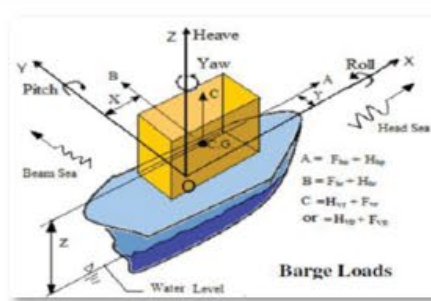
Procurement & Construction
(Eng Comp/Change Orders: 70-100%)



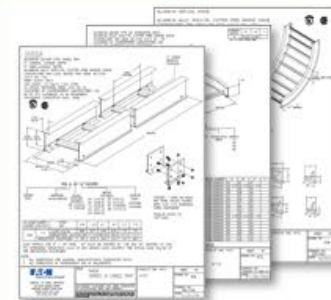
Training / Presentations



Project Review



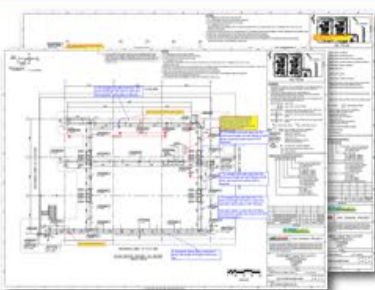
Sea Transportation Analysis



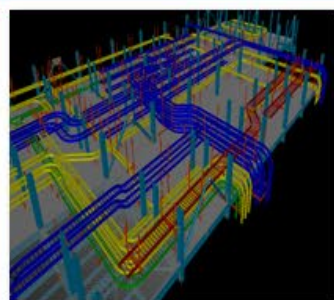
Submittal Packages

MATERIAL TAKE-OFF			
QTY	UOM	PART NUMBER	DESCRIPTION
100	EA	100-100-0000	STEEL DECK BRACKET
2	EA	100-100-0001	BARRED SHIP
4	EA	100-100-0002	SPICE PLATE
10	EA	100-100-0003	SPICE PLATE
4	EA	100-100-0004	WORKING LAMPER
4	EA	100-100-0005	WORKING LAMPER
1	EA	100-20-000000	NO BEND
1	EA	100-20-000001	NO BEND
2	EA	100-20-000002	NO BEND
4	EA	100-20-000003	NO BEND
4	EA	100-20-000004	NO BEND
16	EA	100-20-000005	STRAIGHT
14	EA	100-20-000006	STRAIGHT
4	EA	100-20-000007	TEE HOOD
11	EA	100-20-000008	TEE HOOD

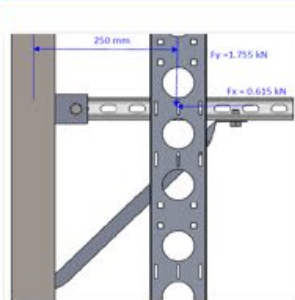
Take-Offs (BOM)



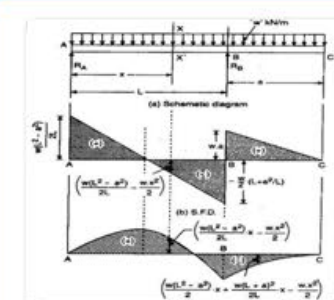
2D Drawing Review



3D Model Review



Support Design

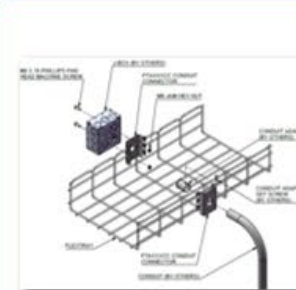


Structural Calculations

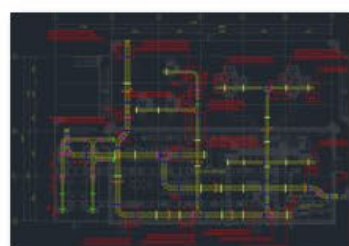


Structural Steel Savings

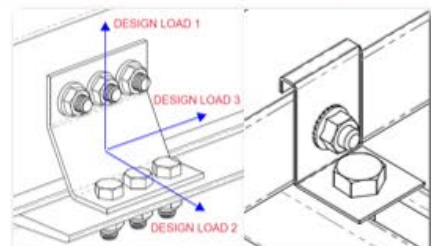
Support Optimization



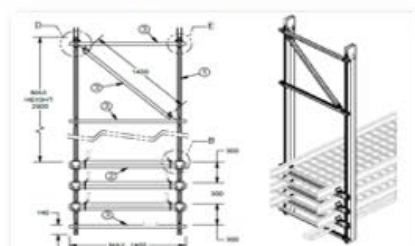
Installation Detail



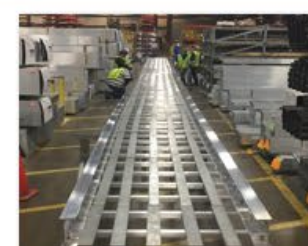
Support Layout



Custom Product Solutions



General Assembly Drawings



Product Testing

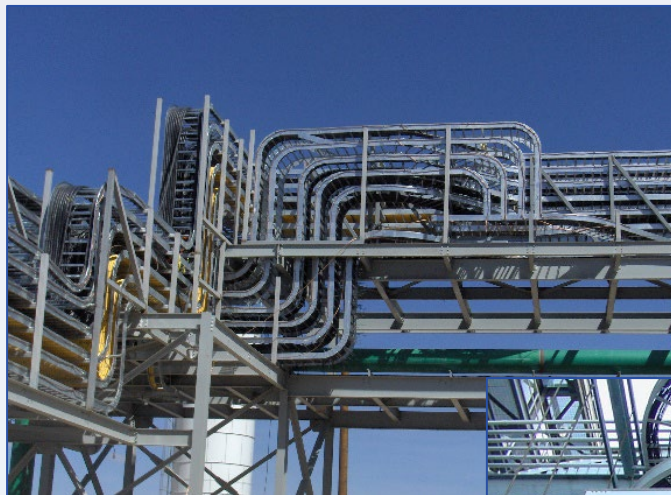


Technical Support

Secure your next Big Project with B-Line's Engineering Services

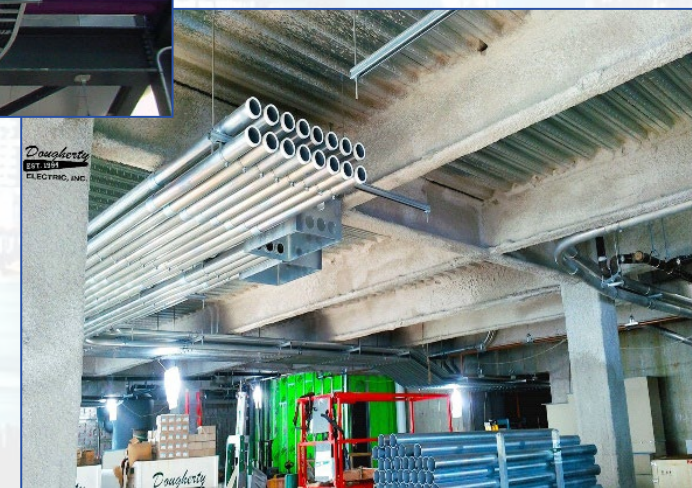
Technical Services

- Take-Offs
- Full Project Layout
- Application & Product Questions
- Design / Calculations / FEA
- Specification / Certification
- Training



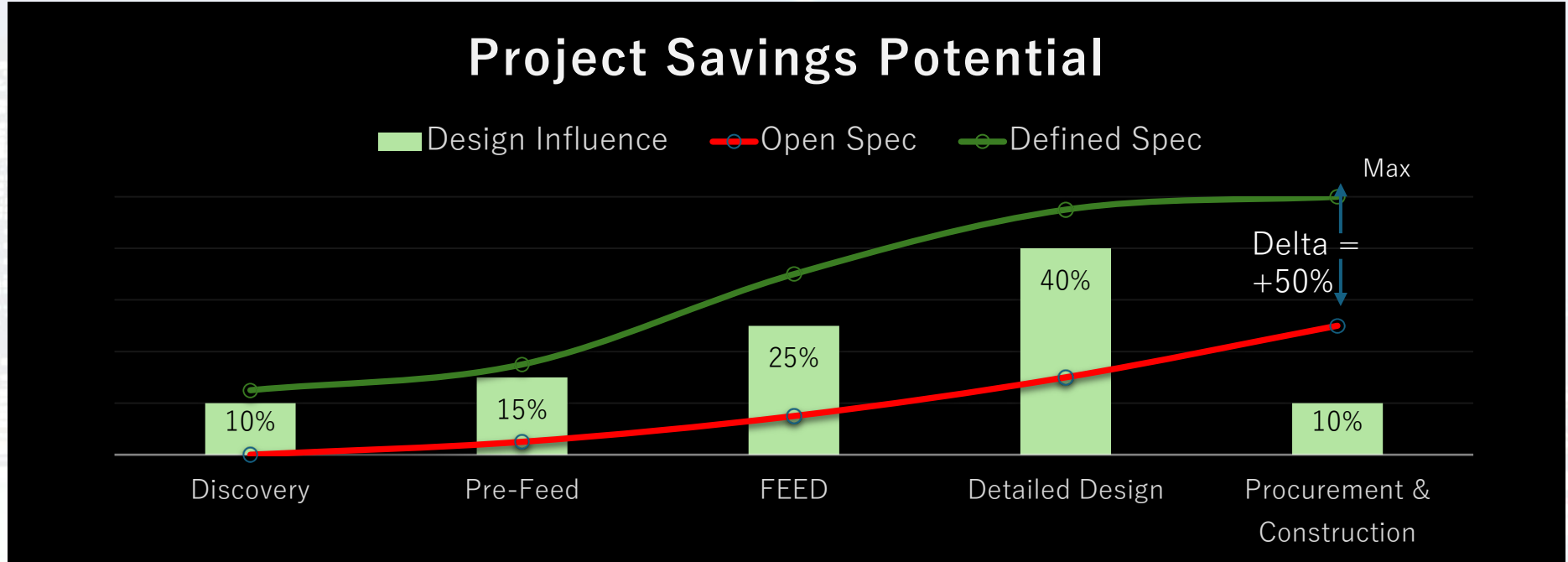
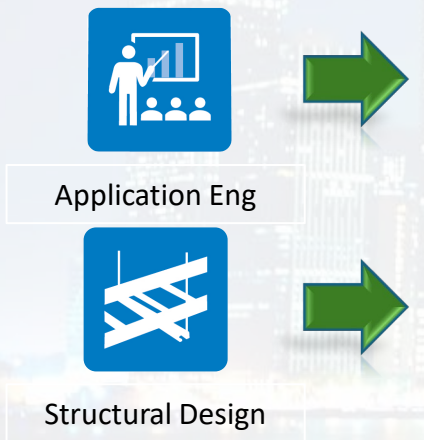
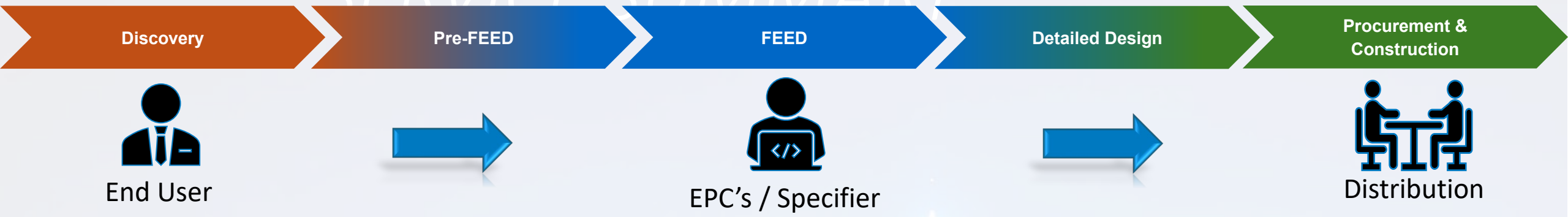
ETO/MTO & Seismic

- Seismic Take-Offs
- Stamped Drawings
- Installation Details
- Project Specific Products
- Modified Enclosure Support
- Tool Development



Increase Project Effectiveness


SERVICE SUMMARY




 Driving Specification To Optimize Project Savings

Projects References @ Diversified Industries

Delivering world-class reliability and safety in diversified environments worldwide



O&G Onshore



Woodfibre LNG
Invested by Pacific Energy, has a planned annual capacity of 2.1 million tons of LNG, world's first net-zero emission LNG project



O&G Offshore



Shell Sparta
Will be Shell's 15th deep-water host in the Gulf of Mexico



Commercial Building



GyeongGi NongHyup Building
NongHyup, the biggest Korea farmer's supporting group for economy & finance, built a new building at GyeongGi-Do (19 floors, 5,713m2)



New Energy



S-JV (EV battery cell plant)
\$5 billion investment to build an EV battery cell plant in Bartow County, Georgia



New Energy



Hyundai Motor Group Metaplant
US \$5.54 billion investment by Hyundai Motor Group and its affiliate suppliers in Savannah Georgia



Mining



Manyar Copper Smelter
The world's largest single line smelter at the Surabaya, East Java, Indonesia

Projects References @ Data Center

Preferred solutions of data center owners & operators worldwide



Data Center



T5 Microsoft Data Center

Microsoft paid \$52.3 million for 37 acres in the Elk Grove Technology Park, while T5 data centers acquired a new building there for \$29 million



Data Center



Digital Realty NRT14

NRT14, an important addition to Digital Realty's global data center platform, will raise campus capacity to up to 104MW to meeting rising demand



Data Center



Google Japan Data Center

The 1st Google data center in Japan



Data Center



AWS PDX81

Located at Hermiston, OR, USA., with space of 217900 sqft



Data Center



NTT Dojima Data Center

Osaka's Dojima district holds a strategic position regarding West Japan's communications traffic



Data Center



Equinix HK6 Data Center

US \$124 million investment of its International business exchange data center in Tsuen Wan, HK6

The Eaton logo is displayed in a bold, blue, sans-serif font. The letter 'E' is stylized with a white negative space cutout. The letter 'O' is a solid blue circle. The letters 'A', 'T', and 'N' are solid blue. The logo is centered horizontally within a white rectangular background that is semi-transparent over the city skyline.

EATON

Powering Business Worldwide