

Express Rectangle (Large) - Power Drops

NOT A REPLACEMENT FOR ARCHITECTURAL/ENGINEERING/ ELECTRICAL SPECIFICATIONS. (DEFER TO THEIR DRAWINGS)

CONTRACTOR IS RESPONSIBLE FOR:

- ATTACHMENT FROM busSTRUT SYSTEM TO STRUCTURE MUST BE ENGINEERED AND INSTALLED TO PROPERLY SUPPORT THE ENTIRE SUSPENDED WEIGHT.

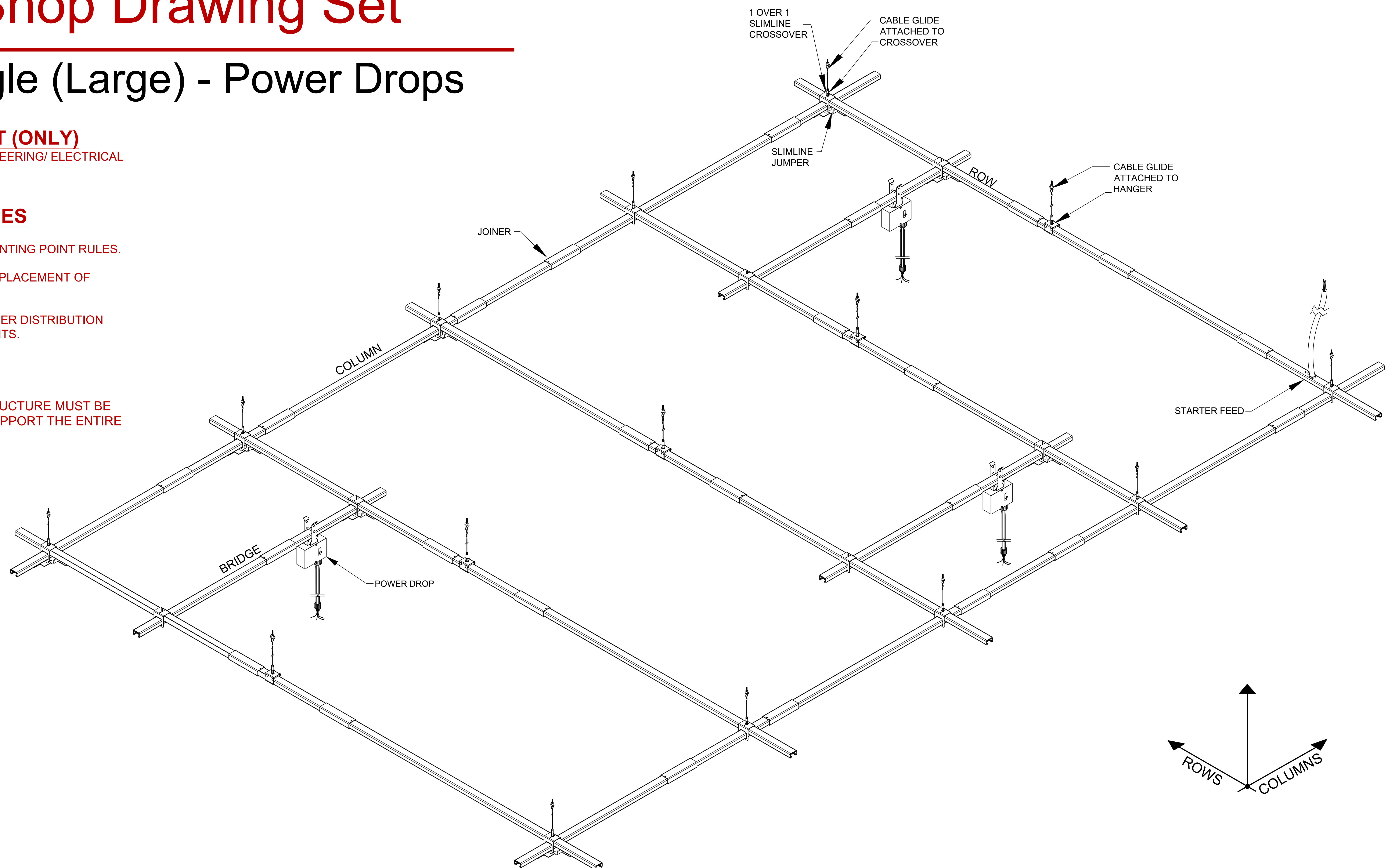
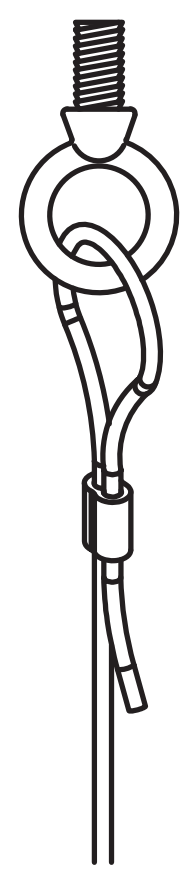


TABLE OF CONTENTS		KEY MOUNTING RULES		APPROVAL
E-b01 E-b02	Typical Installation Instructions		Rows are to be mounted on top of Columns. Crossover sleeve runs with Rows.	
E-b1 E-b2	Lighting Plan, BOM, & Labor Hours Assembly Plan			

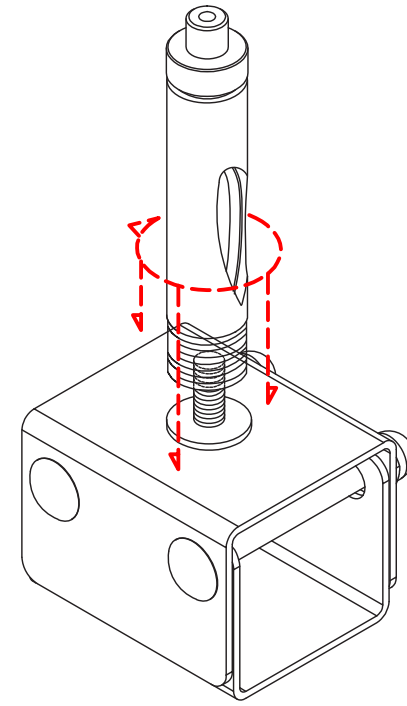
STEP 1

SUSPENDING busSTRUT



1 SUSPEND CABLES (CG-XX) ATTACH CABLE ASSEMBLY to STRUCTURE

*It is the contractor and/or engineer's responsibility
to determine correct connection to structure (beam
clamp, etc).

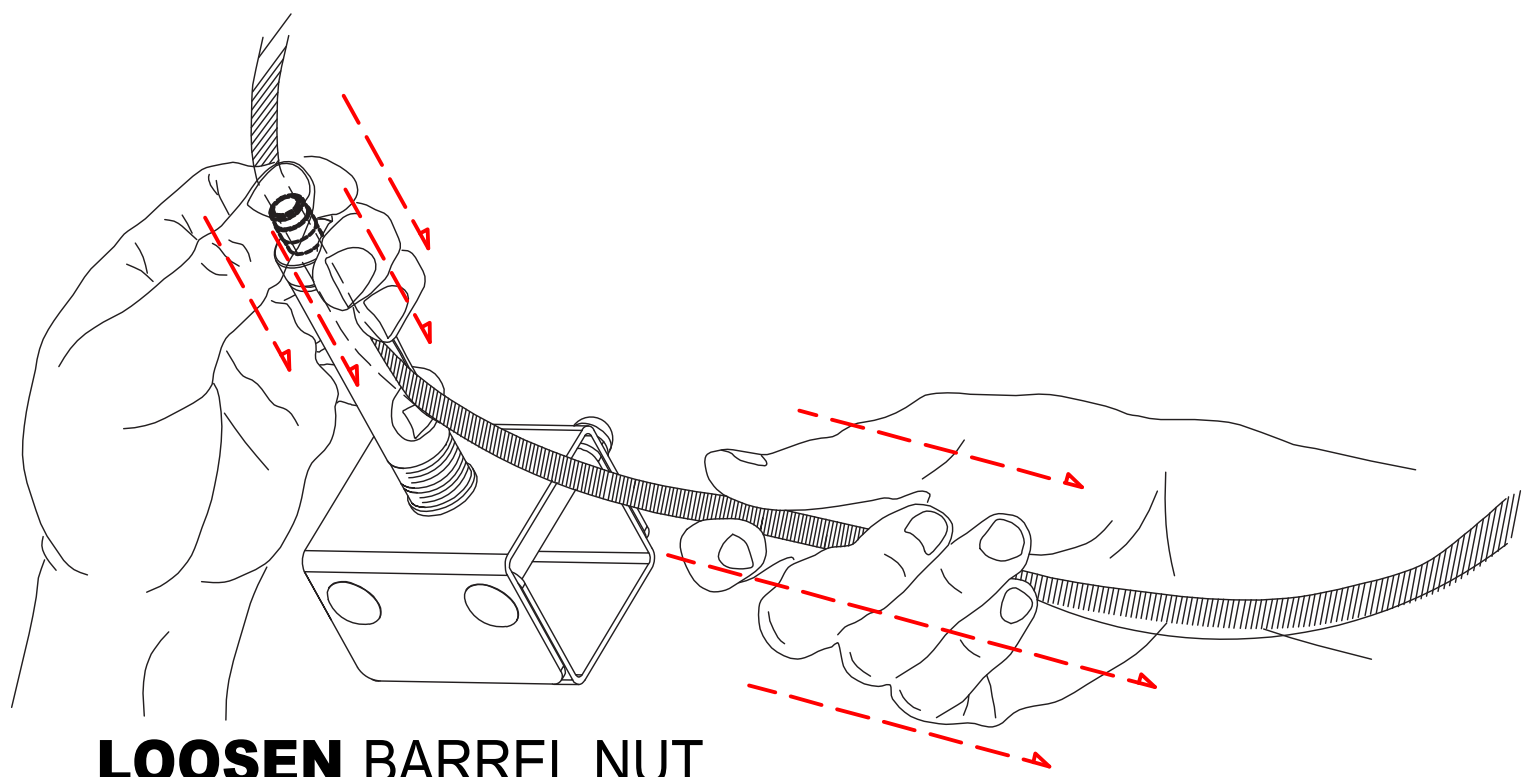
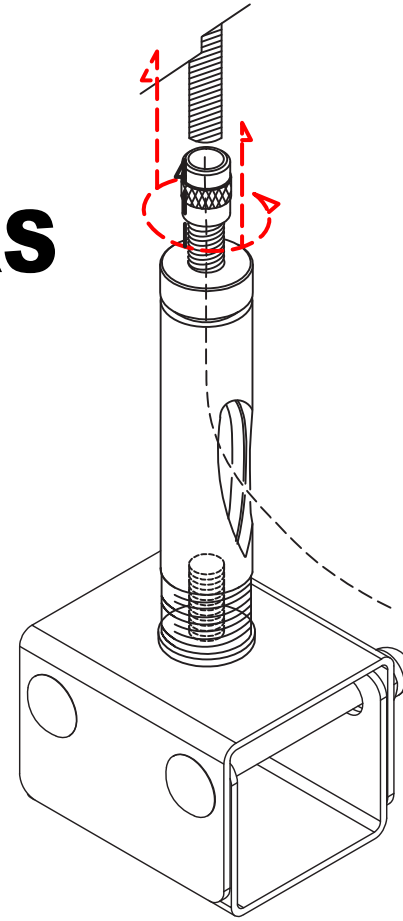


2 ASSEMBLE HANGERS (HM-S)

ASSEMBLE HANGERS AND
ATTACH CABLE GLIDE

3 ATTACH HANGERS TO CABLES (CG-XX)

FEED CABLES THROUGH
GLIDE TO ATTACH



LOOSEN BARREL NUT
PUSH CABLE THROUGH
PULL CABLE FOR SLACK

SLIDE busSTRUT THROUGH SUSPENDED HANGERS

Assemble
Create cable suspended runs of
busSTRUT. Usually, these are
running perpendicular to structural
joists. Insert busSTRUT lengths
through hangers/crossovers
working from FINISHED HEIGHT.

FINISHED HEIGHT

*It is the contractor and/or engineer's responsibility
to determine correct connection to structure (beam
clamp, etc).

LEVEL busSTRUT AND TRIM CABLE

FINISHED HEIGHT

BE SURE TO FOLLOW
busSTRUT MOUNTING
RULES (SEE busSTRUT
shop drawings)

CUT CABLE
Leave enough pass
through cable for
future leveling

STEP 2

INSERT JOINERS

ATTACH JOINERS TO EACH END OF
CONNECTING busSTRUT

JOINERS (M-JB)
Joiners are used to mechanically
and electrically connect individual
busSTRUT lengths.

TIGHTEN JOINERS

TIGHTEN SET SCREWS ON THE BOTTOM OF THE
JOINER

*Joiners require 3/32 Hex key
for tightening set screws*

ATTACH INSERT

ATTACH JOINERS TO EACH END OF
CONNECTING busSTRUT

Line up **center** of insert with
etched centerline on joiner
sleeve

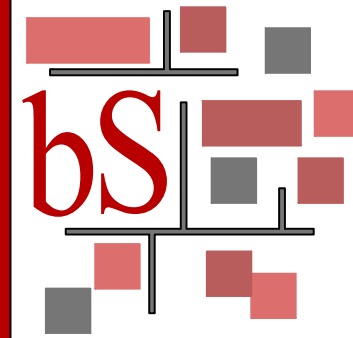
Turn the first knob

Squeeze tightly on the opposite
side, then turn the second knob
to secure the electrical
connection.

JOINER INSERT (M-JI-X)

A single piece unit that is installed
with two knobs, one must be fully
turned in each abutting length. As
a result, power can continue to
flow from one length to the next.

**Installation Instruction Guidelines are provided only as that, informative guidelines. Defer to architectural/engineering drawings tailored to the specific project.



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CHECKED BY
JOHN LOCH
DRAWN BY
JOHN LOCH
DATE
11/01/2024
ISSUED FOR
BID / REVIEW

TYPICAL
busSTRUT Installation Instructions

busSTRUT
SHOP DRAWING SET(ONLY)
NOT A REPLACEMENT FOR
ARCHITECTURAL /
ENGINEERING OR ELECTRICAL
DRAWINGS

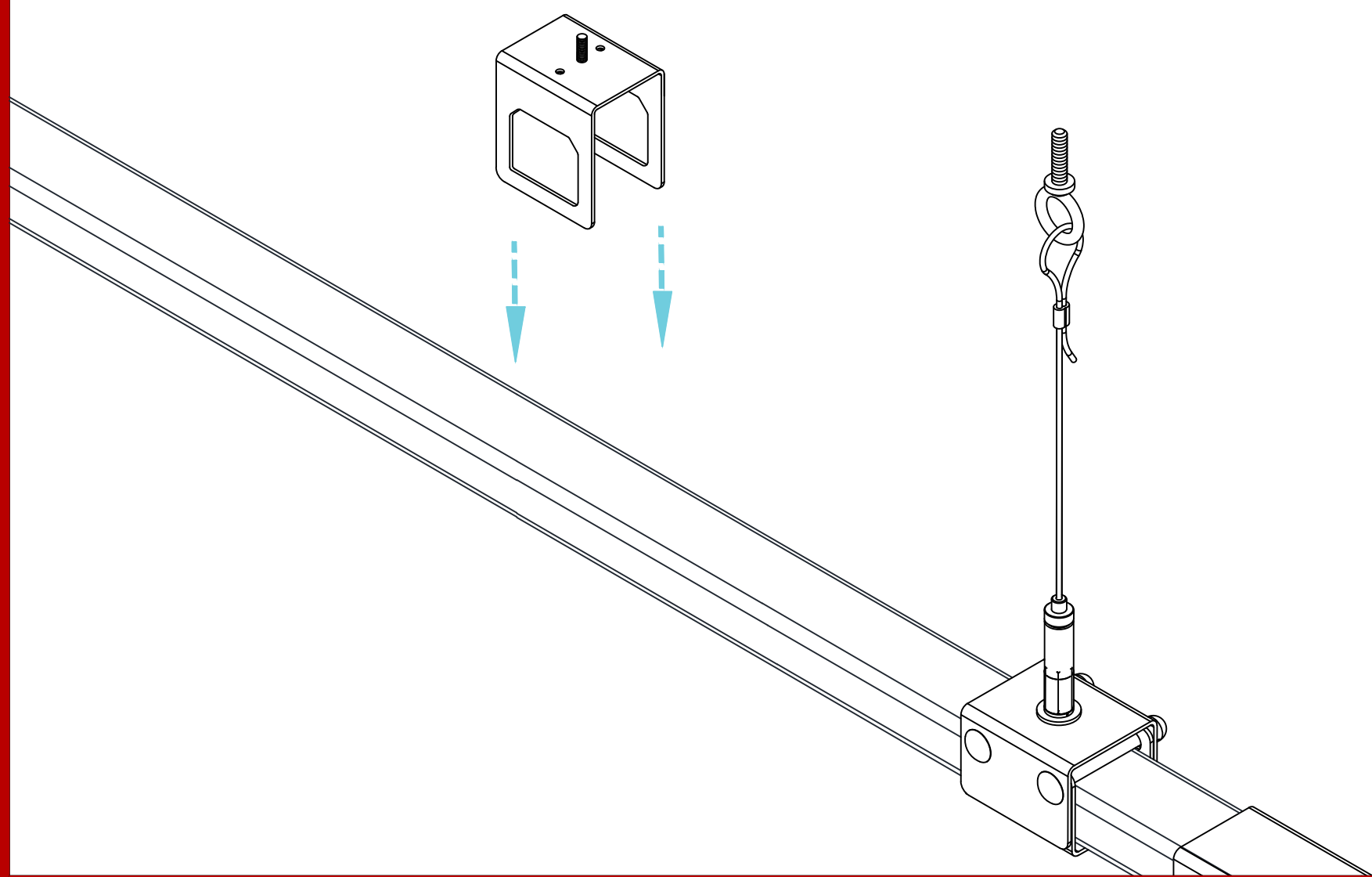
NO.	REV.	DESCRIPTION	DATE
1	1	ISSUED FOR BID / REVIEW	11/01/2024

PAPER SIZE:
ARCH E (48x36)
NOT TO SCALE
DRAWING NUMBER
E-b01

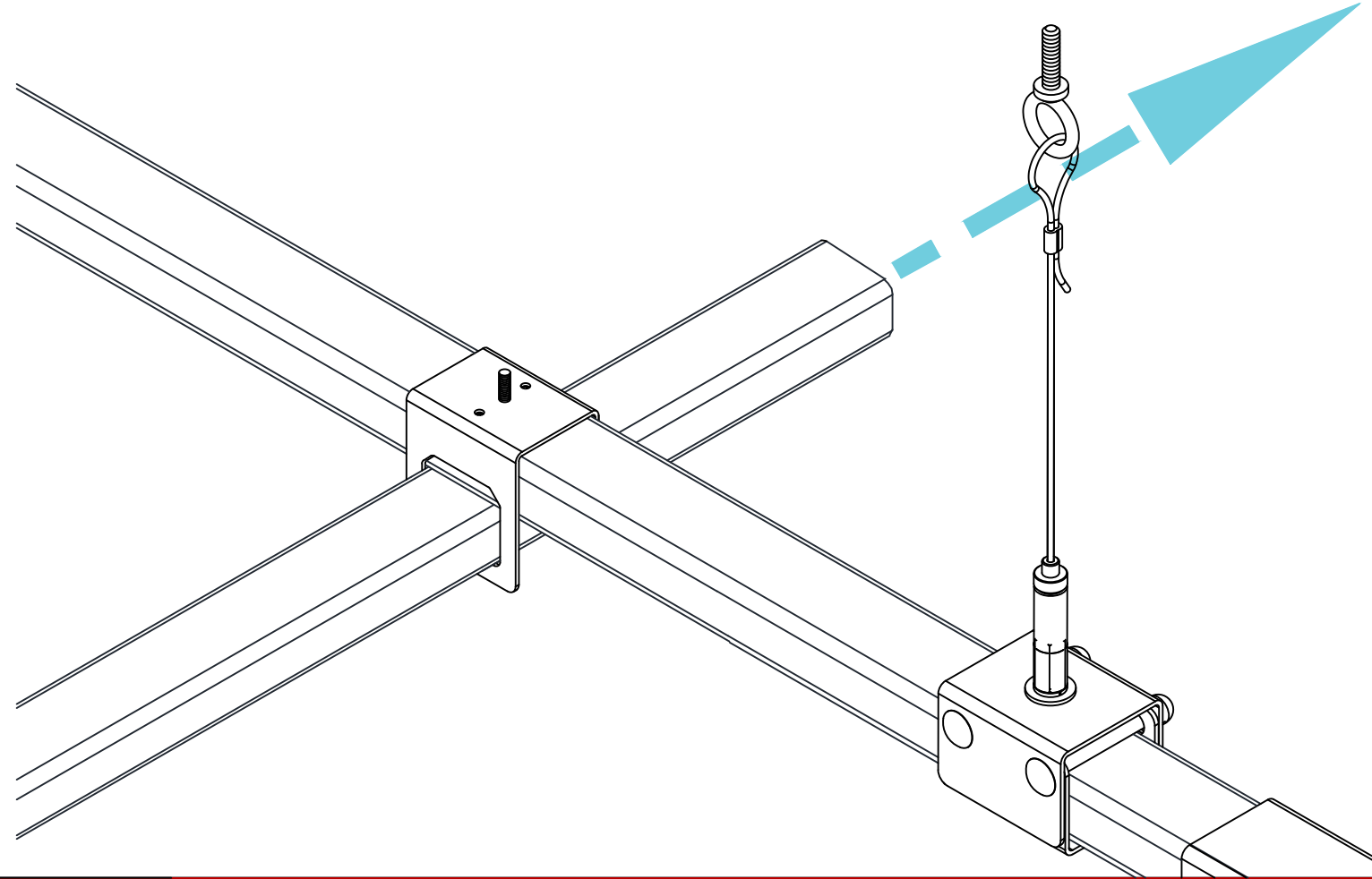
STEP 3

INSTALLING CROSSOVERS DROPPING ON

Crossovers can be dropped onto suspended busSTRUT to create an intersection with a perpendicular run of busSTRUT.



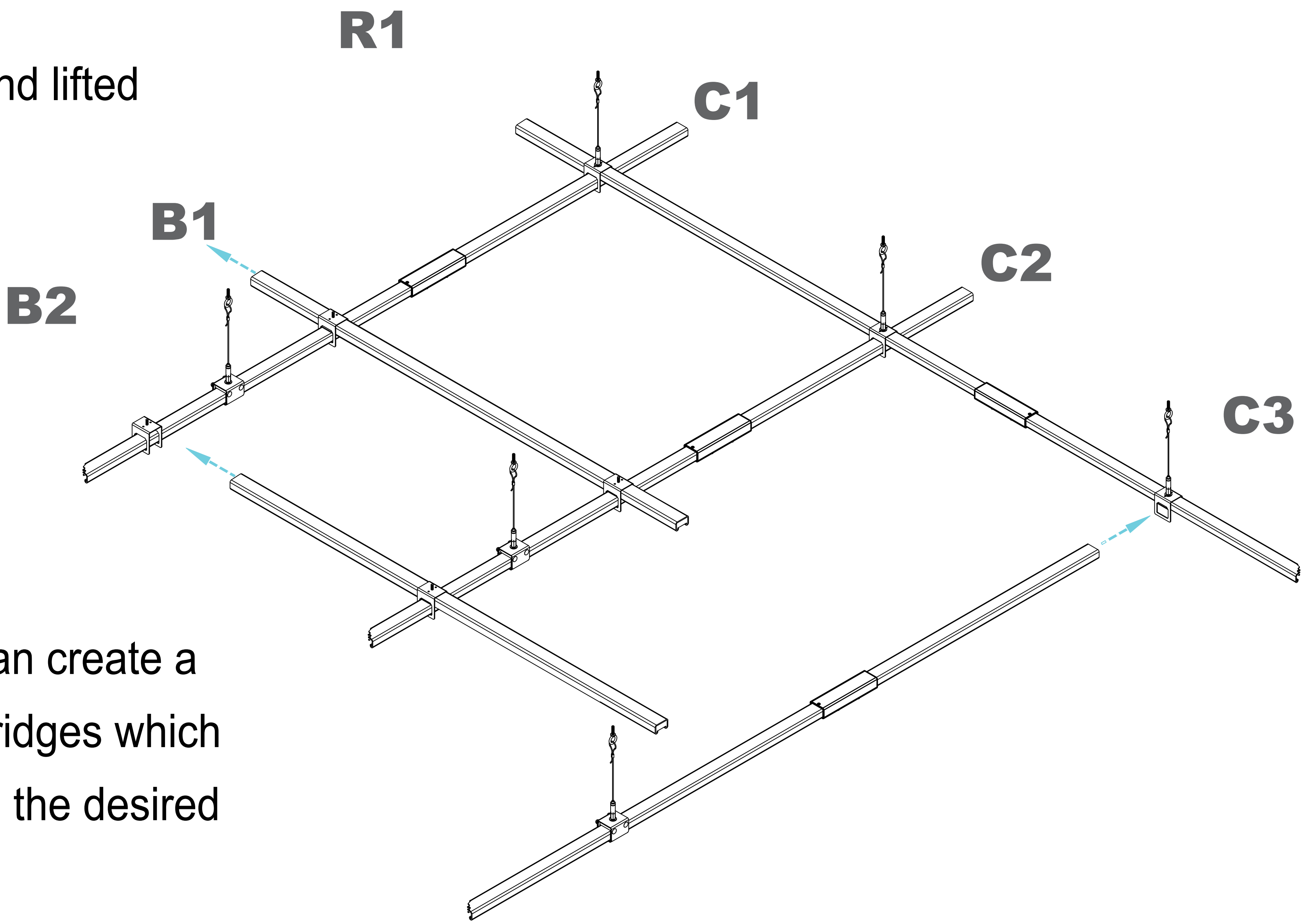
Slide perpendicular runs of busSTRUT through the crossover and tighten the set screws.



SLIDING ON

Crossovers can be slid into position and lifted to create perpendicular bridges.

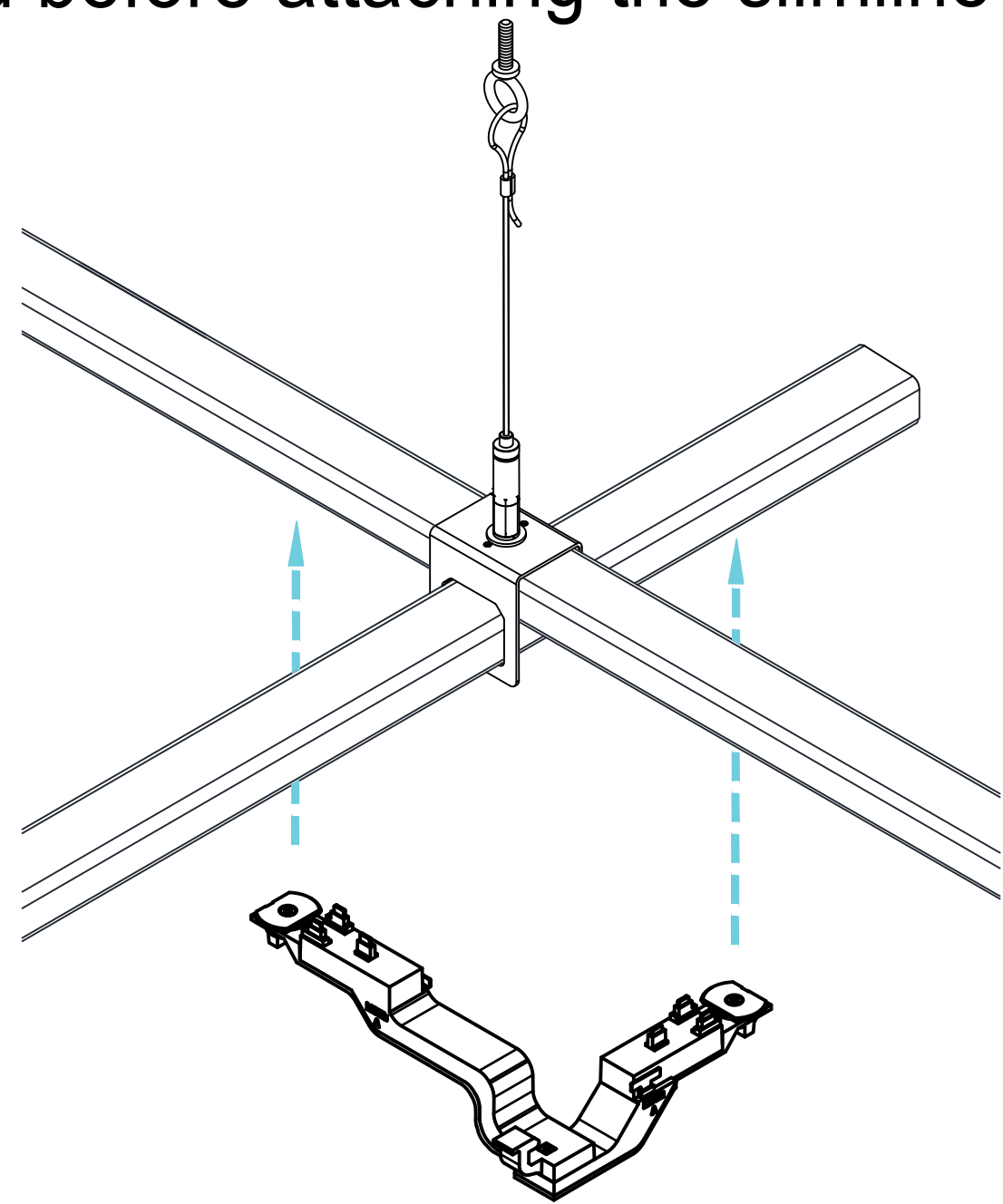
Perpendicular runs can create a full grid or be short bridges which are easily moved into the desired position.



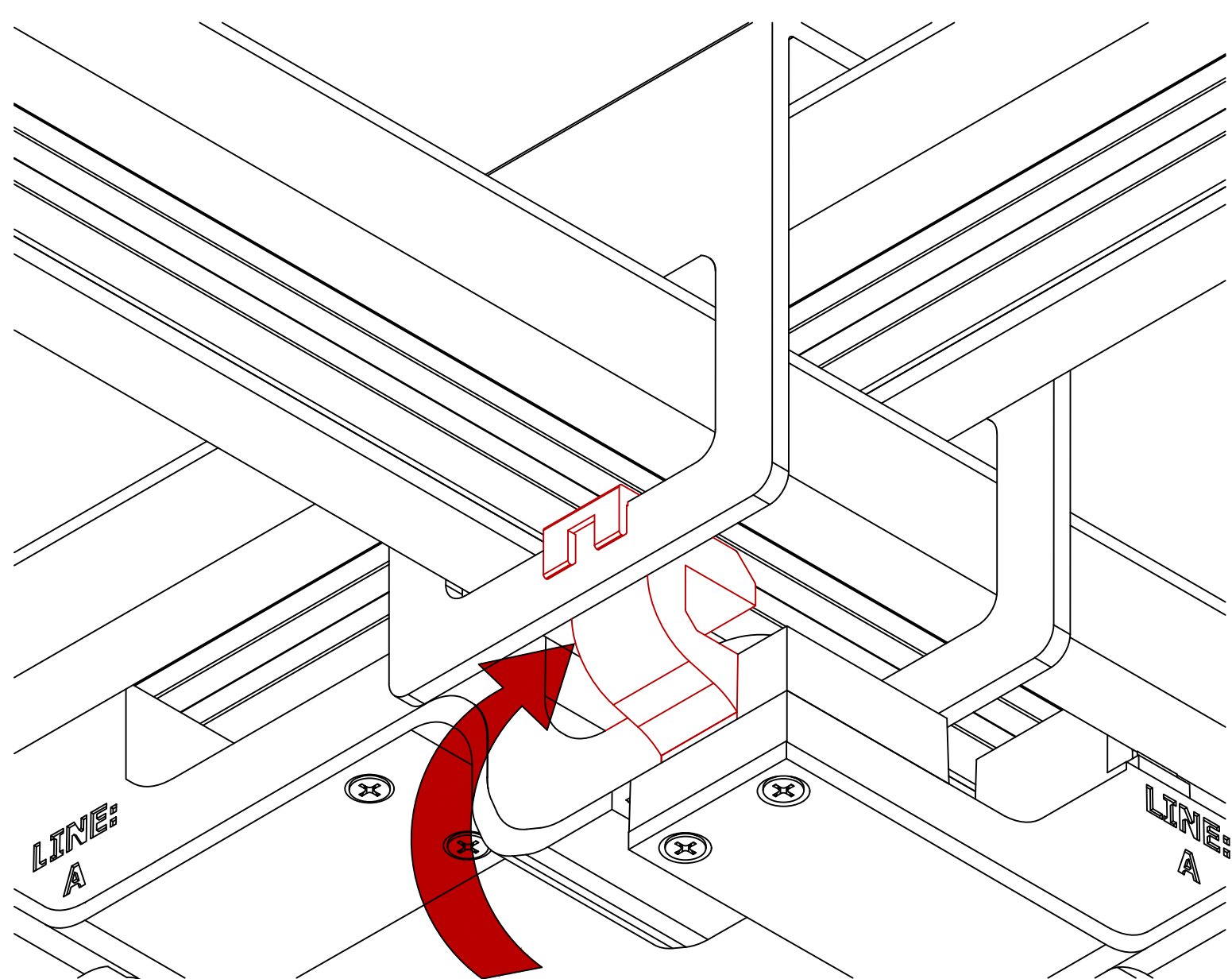
STEP 4A

SLIMLINE JUMPER

Make sure that the slimline crossover is tightened before attaching the slimline jumper.

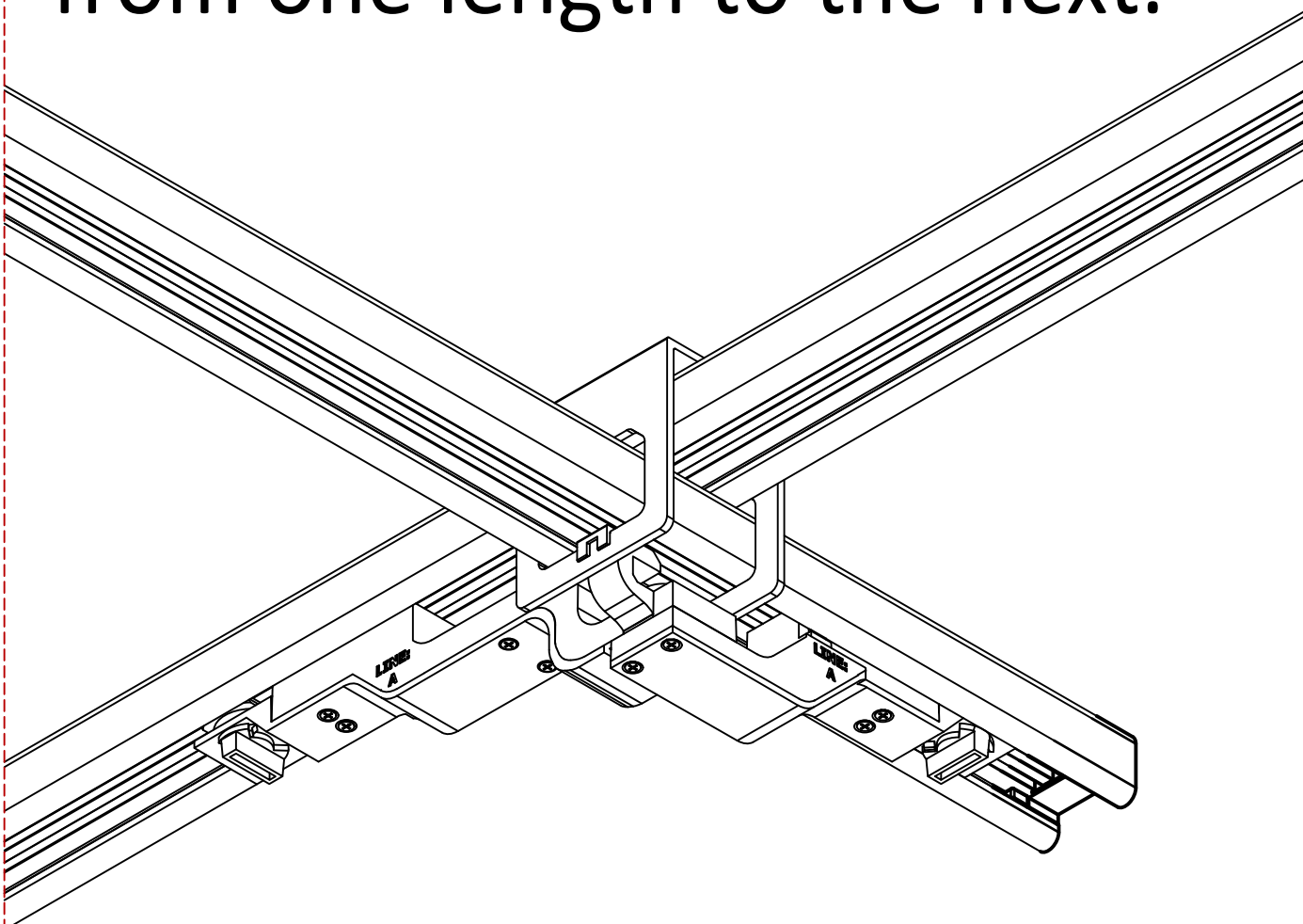


First, clip the jumper to the crossover.

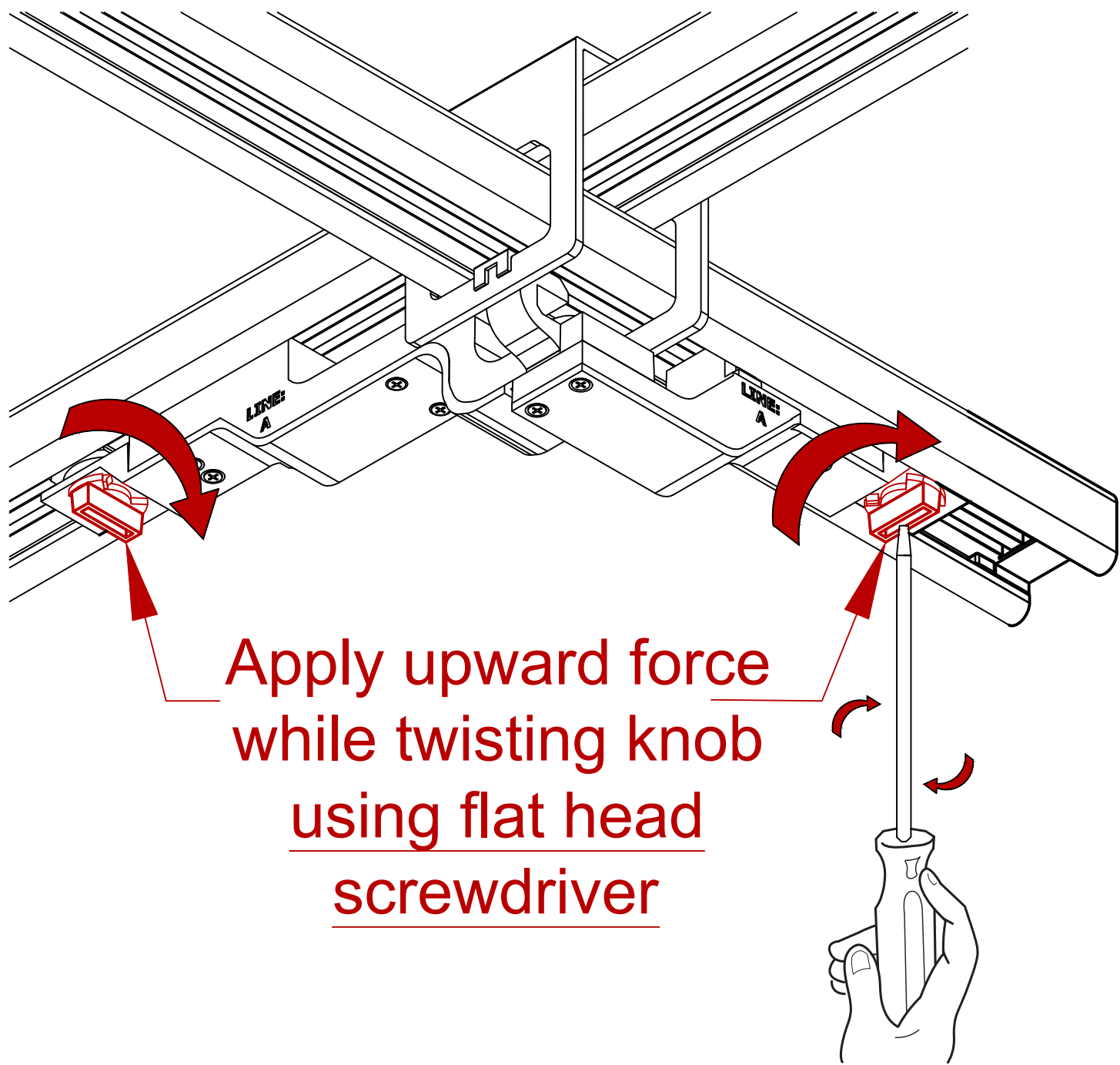


SLIMLINE JUMPER (MD2020-UNIV-IJ2-B-X)

A single piece unit that is installed with two knobs, one must be fully turned in each abutting length. As a result, power can continue to flow from one length to the next.



Seat the jumper into the busSTRUT by squeezing tightly on one side and turning the knob. Then, turn the other knob to complete the circuit.

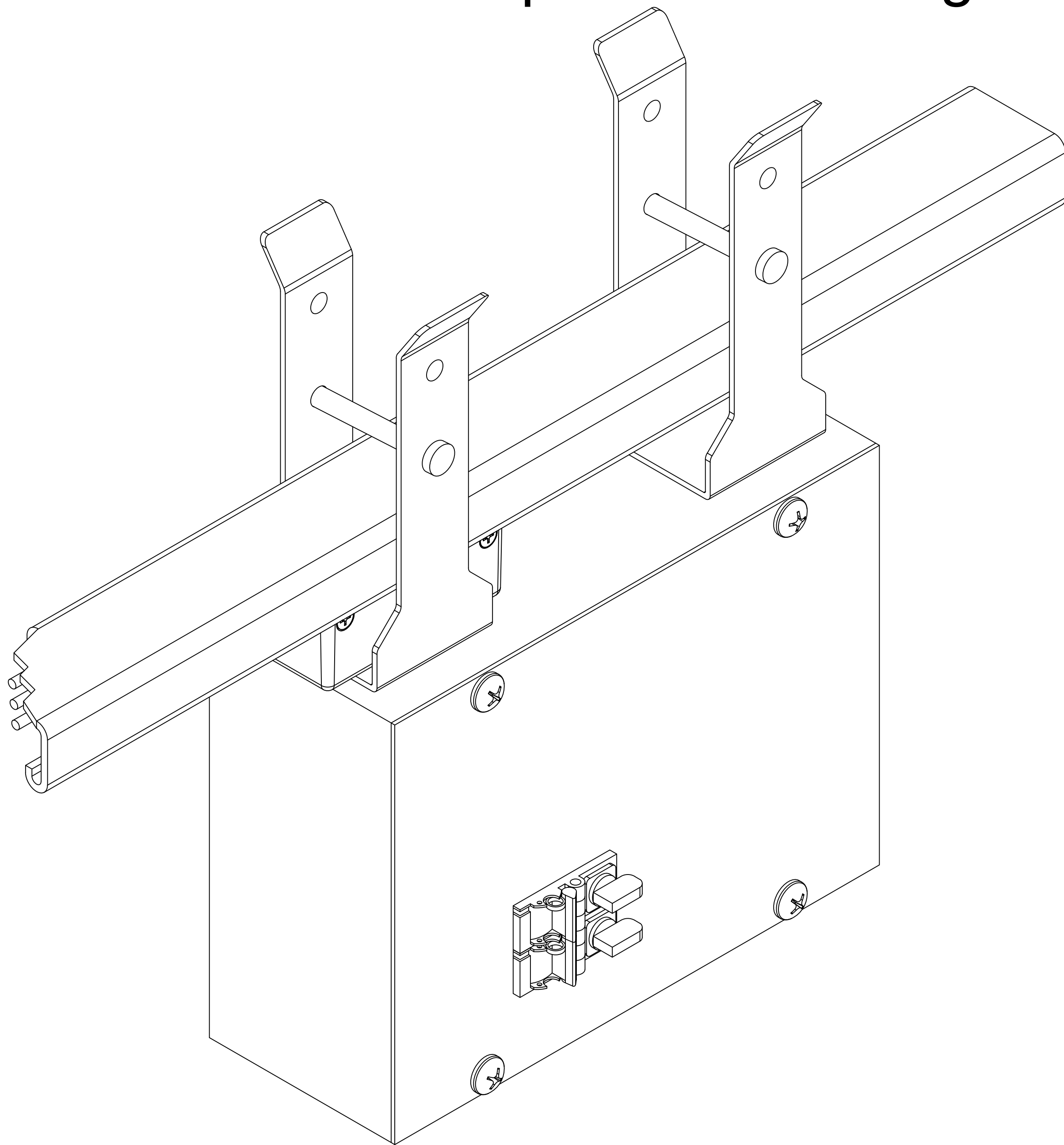


Apply upward force while twisting knob using flat head screwdriver

STEP 4B

LINE FEEDS

Install line feeds on busSTRUT to power the configuration.

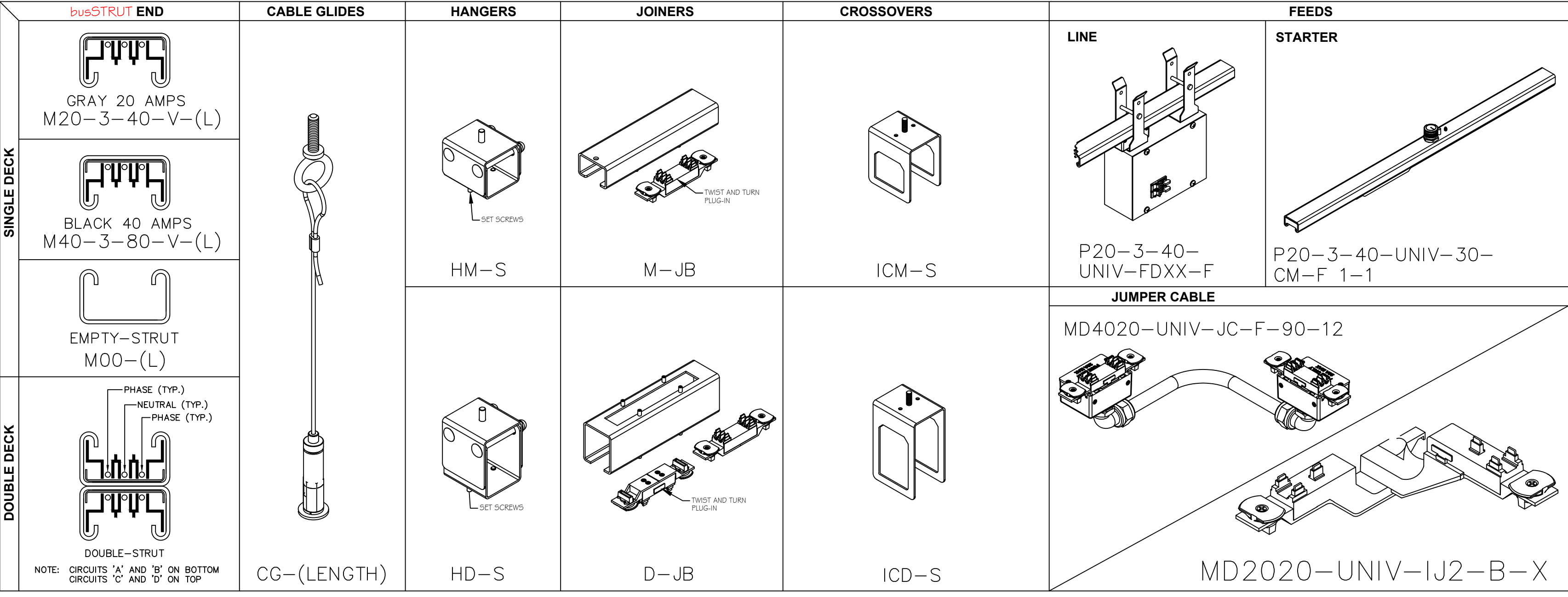


20A LINE FEED

Shown on single decked busSTRUT

**Installation Instruction Guidelines are provided only as that, informative guidelines. Defer to architectural/engineering drawings tailored to the specific project.

busSTRUT Parts



busSTRUT 12 gauge 1" x 1" x 1-5/8" STEEL busSTRUT features two Hot wires symmetrically surrounding a center Neutral. The result, two 20 Amp circuits 40 Amp Maximum with busSTRUT/200, alternatively two 40 Amp circuits 80 Amp Maximum with busSTRUT/40, 2, 5, 5', 10', and 20' lengths. Rated for up to 277/480V. Double decks with standard hardware for trunking.

BRAIDED CABLE with GLIDE: For use with busSTRUT Hangers/Crossovers. Includes cable-glide and cable with factory assembled cable looped threaded 1/4-20 eye bolt.

HANGERS: Single and Double Hangers are for use with busSTRUT. Each is an assembled two-part unit. The upper piece includes a threaded stud for use with busSTRUT cable-glide.

JOINERS: Single and Double are for use with busSTRUT. Lengths are joined together mechanically with the 8" steel sleeve. Electrical Joiner-Kits include both a Twist & Turn Plug in electrical insert to bridge power. And continuous grounding paths through the bus itself by means of a permanently affixed copper grounding bar.

CROSSOVERS: For use with intersecting busSTRUT. Each is an assembled two-part unit for building grid configurations and bridges. The upper piece includes a threaded stud for use with busSTRUT cable-glide.

JUMPERS: For use with both busSTRUT/200 and busSTRUT/40. The fused 40/20 Jumper Cables can be used to electrically connect busSTRUT/40. Trunks to busSTRUT/200 Branches and/or electrically connecting busSTRUT/200 to busSTRUT/200.

LINE FEEDS: For use with powering single-decked busSTRUT. Junction Box features energy code type "fuses" (breakers/fuse holders) and 3 Pole Fuses. Available up to 277/480V. Can be positioned anywhere along busSTRUT to reduce the lengths of homeruns.

STARTER FEEDS: For use with powering single-decked busSTRUT. Utilized when no current limiting is required on the busSTRUT. Must be positioned at the beginning of a run.

Bill of Materials

busSTRUT Bill of Materials																					
ROWS Large PD				Finish TBD: Galvanized, White, or Black												Drawn By Checked By Date		John Loch John Loch 10/4/2024			
				busSTRUT LENGTHS				busSTRUT Hardware						busSTRUT POWER							
				busSTRUT 20				Joiners		Hangers		C-GI	Xover	Jcord	Line			GEN	ACT		
				M20-3-40-277-2.5-F-2B	M20-3-40-277-3-F-2B	M20-3-40-277-5-F-2B	M20-3-40-277-7-F-2B	M-JB-F-X	M-JI-F-X	M-JI-F-NE	HM-S-F-ST-LFX	MKU-ST-A-F	CG-E-15-B-GL	ICM-S-F-ST-X	MD4020-UNIV-JCF-90-12-602	MD2020-UNIV-IJ2-F-X	P20-3-40-UNIV-JK-NB-F	P20-3-40-UNIV-30-CM-F-1-1	MD40-2-120-CB20-DC-XX-LE-F	BRL-4-40L-30K80-ST-WD-F	BR-LUCY-U-309-30-F-(OC)
								SINGLE	JOINER INSERT	NON-ELECTRIC JOINER INSERT	SINGLE	DÉCOR BRACKET			JUMP CORD		STARTER FEED CENTER MOUNT	POWER DROP			
R/C	Amps	LF	BF	2.5	3	5	7	M	INS	NE-INS	M	DB	C-GI	1/1	12"	INVS	JK	30ST	PD	GEN	ACT
Rows																					
R1	20	15	15	1	1		1	3	3		1		3	2			1				
R2	20	15	15		1	1	1	2	2		1		3	2		1					
R3	20	15	15		1	1	1	2	2		1		3	2		1					
R4	20	15	15		1	1	1	2	2		1		3	2		1					
R5	20	15	15		1	1	1	2	2		1		3	2		1					
SUB TOTAL		75	75	1	5	4	5	11	11		5		15	10		4		1			
R/C	Amps	LF	BF	2.5	3	5	7	M	INS	NE-INS	M	D	C-GI	1/1	12"	INVS	JK	30ST	PD	WW	LUCY
Columns																					
C1	20	30	30		3		3	5	5							1					
C2	20	30	30		3		3	5	5							1					
SUB TOTAL		60	60		6		6	10	10							2					
R/C	Amps	LF	BF	2.5	3	5	7	M	INS	NE-INS	M	D	C-GI	1/1	12"	INVS	JK	30ST	PD	WW	LUCY
Bridges																					
B1	20	8	8		1	1		1	1					2		1			1		
B2	20	8	8		1	1		1	1					2		1			1		
B3	20	8	8		1	1		1	1					2		1			1		
SUB TOTAL		24	24		3	3		3	3					6		3			3		
STORE TOTAL																					
		159.0	159.0	1	14	7	11	24	24		5		15	16		9		1	3		

Labor Hours

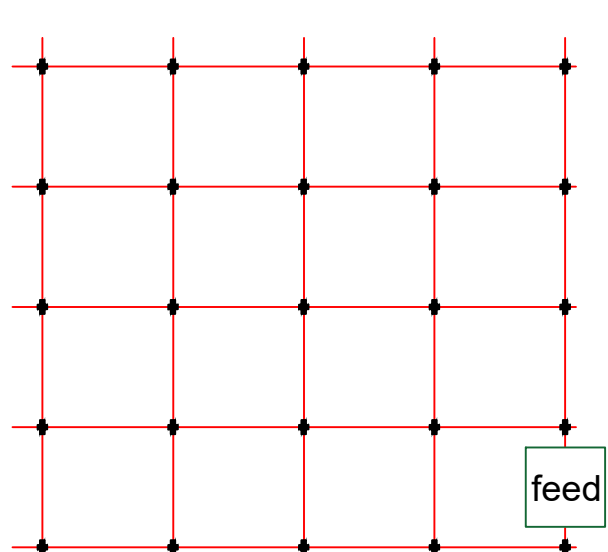
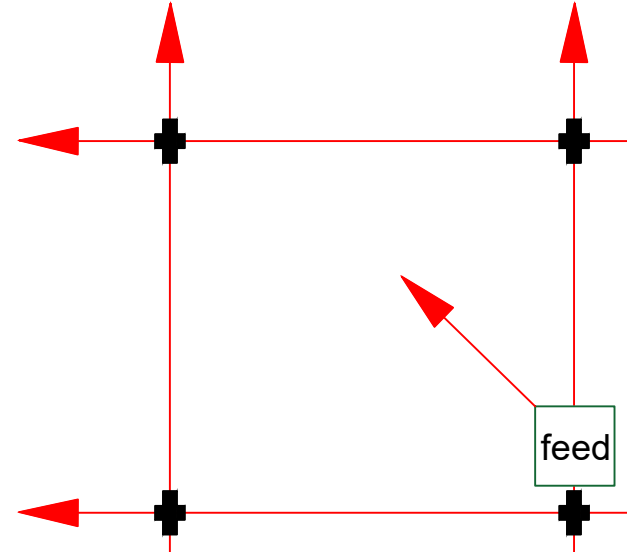
busSTRUT provides time-tested standard labor hours per part, which are then multiplied by the project's Bill of Materials.

bus.STRUT LABOR						
ITEMS	Qty.	U/M	STANDARDIZED		TOTAL HRS	
			LABOR HOURS			
			min	hrs	60	
bus.STRUT SYSTEM						
LENGTHS	159	LF	x	2.95	0.05	= 7
JOINERS	24	EA	x	12	0.20	= 5
HANGERS	15	EA	x	25	0.42	= 6
CROSSOVERS	16	EA	x	10	0.17	= 3
ATTACHMENTS	3	EA	x	8	0.13	= 0
JUMPERS	9	EA	x	6	0.10	= 1
FEEDS	1	EA	x	15	0.25	= 0
bus.STRUT SUB-TOTAL					-	23
FIXTURES						
ACCENT		EA	x	8	0.13	= 0
LINEARS		EA	x	20	0.33	= 0
bus.STRUT READY LIGHTS SUB-TOTAL					-	0
TOTAL TIME					-	23

busSTRUT system is designed to be BID separately.

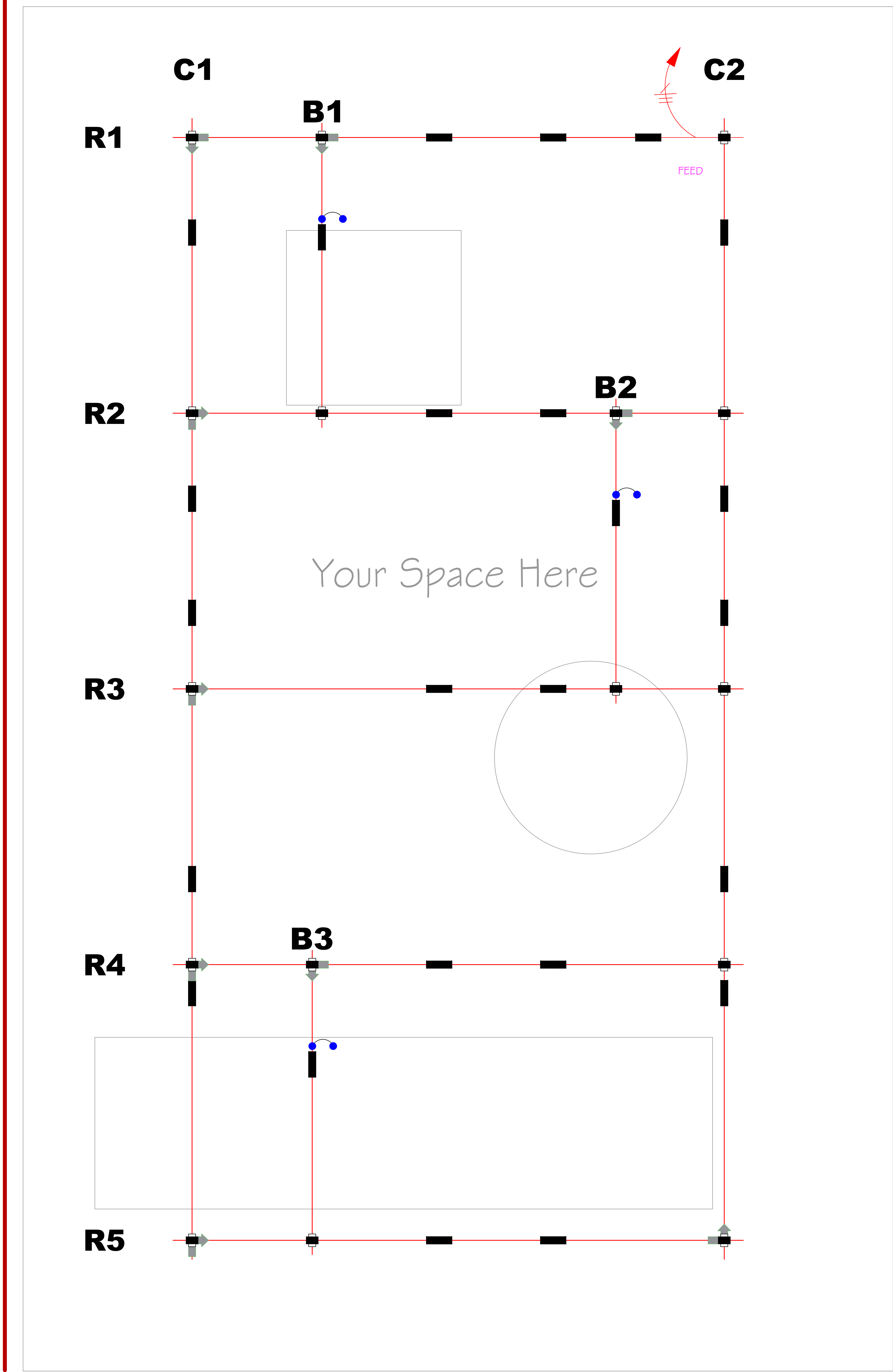
Bid from the feeds-in.

* Powered by a minimal amount of feed boxes.



Lighting Plan

busSTRUT LIGHTING PLAN ONLY
THIS DRAWING IS MEANT TO SHOW THE LOCATION OF busSTRUT LIGHTS ONLY. IT IS NOT A REPLACEMENT FOR: ARCHITECTURAL / ENGINEERING / ELECTRICAL SPECIFICATIONS. (SEE THEIR DRAWINGS)



Legend

	busSTRUT 20 / Single Deck
	30" Starter Feed
	Joiner
	1/1 Slimline Crossover
	Slimline Jumper

bsi

busSTRUT

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DESIGNED BY
JOHN LOCH

DRAWN BY
JOHN LOCH

ISSUE DATE
11/01/2024

ISSUE REASON
BID/REVIEW

Lighting Plan & Bill of Materials
Rectangle Large - Power Drops

busSTRUT SHOP DRAWING SET(ONLY) NOT A REPLACEMENT FOR ARCHITECTURAL / ENGINEERING OR ELECTRICAL DRAWINGS

XX

BT

XXXX

REGION DESCRIPTION

XX-XX-XX

DATE

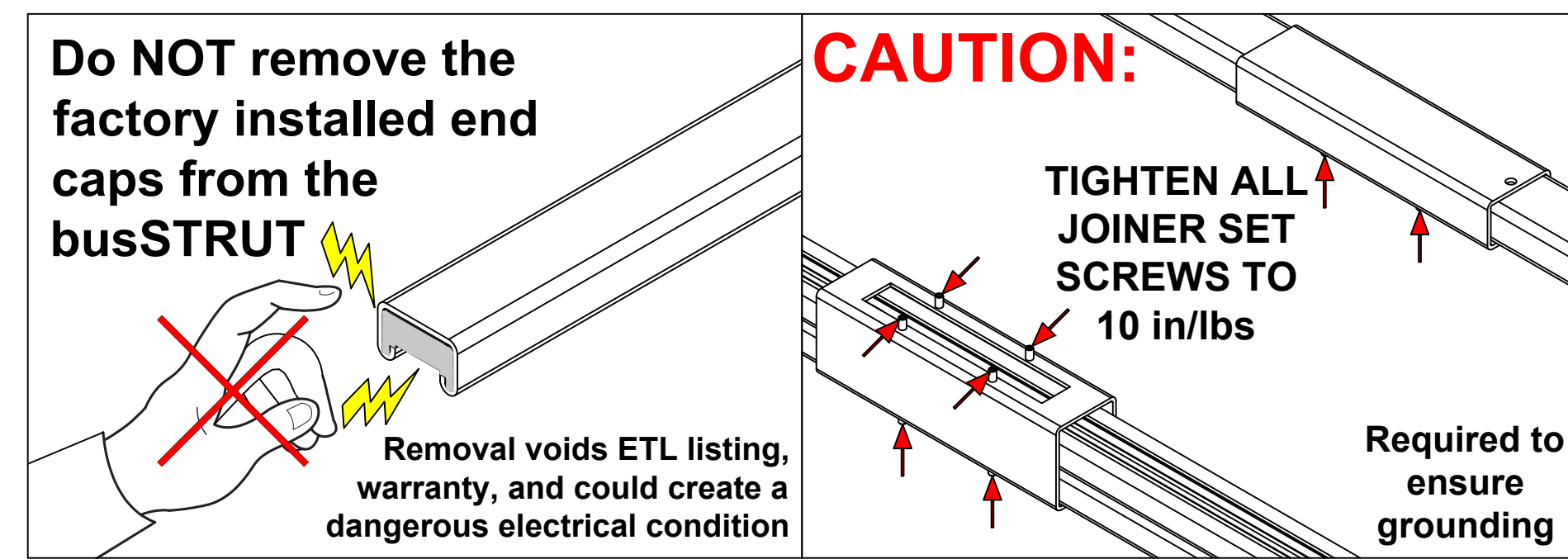
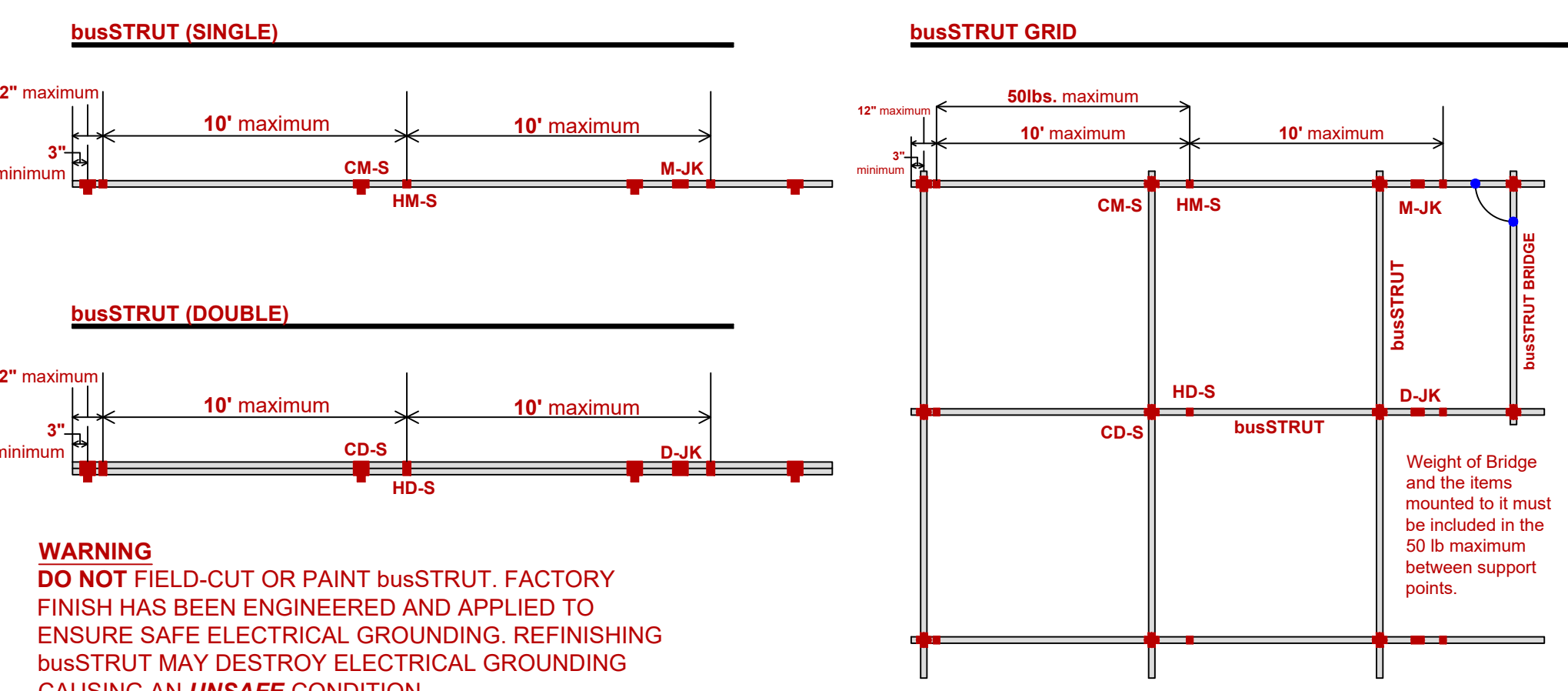
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PAPER SIZE:
ARCH E (48x36)

SCALE 3/4" = 1'-0"

DRAWING NUMBER
E-b1

Mounting Rules



DISTANCE:

10' MAXIMUM 10' spacing between support points

12" Support point must be within 12" from every end or corner

3" MINIMUM 3" of busSTRUT to be exposed beyond end of mounting hangers and/or crossovers

WEIGHT:

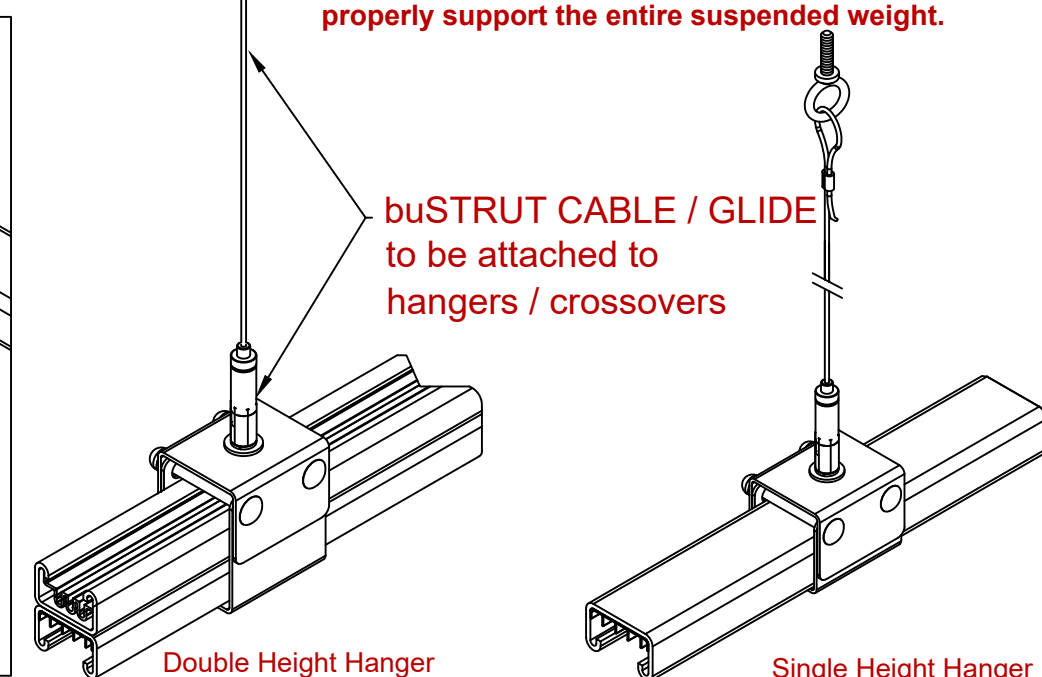
50 lbs Maximum 50 pounds between support points (Include weight of busSTRUT System)
Weight of 1 foot of busSTRUT:
Single (MIN) - 1.5 lb per Linear Foot (not including connected weight)
Double (MAX) - 3 lb per Linear Foot (not including connected weight)

FITTERS

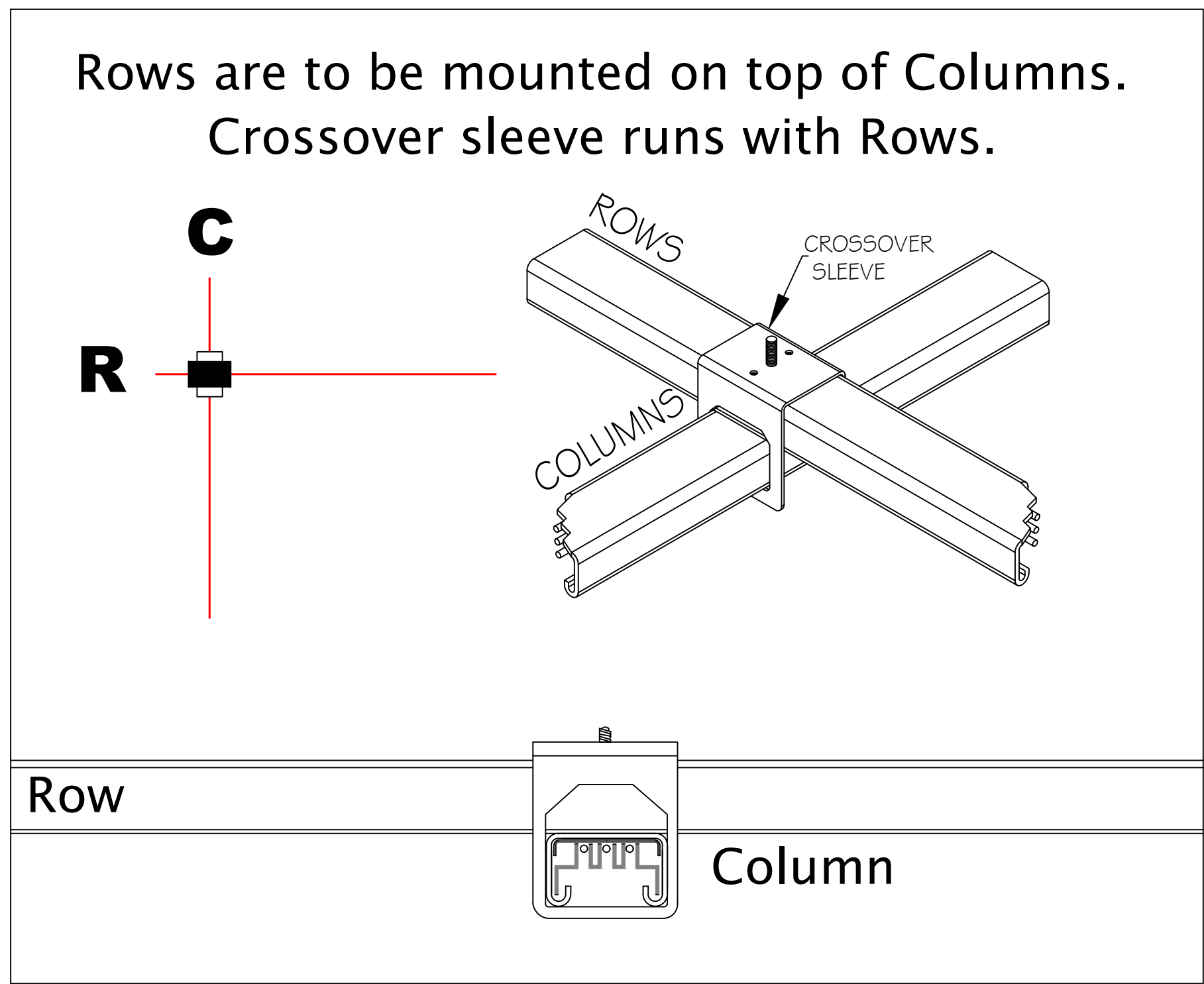
40 lbs The busSTRUT Flip-Fitters (with metal bracket) are rated for 40 lbs maximum static, vertical load.
Flip-Fitters without metal bracket are for use with standard track light fixtures only. Consult for maximum weight restrictions.

Only busSTRUT fittings and hardware may be mounted directly to busSTRUT

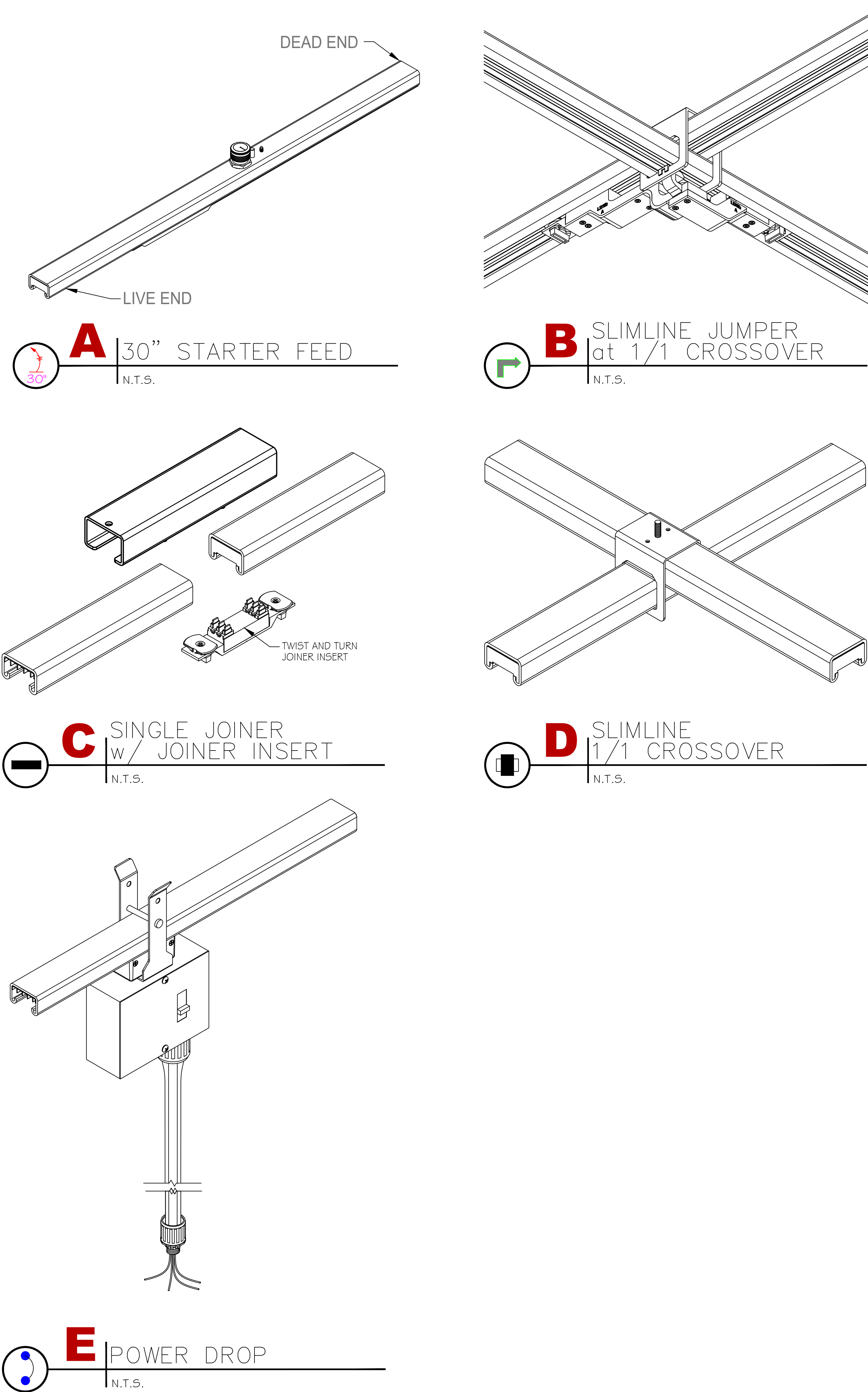
CONNECTION TO STRUCTURE BY OTHERS
Attachment from busSTRUT System to structure must be engineered and installed to properly support the entire suspended weight.



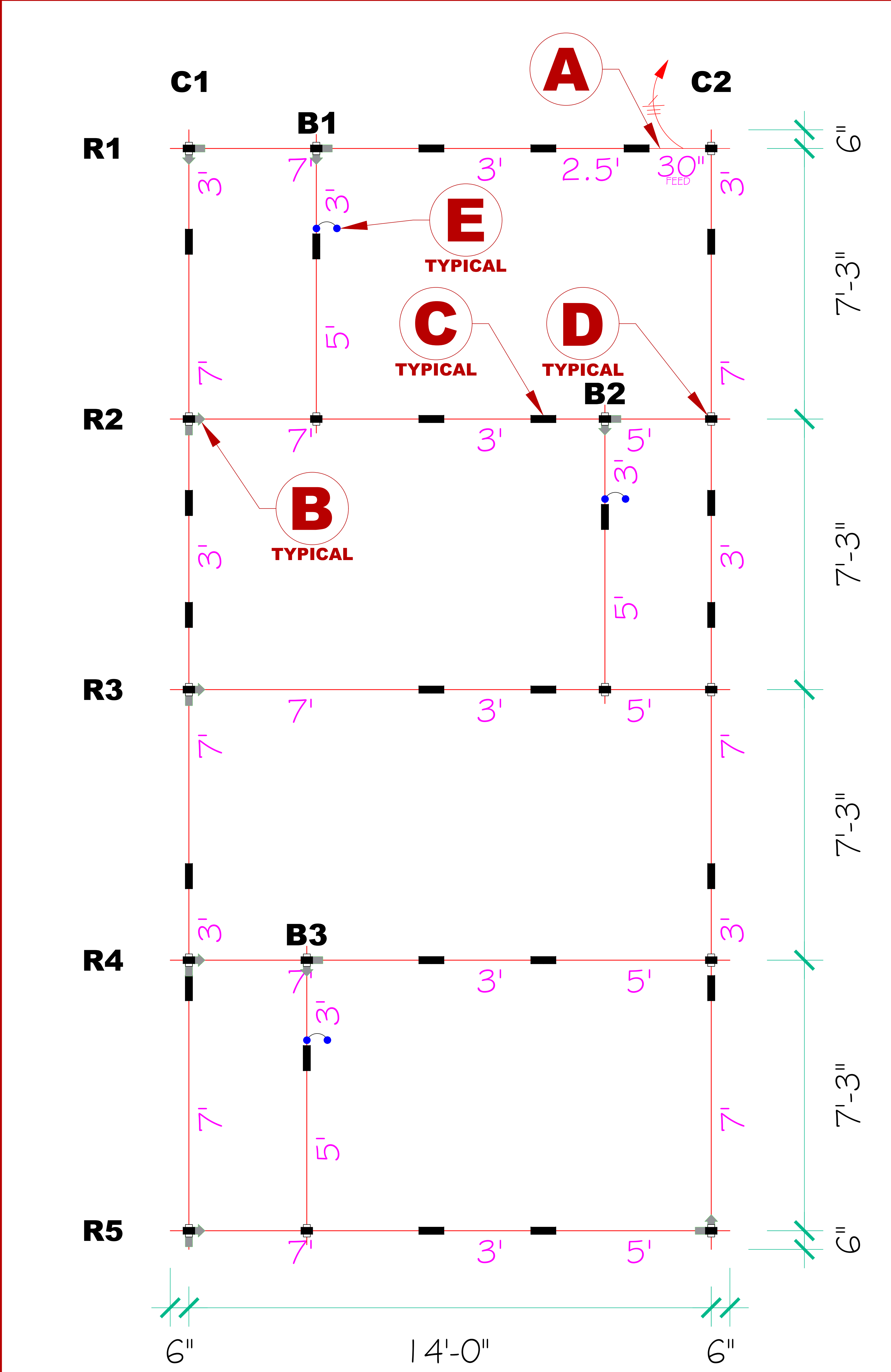
Project Specific Rules



ISO Details



Dimensions



Legend

	busSTRUT 20 / Single Deck
	30" Starter Feed
	Joiner
	1/1 Slimline Crossover
	Slimline Jumper

bsi

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PRINCIPAL IN CHARGE
LARRY GELLERT

CHECKED BY
JOHN LOCH

DRAWN BY
JOHN LOCH

DATE
11/01/2024

REVISION
BID/REVIEW

Assembly Plan
Rectangle Large - Power Drops

busSTRUT
SPEC DRAWING SET(ONLY)
NOT A REPLACEMENT FOR
ARCHITECTURAL
ENGINEERING OR ELECTRICAL
DRAWINGS

NO.	DATE	REVISION	DESCRIPTION	BY
1	11/01/24	1	ISSUED FOR PERMIT	XX

PAPER SIZE:
ARCH E (48x36)

SCALE 3/4" = 1'-0"

DRAWING NUMBER
E-b2

