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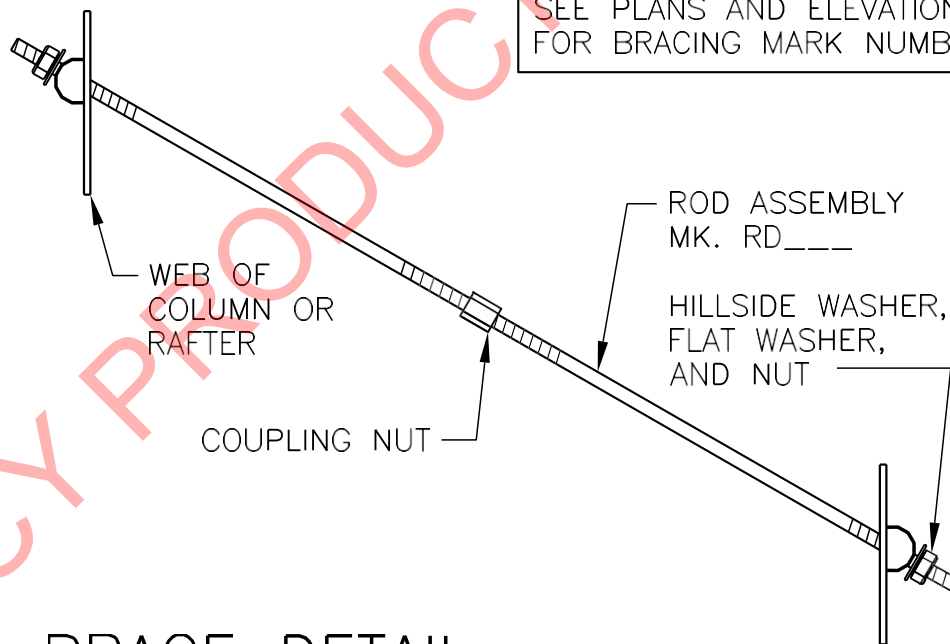
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CABLE AND ROD BRACING DETAILS

AF0010 – ROD BRACING

ROD DIAMETER	MARK NUMBER	HILLSIDE WASHERS	FLAT WASHERS	A307/A325 NUTS	COUPLING NUTS
5/8" ϕ	RDB__	(2) H0930	(2) H0210	(2) H0310	H0810
3/4" ϕ	RDC__	(2) H0930	(2) H0220	(2) H0320	H0820
7/8" ϕ	RDD__	(2) H0930	(2) H0230	(2) H0325	H0830
1" ϕ	RDE__	(2) H0960	(2) H0240	(2) H0330	H0840
1 1/8" ϕ	RDF__	(2) H0960	(2) H0250	(2) H0450	H0850
1 1/4" ϕ	RDG__	(2) H0960	(2) H0260	(2) H0340	H0860

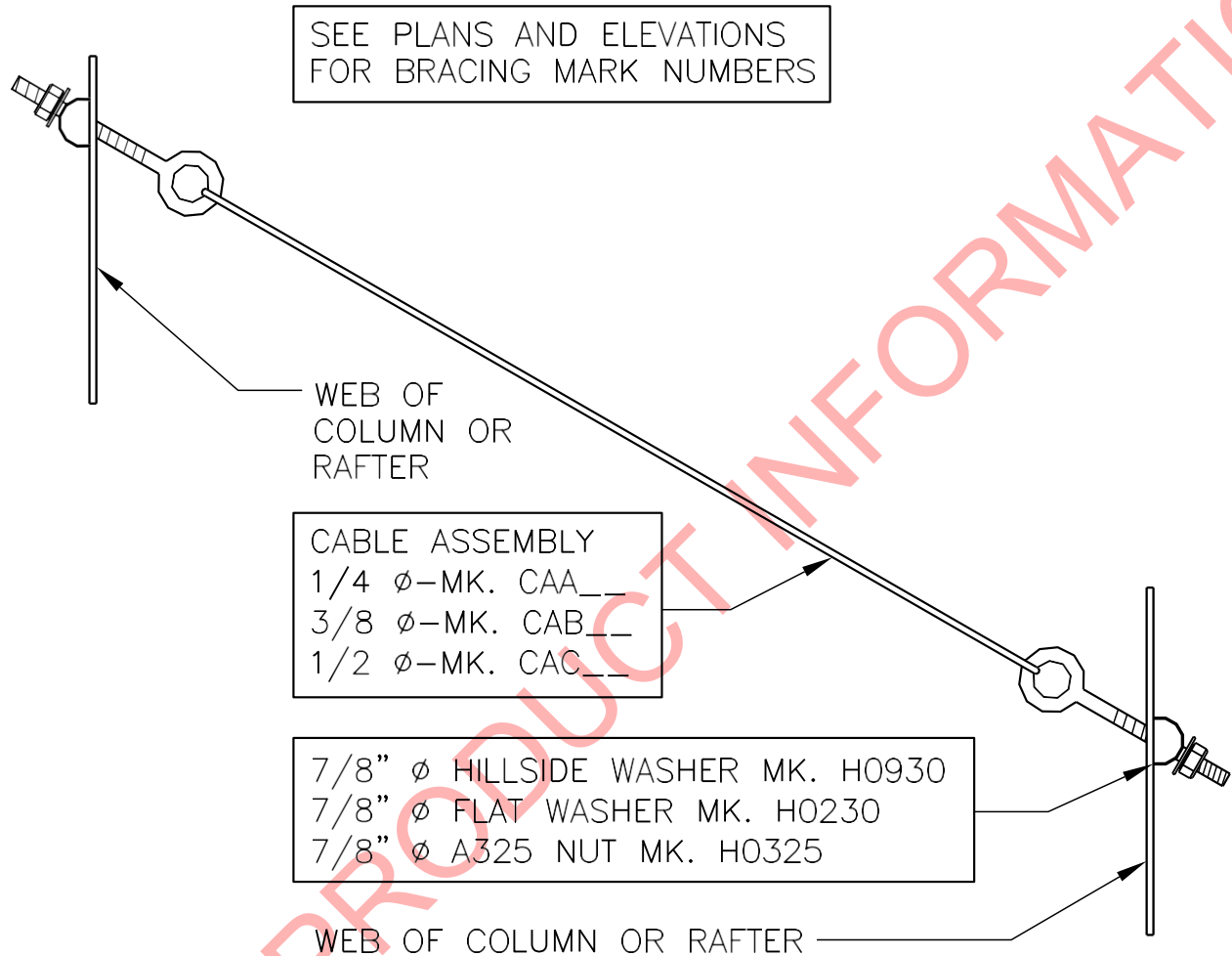
SEE PLANS AND ELEVATIONS FOR BRACING MARK NUMBERS



ROD BRACE DETAIL
(WEB TO WEB)

AF0010

AF0710 – CABLE BRACING



CABLE BRACE DETAIL

(WEB TO WEB)

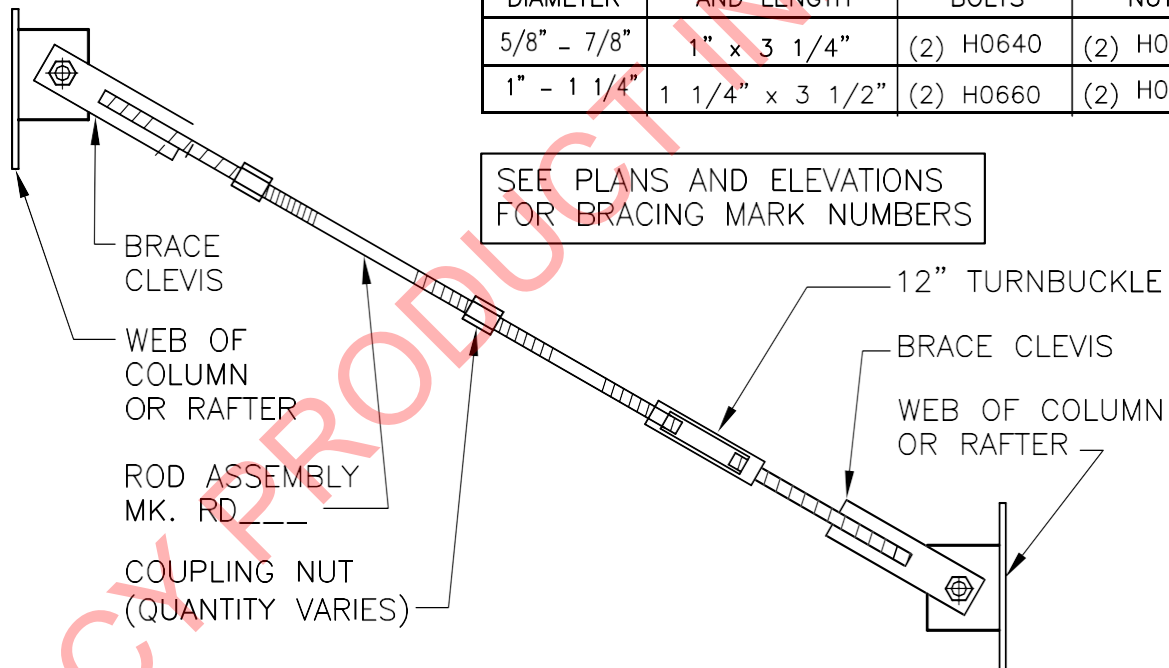
AF0710

AF0030 – ROD TO CLEVIS CONNECTIONS

ROD DIAMETERS	MARK NUMBERS	TURNBUCKLES	COUPLING NUTS	BRACE CLEVIS (AT TURNBUCKLE)	BRACE CLEVIS (AT COUPLING NUT)
5/8"	RDB ___	(1) H0710	H0810	(1) BCS02	(1) BCS07
3/4"	RDC ___	(1) H0720	H0820	(1) BCS03	(1) BCS08
7/8"	RDD ___	(1) H0730	H0830	(1) BCS04	(1) BCS09
1"	RDE ___	(1) H0740	H0840	(1) BCL05	(1) BCL06
1 1/8"	RDF ___	(1) H0750	H0850	(1) BCL01	(1) BCL03
1 1/4"	RDG ___	(1) H0760	H0860	(1) BCL02	(1) BCL04

BRACE CLEVIS BOLT AND NUT PART NUMBERS

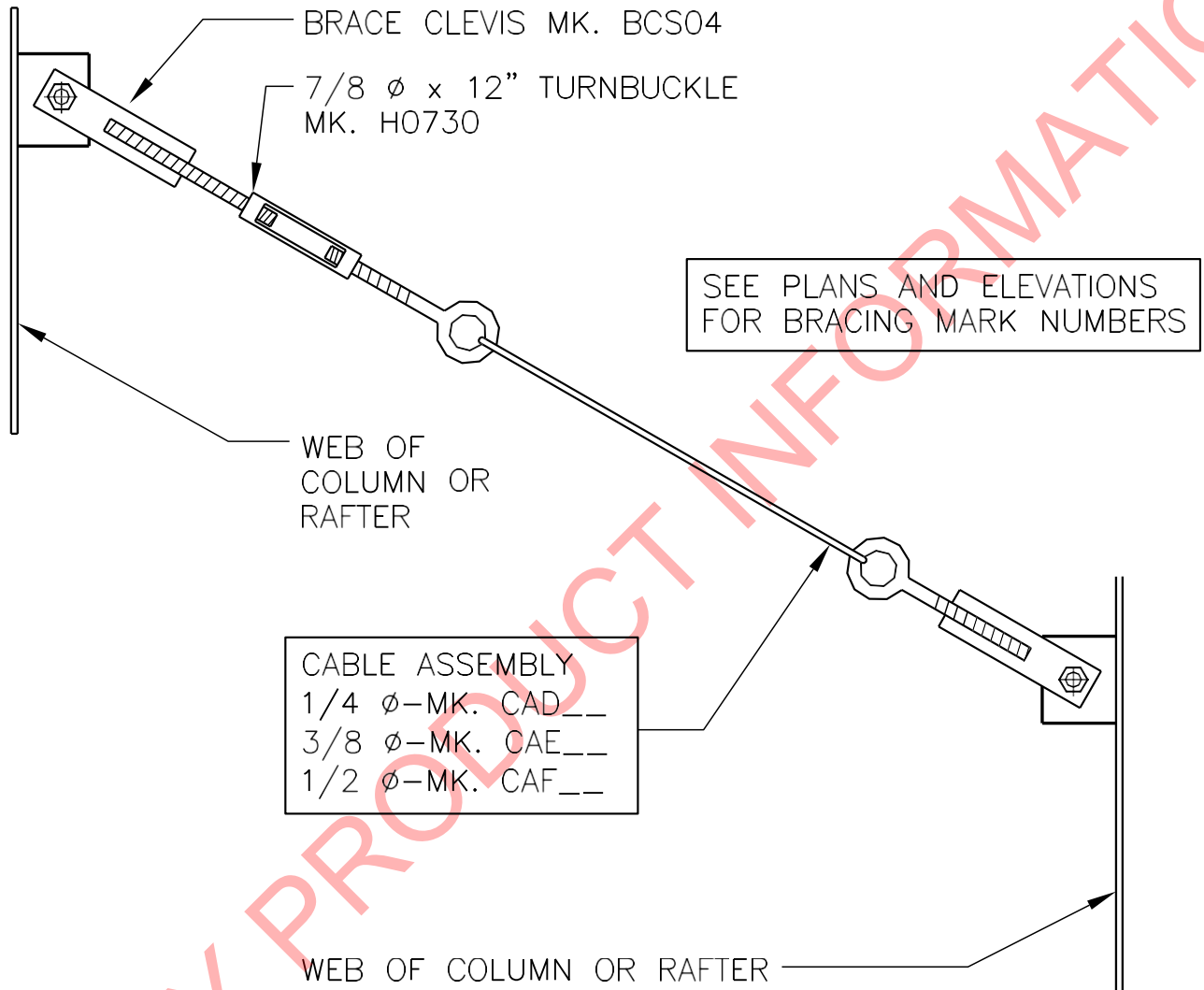
ROD DIAMETER	BOLT DIAMETER AND LENGTH	A325 BOLTS	A325 NUTS
5/8" - 7/8"	1" x 3 1/4"	(2) H0640	(2) H0330
1" - 1 1/4"	1 1/4" x 3 1/2"	(2) H0660	(2) H0340



ROD BRACE DETAIL
(CLEVIS TO CLEVIS)

AF0030

AF0730 – CABLE TO CLEVIS CONNECTIONS



CABLE BRACE DETAIL

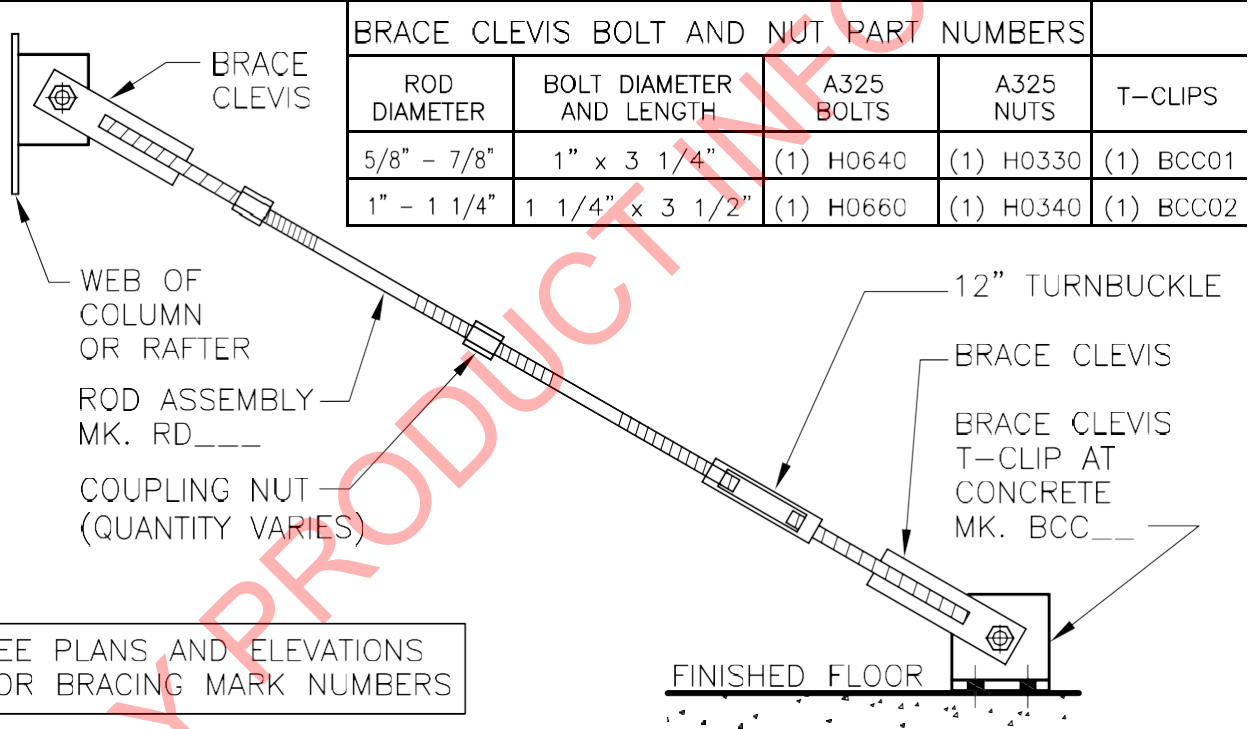
(CLEVIS TO CLEVIS)

NOTE: USE (2) 1" ϕ x 3 1/4" A325 BOLTS (H0640)
AND NUTS (H0330)

AF0730

AF0050 – CLEVIS TO FLOOR

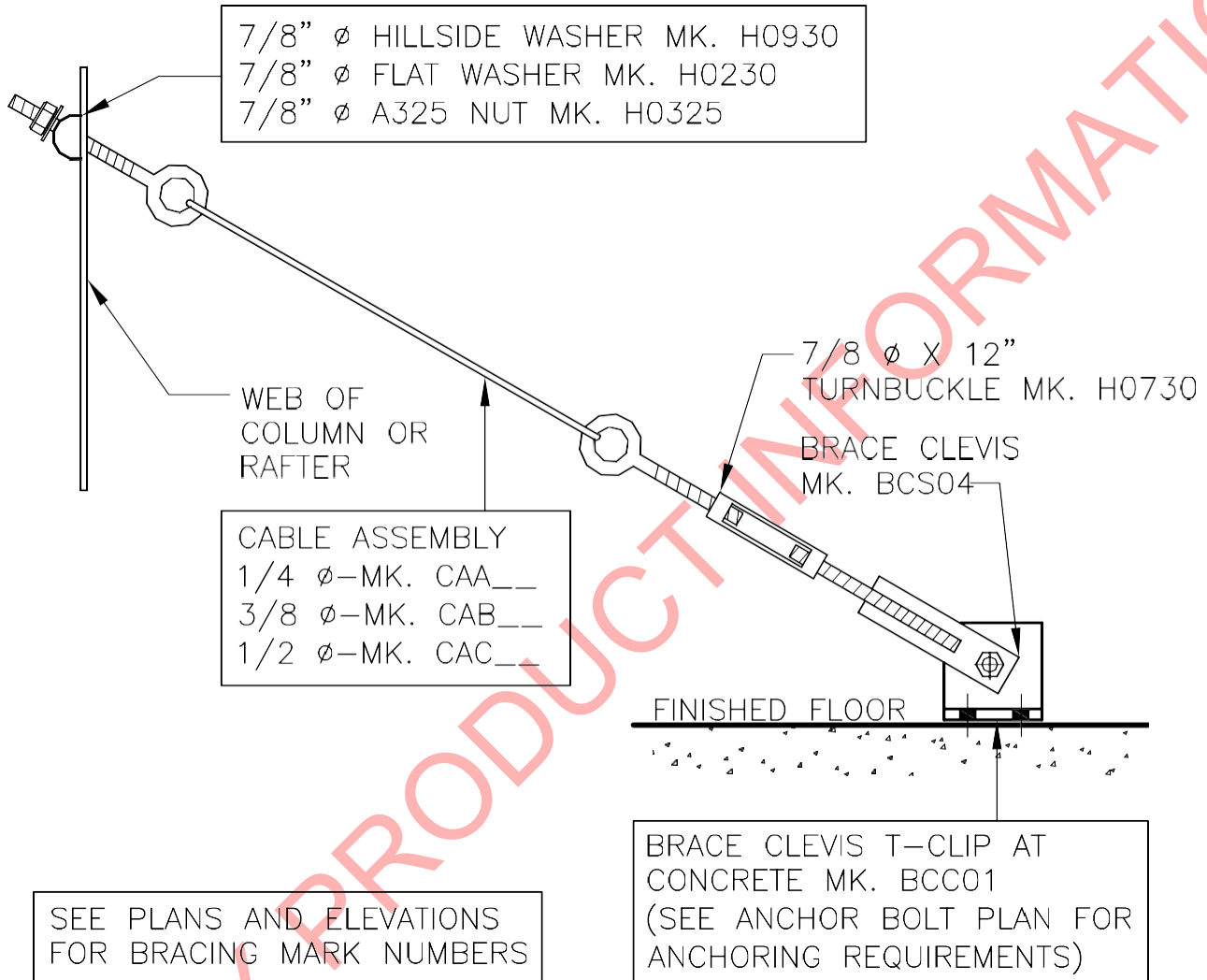
ROD DIAMETERS	MARK NUMBERS	TURNBUCKLES	COUPLING NUTS	BRACE CLEVIS (AT TURNBUCKLE)	BRACE CLEVIS (AT COUPLING NUT)
5/8"	RDB ___	(1) H0710	H0810	(1) BCS02	(1) BCS07
3/4"	RDC ___	(1) H0720	H0820	(1) BCS03	(1) BCS08
7/8"	RDD ___	(1) H0730	H0830	(1) BCS04	(1) BCS09
1"	RDE ___	(1) H0740	H0840	(1) BCL05	(1) BCL06
1 1/8"	RDF ___	(1) H0750	H0850	(1) BCL01	(1) BCL03
1 1/4"	RDG ___	(1) H0760	H0860	(1) BCL02	(1) BCL04



ROD BRACE DETAIL
(CLEVIS TO FLOOR)

AF0050

AF0740 – WEB TO FLOOR



CABLE BRACE DETAIL

(WEB TO FLOOR)

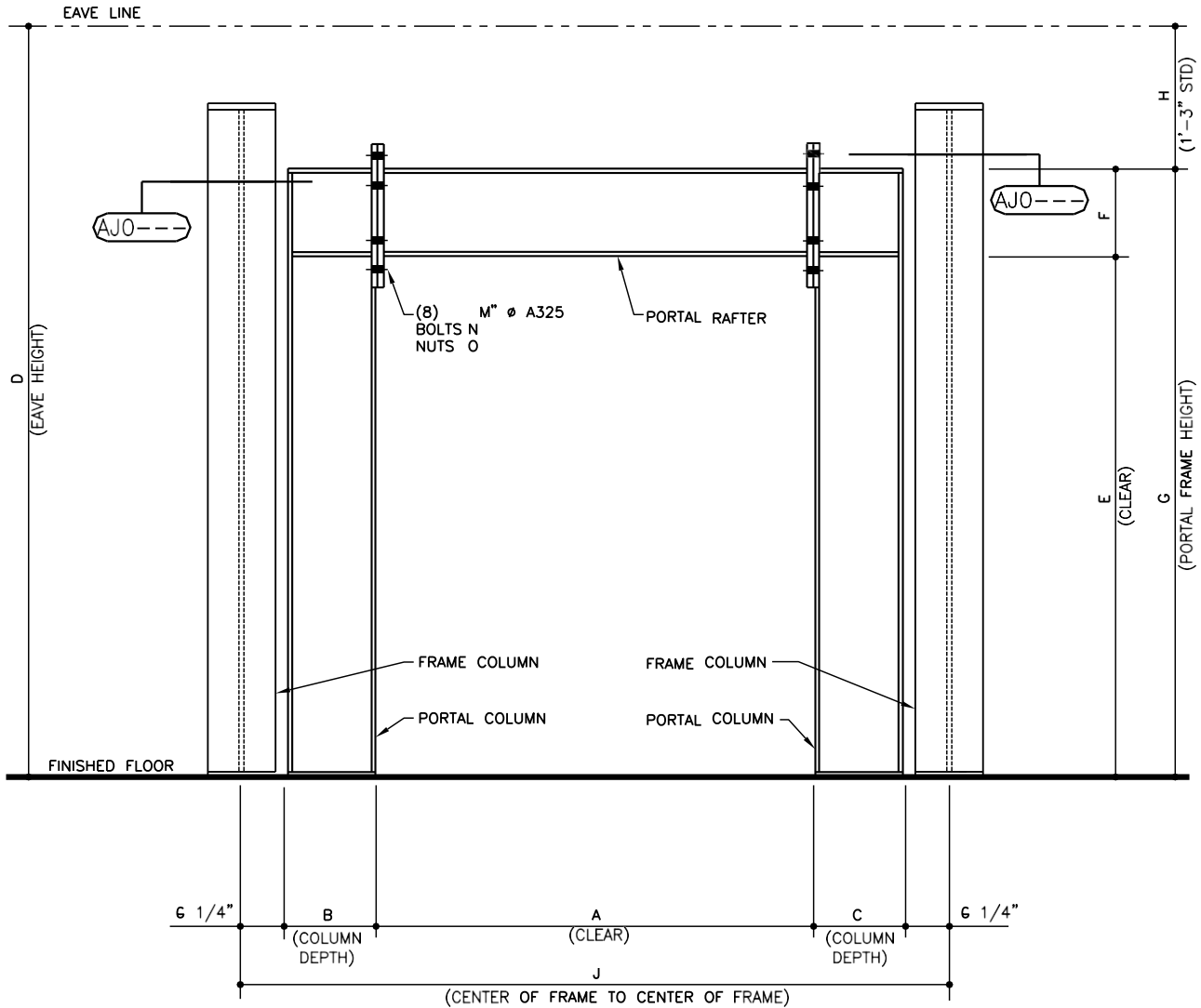
NOTE: USE (1) 1" ϕ x 3 1/4" A325 BOLT (H0640)
AND NUTS (H0330)

AF0740

PORTAL FRAME DETAILS

AJ0020 – FULL HEIGHT PORTAL FRAME

[Download the DWG file by clicking here.](#)



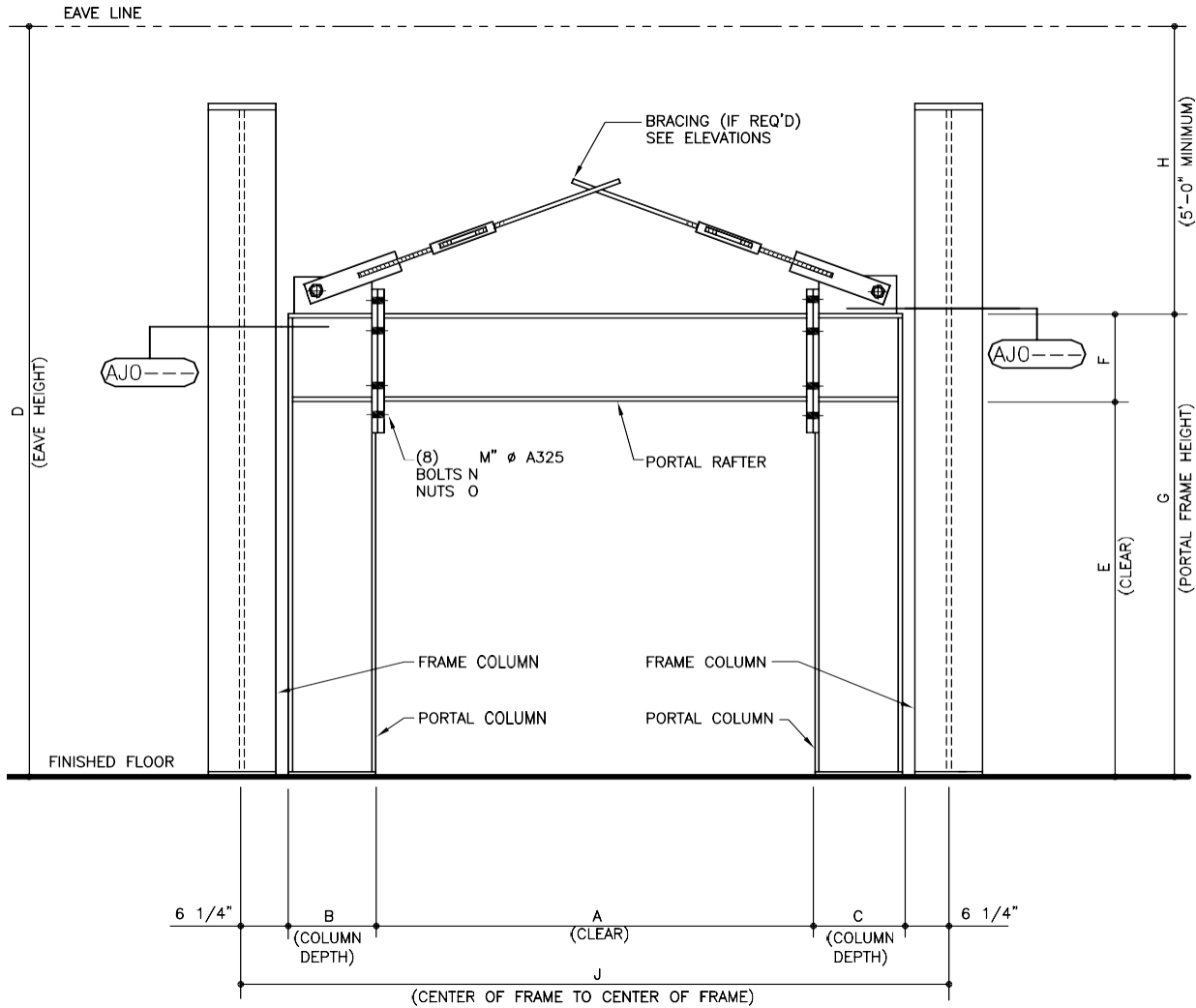
FULL HEIGHT PORTAL FRAME DETAIL

SEE PLANS AND/OR ELEVATIONS FOR MARK NUMBERS

AJ0020

AJ0010 – PARTIAL HEIGHT PORTAL FRAME

Download the DWG file by [clicking here](#).



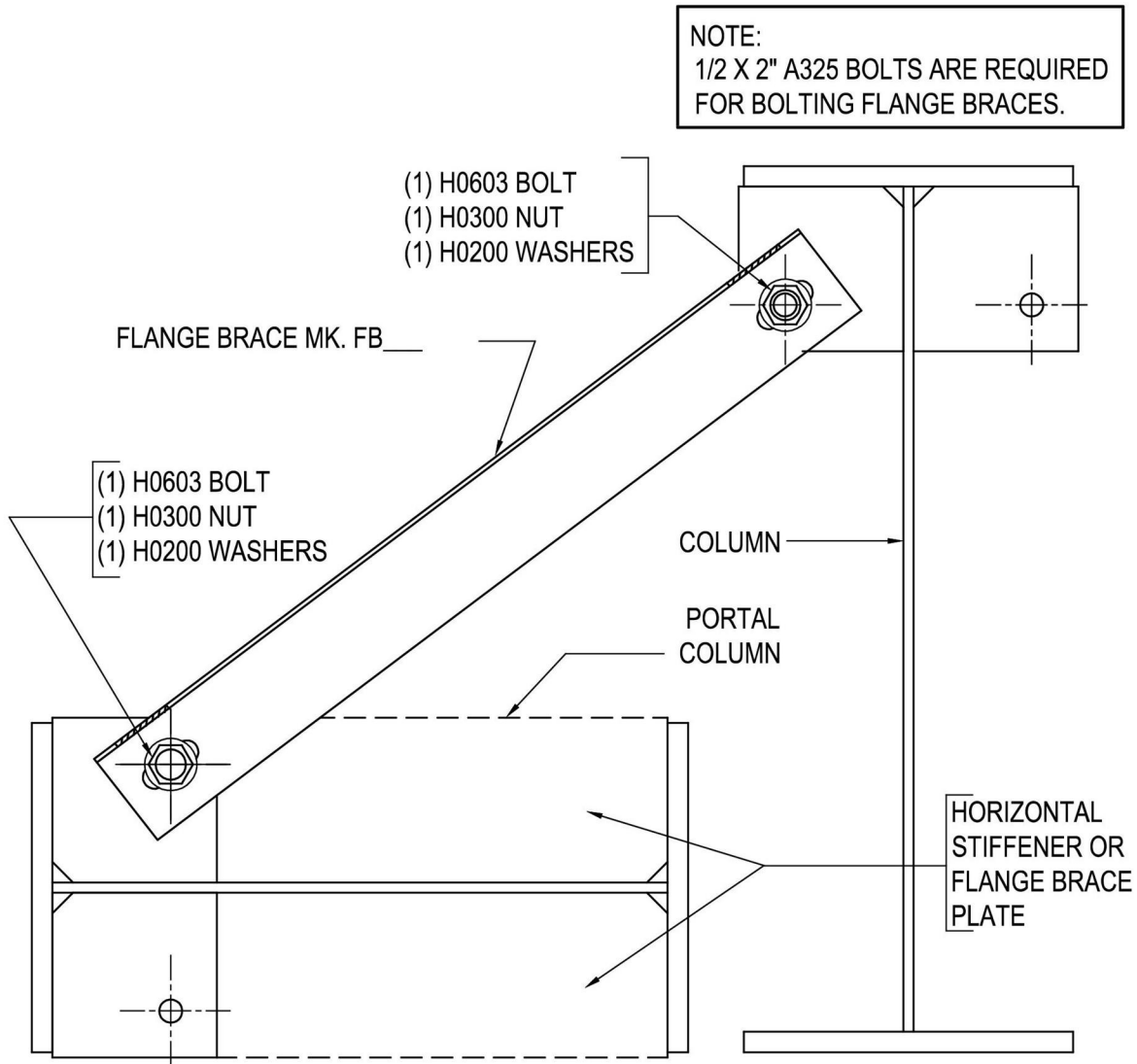
PARTIAL HEIGHT PORTAL FRAME WITH OPTIONAL ROD BRACING ABOVE

SEE PLANS AND/OR ELEVATIONS FOR MARK NUMBERS

(AJ0010)

AJ0050 – FLANGE BRACE @ FRAME/PORTAL COLUMN – STIFFENER

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TYPICAL FLANGE BRACE AT BU COL & PORTAL COL

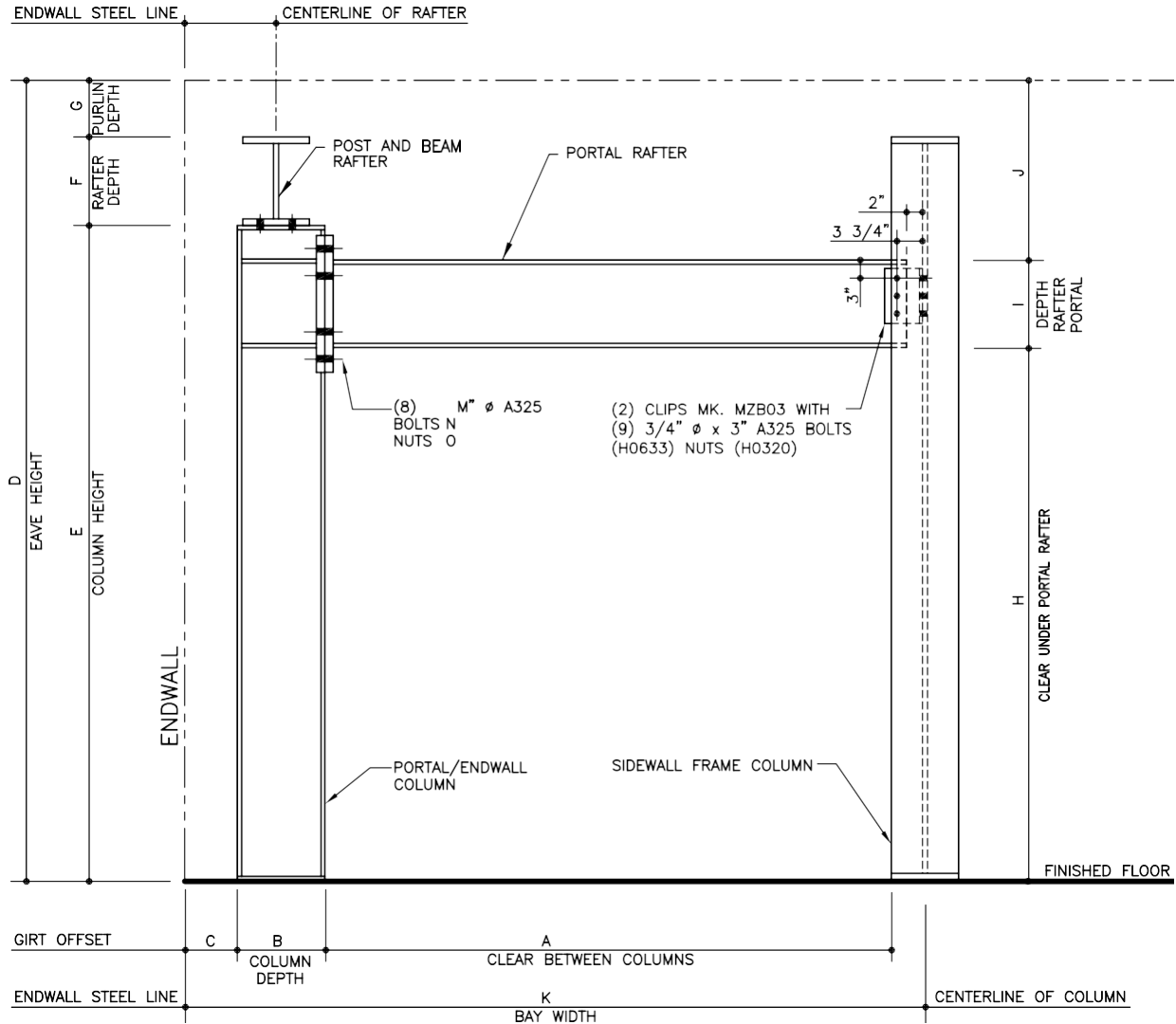
AJ0050

SEE PLANS AND ELEVATIONS FOR FLANGE BRACE PART MARKS

AJ0050

AJ0150 – SINGLE LEG PORTAL FRAME @ END BAY W/POST & BEAM FRAME

[Download the DWG file by clicking here.](#)

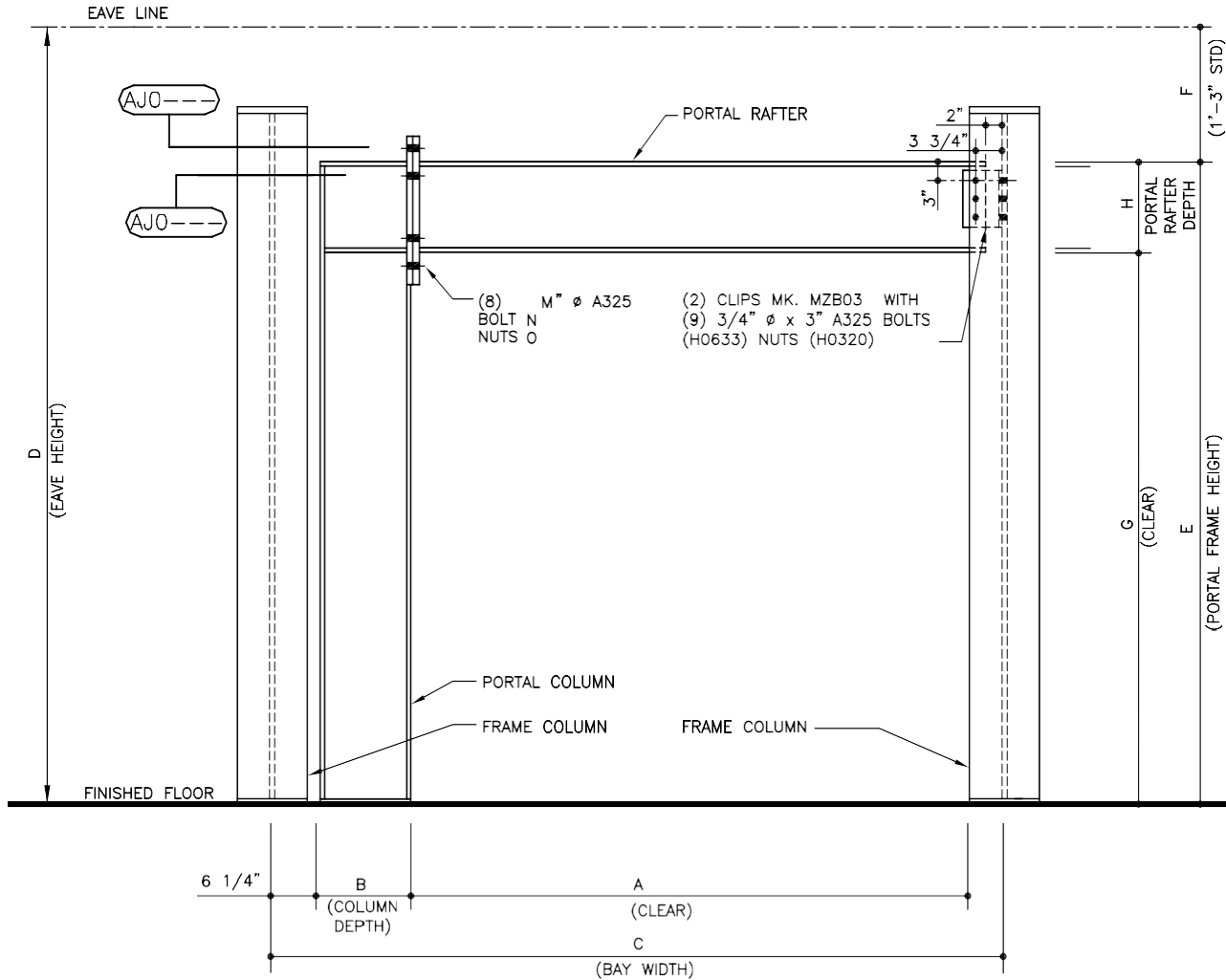


SINGLE LEG PORTAL FRAME AT END BAY WITH POST & BEAM FRAME

AJ0150

AJ0160 – FULL HEIGHT SINGLE LEG PORTAL FRAME

Download the DWG file by clicking [here](#).



FULL HEIGHT SINGLE LEG PORTAL FRAME

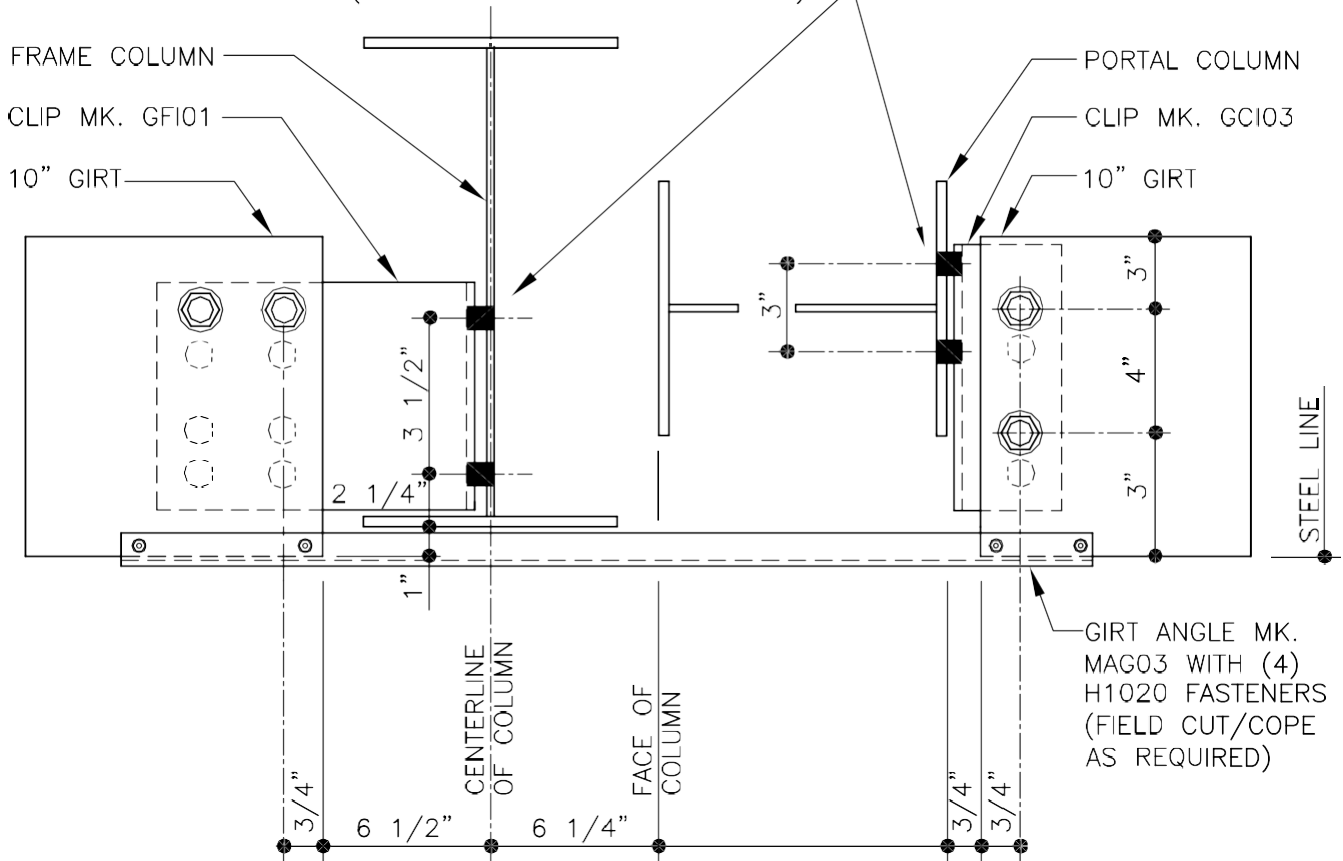
PORTAL COLUMN AT LEFT OF BAY SHOWN, RIGHT HAND OPPOSITE

AJ0160

AJ0120 – FRAME/PORTAL COLUMN GIRT DETAIL – INSET (LEFT)

[Download the DWG file by clicking here.](#)

USE (4) 1/2" x 2" A325 BOLTS H0603/
NUTS H0300 (CLIP TO FLANGE CONNECTION)



GIRT TO FRAME/PORTAL COLUMN

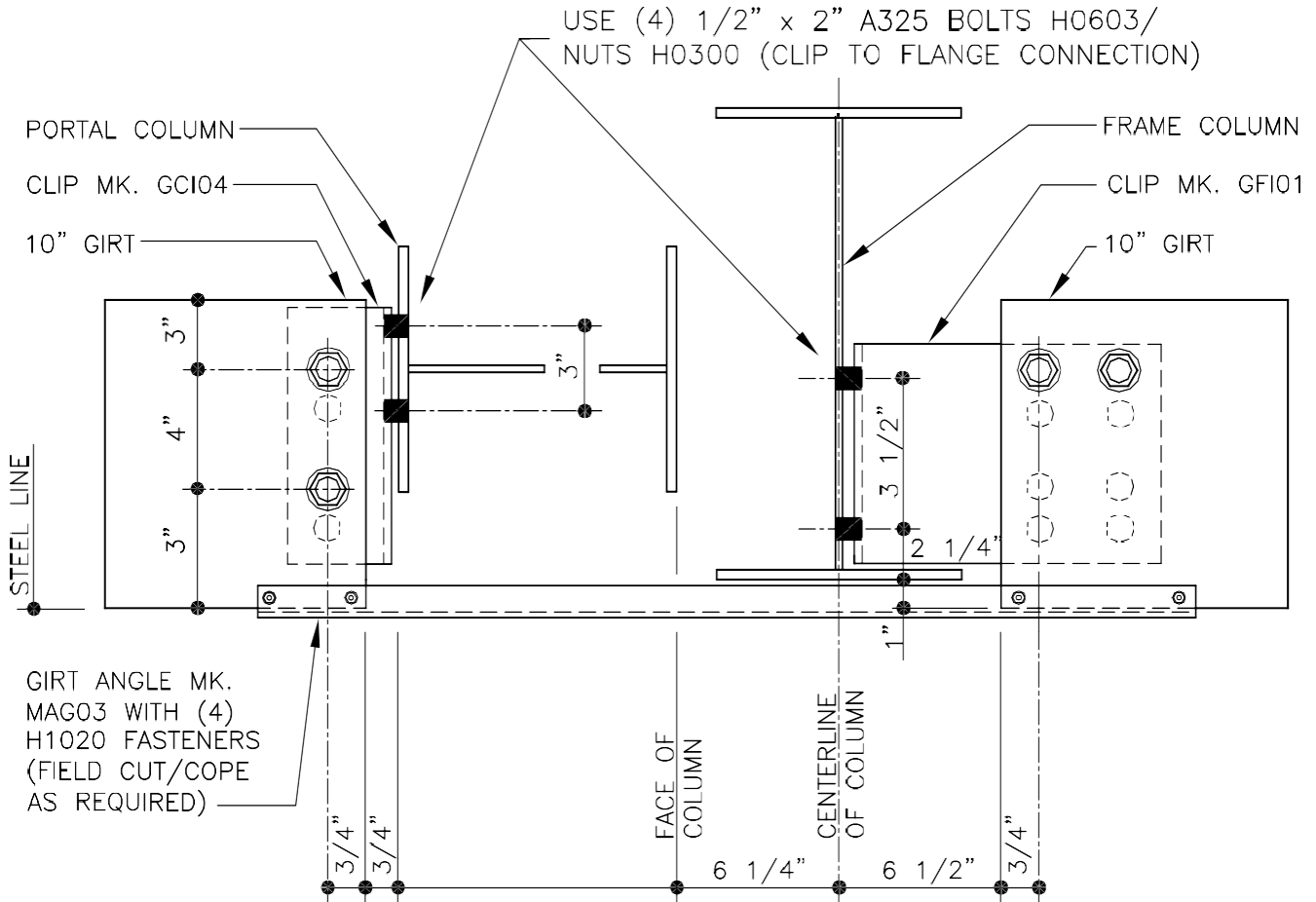
WITH 10" INSET GIRTS

NOTE: USE (4) 1/2" x 1 1/4" A307 BOLTS (H0500), NUTS (H0400), AND (4) 1/2" WASHERS (H0200) AT SLOTS

AJ0120

AJ0140 – FRAME/PORTAL COLUMN GIRT DETAIL – INSET (RIGHT)

[Download the DWG file by clicking here.](#)



GIRT TO FRAME/PORTAL COLUMN

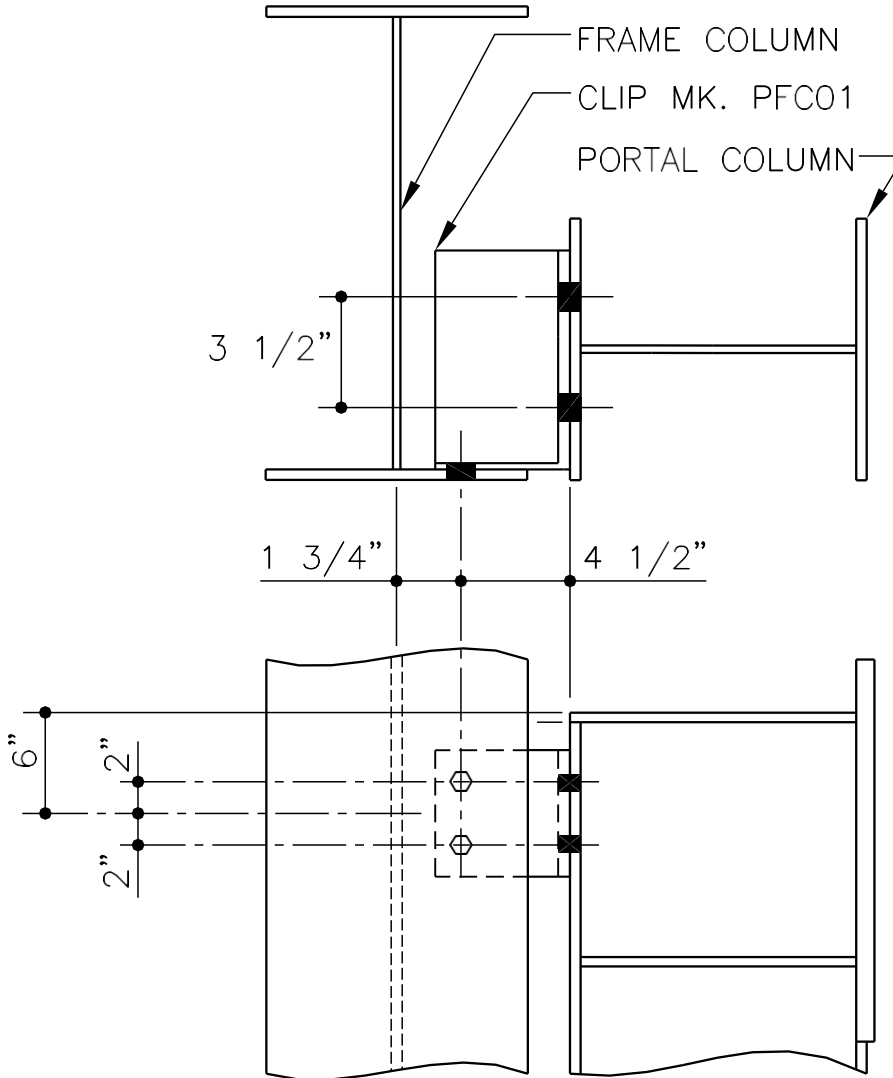
WITH 10" INSET GIRTS

NOTE: USE (4) 1/2" X 1 1/4" A307 BOLTS (H0500), NUTS (H0400). AND (4) 1/2" WASHERS (H0200) AT SLOTS

AJ0140

AJ0040 – FRAME/PORTAL COLUMN GIRT DETAILS - BYPASS

[Download the DWG file by clicking here.](#)



FRAME/PORTAL COLUMN ATTACHMENT

WITH INSET OR BYPASS GIRTS

USE (6) $\frac{3}{4}"$ X $3"$ A325 BOLTS (H0633), NUTS (H0320),
AND (4) $\frac{3}{4}"$ WASHERS (H0220) AT SLOTS

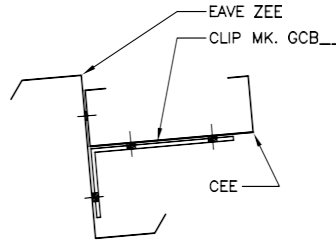
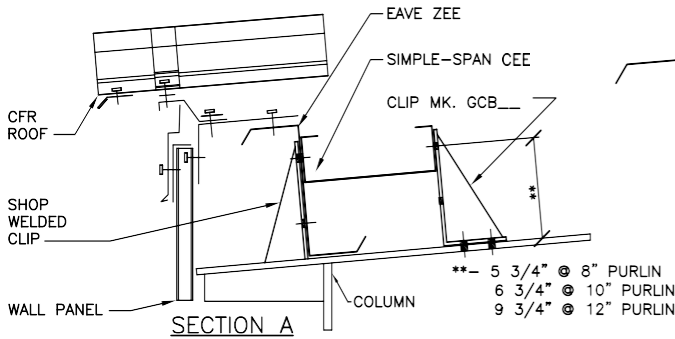
AJ0040

CFR PURLIN BRACING SYSTEM DETAILS

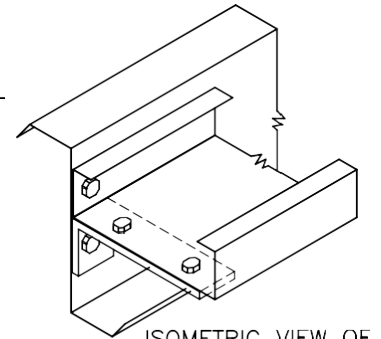
Download the DWG file by clicking [here](#).

BE1310 – STRONG-BACK EAVE-CEE @ BUILT-UP

STRONG-BACK SINGLE CEE EAVE DETAIL
USE 1/2" x 2" A325 BOLTS (H0603) AND NUTS (H0300)
AT ALL CONNECTIONS

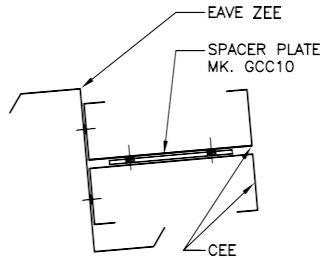
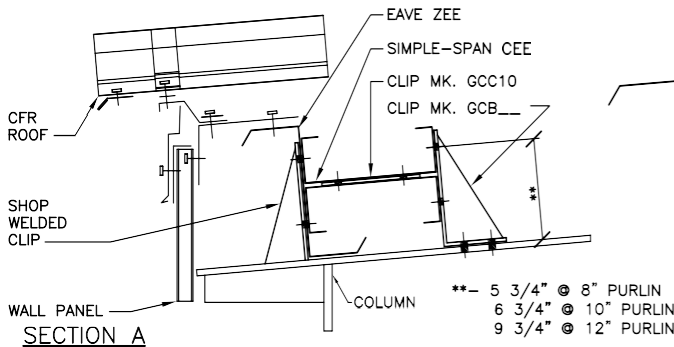


SECTION B
SEE DETAIL AT TOP LEFT
FOR CLIP SPACING

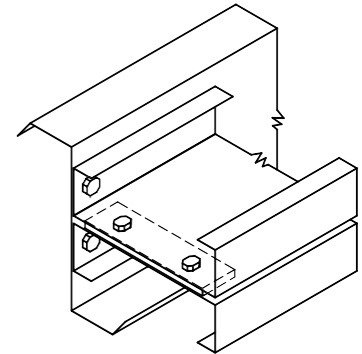


**ISOMETRIC VIEW OF
SECTION B**

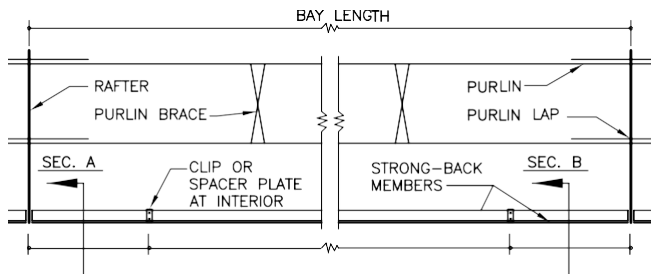
STRONG-BACK DOUBLE CEE EAVE DETAIL
USE 1/2" x 2" A325 BOLTS (H0603) AND NUTS (H0300)
AT ALL CONNECTIONS



SECTION B
SEE DETAIL AT TOP LEFT
FOR CLIP SPACING



**ISOMETRIC VIEW OF
SECTION B**



CLIP OR SPACER PLATE EQUALLY SPACED AT A MAXIMUM SPACING OF: _____

PLAN VIEW

GENERAL NOTES

- 1) CEE EAVE MEMBERS AT THIS DETAIL WILL ALWAYS BE SIMPLE-SPAN (EXCEPT @ END FRAMES WITH LARGER THAN 1'-4" OFFSET, CEES EXTEND TO STEEL LINE).
- 2) REFER TO THE ROOF FRAMING PLAN FOR CEE MEMBER SIZES AND MARK NUMBERS. NOTE: IT IS POSSIBLE TO HAVE A MIXTURE OF THE SINGLE-CEE AND DOUBLE-CEE DETAILS. REVIEW THE ROOF FRAMING PLAN QUANTITIES CAREFULLY.
- 3) THE CEES ARE FACTORY PUNCHED FOR ALL CLIP CONNECTIONS.
- 4) USE 1/2" x 2" A325 BOLTS (H0603) AND NUTS (H0300) FOR ALL CONNECTIONS
- 5) REFERENCE ERECTOR NOTE FOR TYPICAL WASHER REQUIREMENTS.

STRONG-BACK EAVE CEE DETAILS

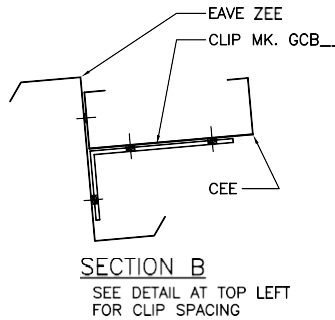
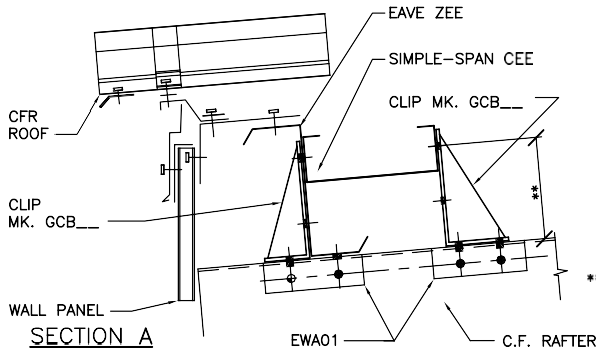
BE1310

BE1310

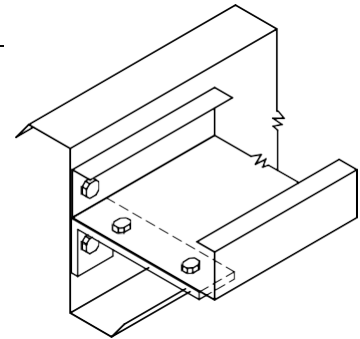
BE1320 – STRONG-BACK EAVE-CEE @ C.F. RAFTER

Download the DWG file by clicking [here](#).

STRONG-BACK SINGLE CEE EAVE DETAIL
USE 1/2" x 2" A325 BOLTS (H0603) AND NUTS (H0300)
AT ALL CONNECTIONS

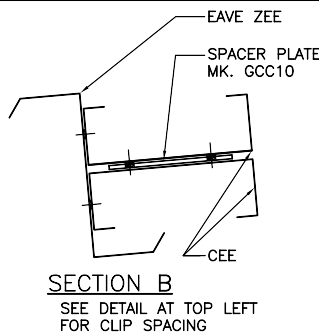
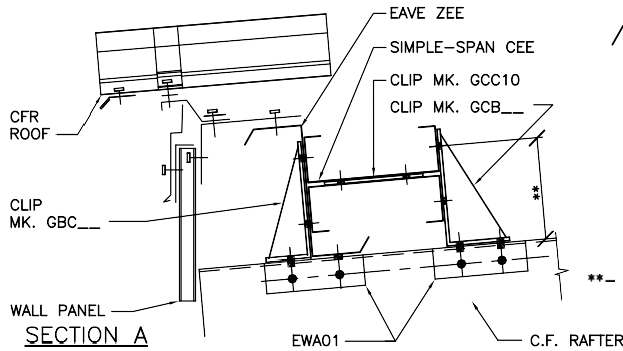


**- 5 3/4" @ 8" PURLIN
6 3/4" @ 10" PURLIN
9 3/4" @ 12" PURLIN

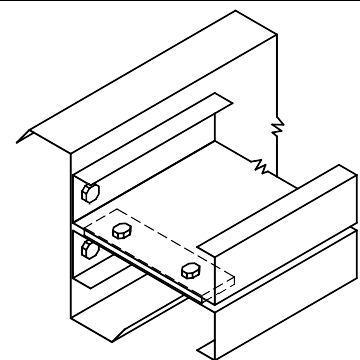


ISOMETRIC VIEW OF
SECTION B

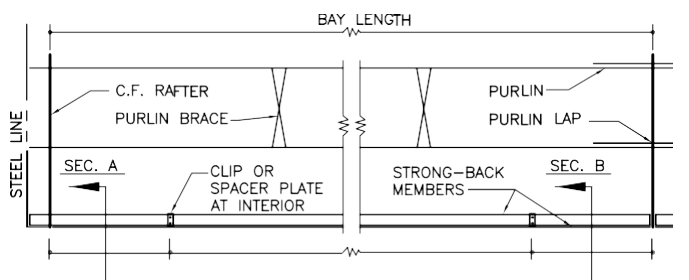
STRONG-BACK DOUBLE CEE EAVE DETAIL
USE 1/2" x 2" A325 BOLTS (H0603) AND NUTS (H0300)
AT ALL CONNECTIONS



**- 5 3/4" @ 8" PURLIN
6 3/4" @ 10" PURLIN
9 3/4" @ 12" PURLIN



ISOMETRIC VIEW OF
SECTION B



CLIP OR SPACER PLATE EQUALLY SPACED AT A MAXIMUM SPACING OF: _____

PLAN VIEW

GENERAL NOTES

- 1) CEE EAVE MEMBERS AT THIS DETAIL WILL ALWAYS BE SIMPLE-SPAN (EXCEPT @ END FRAMES WITH GREATER THAN 1'-4" OFFSET, CEES EXTEND TO STEEL LINE).
- 2) REFER TO THE ROOF FRAMING PLAN FOR CEE MEMBER SIZES AND MARK NUMBERS. NOTE: IT IS POSSIBLE TO HAVE A MIXTURE OF THE SINGLE-CEE AND DOUBLE-CEE DETAILS. REVIEW THE ROOF FRAMING PLAN QUANTITIES CAREFULLY.
- 3) THE CEES ARE FACTORY PUNCHED FOR ALL CLIP CONNECTIONS.
- 4) USE 1/2" x 2" A325 BOLTS (H0603) AND NUTS (H0300) FOR ALL CONNECTIONS
- 5) REFERENCE ERECTOR NOTE FOR TYPICAL WASHER REQUIREMENTS.

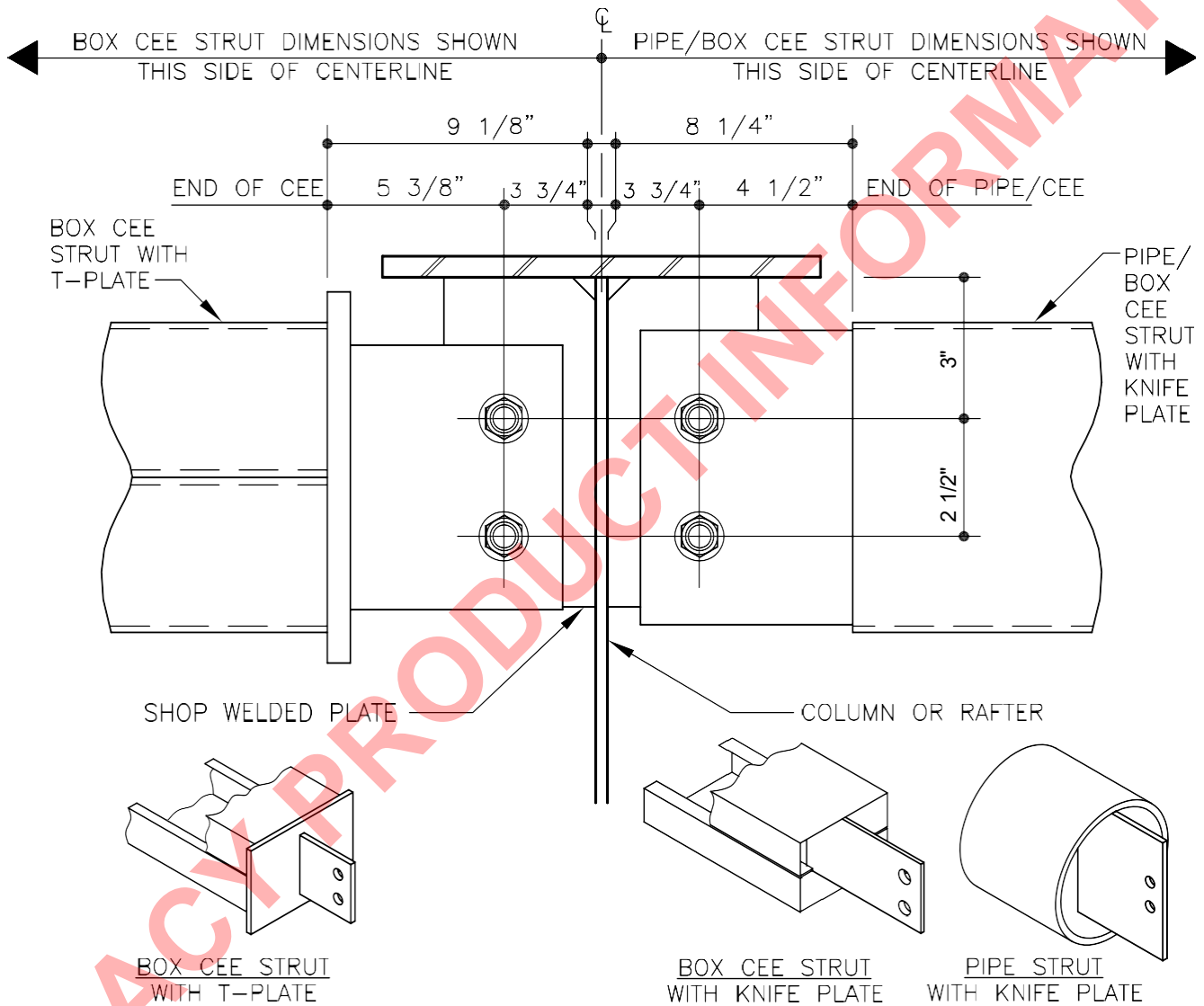
STRONG-BACK EAVE CEE DETAILS

BE1320 @ C.F. ENDWALL

BE1320

GENERAL BRACING DETAILS

AK0160 – STRUT ATTACHED AT WEB OF COLUMN OR RAFTER (6" PIPE)

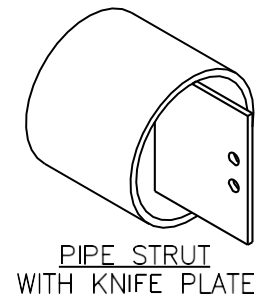
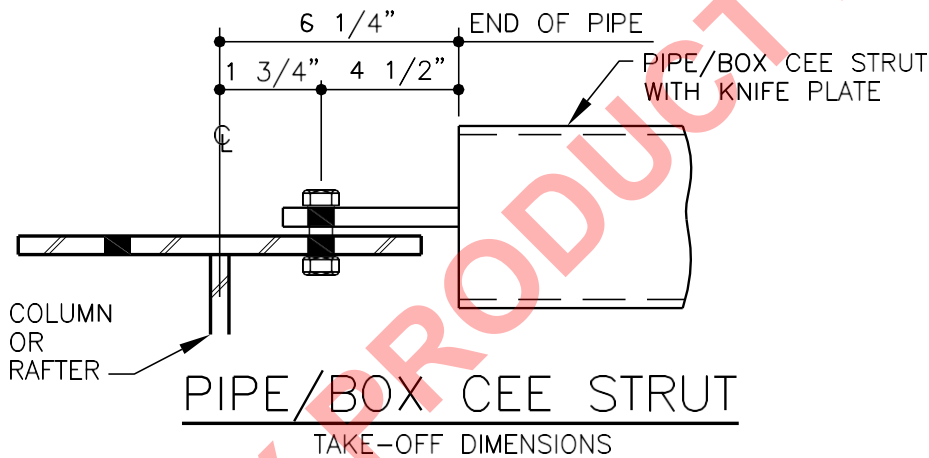
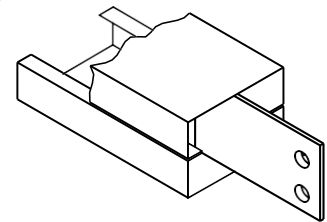
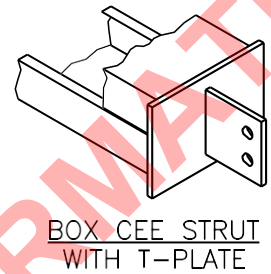
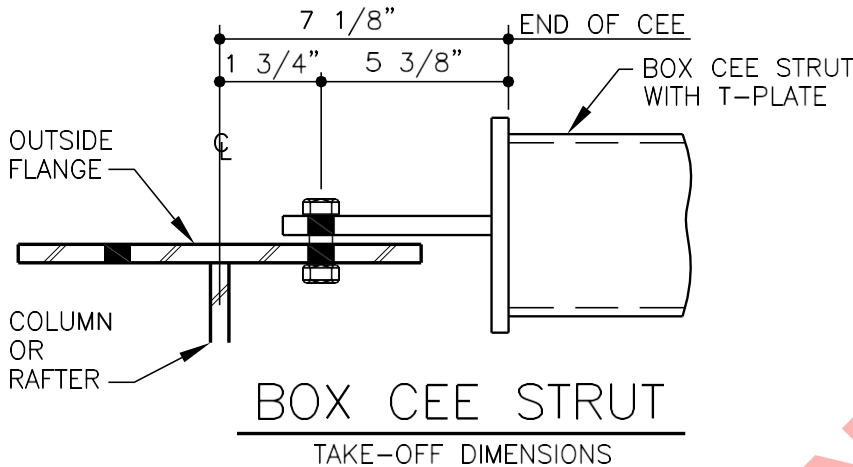


STRUT DETAIL

6" PIPE STRUT OR BOX CEE STRUT AT 8" (MIN.) COLUMN OR RAFTER
 NOTE: USE (2) 1" X 3 1/4" A325 BOLTS H0640/NUTS H0330
 SEE PLANS & ELEVATIONS FOR MARK NUMBERS AND LOCATIONS

AK0160

AK0050 – STRUT ATTACHED AT FLANGE OF COLUMN OR RAFTER

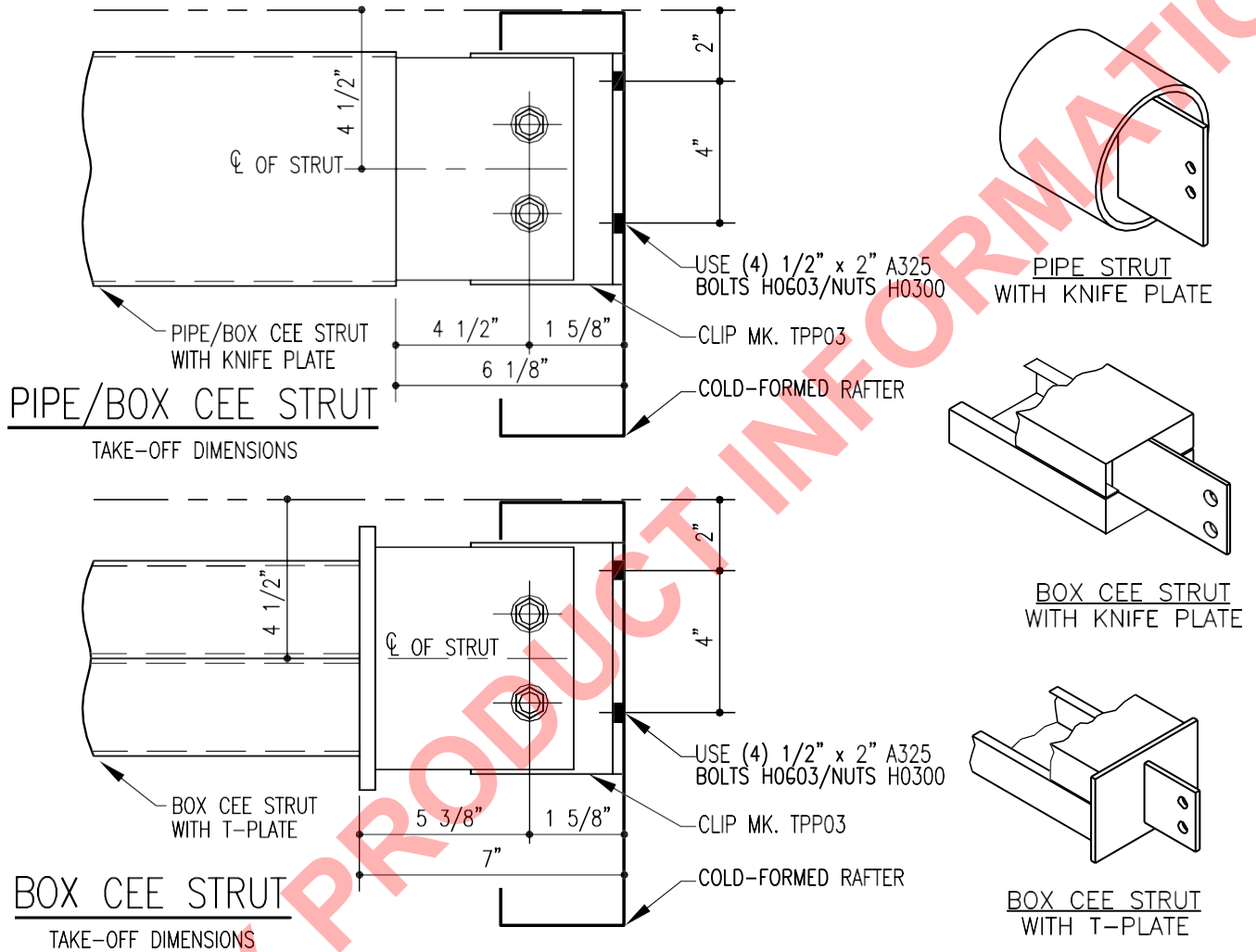


ALTERNATE STRUT DETAIL

PIPE OR BOX CEE STRUT AT COLUMN OR RAFTER FLANGE
 ON A 6" STRUT USE (2) 1" X 3 1/4" A325 BOLTS H0640/NUTS H0330
 ON A 8" STRUT USE (3) 1" X 3 1/4" A325 BOLTS H0640/NUTS H0330
 ON A BOX CEE STRUT USE (2) 1" X 3 1/4" A325 BOLTS H0640/NUTS H0330
 SEE PLANS AND ELEVATIONS FOR MARK NUMBERS & LOCATIONS

AK0050

AK0080 – STRUT ATTACHED TO C.F. RAFTER



STRUT DETAIL

6" PIPE STRUT OR BOX CEE STRUT AT 12" COLD-FORMED RAFTER
 NOTE: USE (2) 1" X 3 1/4" A325 BOLTS H0640/NUTS H0330
 SEE PLANS & ELEVATIONS FOR MARK NUMBERS & LOCATIONS
 REFERENCE ERECTOR NOTE FOR TYPICAL WASHER REQUIREMENTS

AK0080