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THIS IS THE JOIST FRAMING PLAN. FOR ALL JOIST BRIDGING REQUIREMENTS AND INSTALLATION DETAILS, REFERENCE THE SEPARATE JOIST BRIDGING PACKET.

1) N/A

BI9001 - ROOF COVER PAGE

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

2 x 1

Detailer Notes:

ROOF JOIST BRIDGING REQUIREMENTS AND INSTALLATION DETAILS

ROOF JOIST BRIDGING ERECTION NOTE:

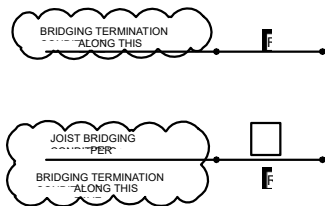
The manufacturer of the roof joists under the Valley Steel Building Group Contract for this project has determined the bridging requirements for stability and safety. The joist manufacturer has selected a bridging "Condition" for each bay of joist and has identified these conditions on the Joist Bridging Plan. Cross reference the plan with the details to determine the bridging requirements in each joist bay.

1) N/A

Detailer Notes:

BI9002 - ROOF FRAMING PLAN NOTES

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



ERECTION NOTE:
IDENTIFY THE JOIST BRIDGING 'CONDITIONS' ON THIS PLAN FOR EACH BAY, AND REFER TO THE FOLLOWING DETAIL SHEETS FOR SPECIFIC INSTALLATION AND TERMINATION GUIDANCE. JOIST MUST BE ERECTED IN ACCORDANCE WITH O.S.H.A. SAFETY REGULATIONS AND WELDING PERFORMED BY A.W.S. QUALIFIED WELDERS FOR THE WELDING PROCESSES AND POSITIONS INDICATED.

JOIST BRIDGING PLAN

Detailer Notes:

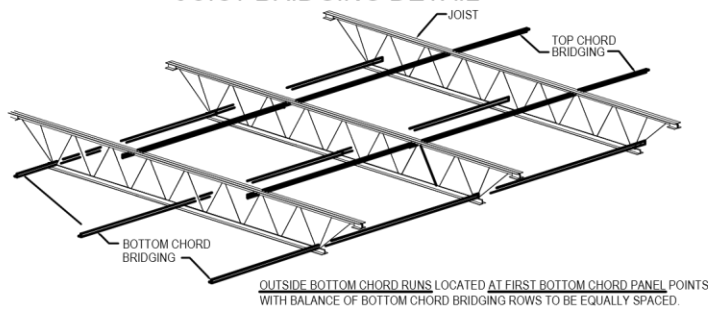
1) CONDITION "R" SHOWN FOR REFERENCE ONLY, ADJUST AS REQUIRED

BI9003 - WELDED ROOF BRIDGING

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

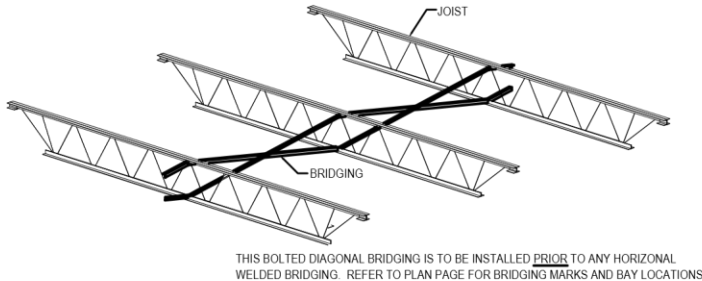
WELDED HORIZONTAL

JOIST BRIDGING DETAIL



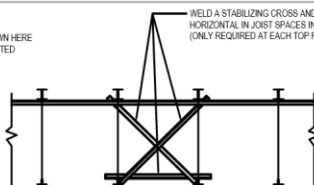
BOLTED DIAGONAL

JOIST BRIDGING DETAIL

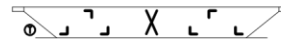


ERECTION NOTE:
WELDED STABILIZING CROSSES SHOWN HERE
ARE NOT TO BE CONFUSED WITH BOLTED
DIAGONAL BRIDGING

WELD A STABILIZING CROSS AND ADDITIONAL STABILIZATION
HORIZONTAL IN JOIST SPACES INDICATED WITH "X" ON THE BRIDGING PLAN
(ONLY REQUIRED AT EACH TOP RUN OF HORIZONTAL BRIDGING U.N.O.)

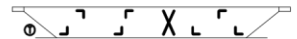


CONDITION X



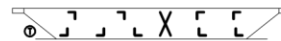
CONDITION A

2 ROWS H TOP, 4 ROWS H BOTTOM, 1 ROW X



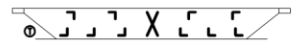
CONDITION B

3 ROWS H TOP, 4 ROWS H BOTTOM, 1 ROW X



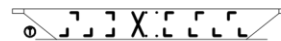
CONDITION C

4 ROWS H TOP, 5 ROWS H BOTTOM, 1 ROW X



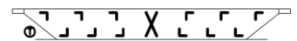
CONDITION D

4 ROWS H TOP, 6 ROWS H BOTTOM, 1 ROW X



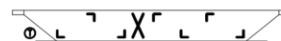
CONDITION E

5 ROWS H TOP, 7 ROWS H BOTTOM, 1 ROW X



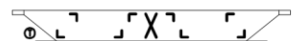
CONDITION F

6 ROWS H TOP & 8 ROWS H BOTTOM, 1 ROW X



CONDITION G

3 ROWS H TOP, 4 ROWS H BOTTOM, 1 ROW X



CONDITION H

4 ROWS H TOP, 4 ROWS H BOTTOM, 1 ROW X



CONDITION J

OTHER



CONDITION K

BRIDGING REQUIREMENT CONDITIONS FOR ROOF

NOTES:

H = HORIZONTAL WELDED BRIDGING
X = BOLTED DIAGONAL BRIDGING

AND ARE INDEPENDENT OF EACH OTHER, AND MAY NOT LINE UP

OTHER

BI9003 

Detailer Notes:

-LOCATE THE FIRST ROW OF BOTTOM CHORD BRIDGING AT THE FIRST BOTTOM CHORD PANEL POINT, AT EACH END.

-TOP AND BOTTOM BRIDGING ROWS SHOULD BE EQUALLY SPACED

1) THIS DETAIL CAN BE USED FOR STANDING SEAM ROOFS, BUT CONSIDER USING DETAIL BI9005 TO HELP ELIMINATE CONFUSION IN THE FIELD ABOUT PROPER WELD LOCATIONS FOR HORIZONTAL BRIDGING.

09.02.20 (MR2020.009)

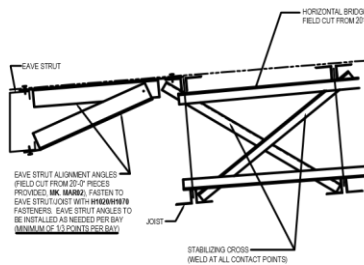
BI9004 - WELDED ROOF BRIDGING TERMINATION

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

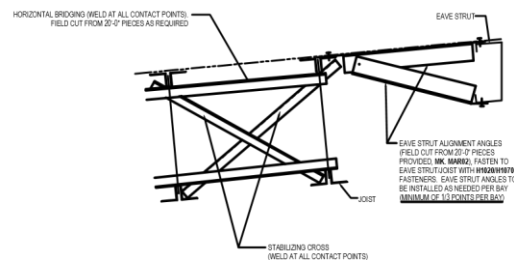
WELDED HORIZONTAL BRIDGING TERMINATION CONDITIONS

NOTE:

IF TOP & BOTTOM CHORD HORIZONTAL BRIDGING DOES NOT LINE UP
LOCATE BRIDGING "X" AT BOTH TOP & BOTTOM CHORD HORIZONTAL BRIDGING LOCATIONS.



CONDITION R
LOW EAVE AT EAVE STRUT



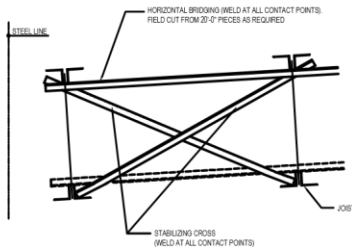
CONDITION X
HIGH EAVE AT EAVE STRUT

Detailer Notes:

NOTES: TERMINATION CROSS BRIDGING WILL BE LOCATED AT ALL TOP & BOTTOM CHORD ROWS. BRIDGING DOES NOT TYPICALLY LINE UP FROM TOP TO BOTTOM. PROVIDE ACCESSORIES TO ACCOMMODATE.

NOTE:

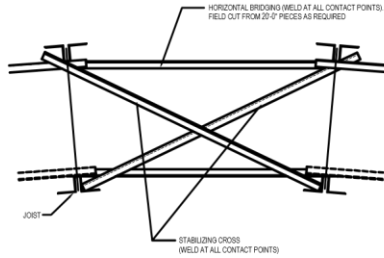
IF TOP & BOTTOM CHORD HORIZONTAL BRIDGING DOES NOT LINE UP, LOCATE BRIDGING "X" AT BOTH TOP & BOTTOM CHORD HORIZONTAL BRIDGING LOCATIONS.



CONDITION S
LOW EAVE AT SIMPLE WALL

NOTE:

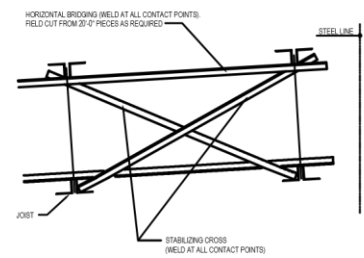
IF TOP & BOTTOM CHORD HORIZONTAL BRIDGING DOES NOT LINE UP, LOCATE BRIDGING "X" AT BOTH TOP & BOTTOM CHORD HORIZONTAL BRIDGING LOCATIONS.



CONDITION T
STANDARD RIDGE CONDITION

NOTE:

IF TOP & BOTTOM CHORD HORIZONTAL BRIDGING DOES NOT LINE UP, LOCATE BRIDGING "X" AT BOTH TOP & BOTTOM CHORD HORIZONTAL BRIDGING LOCATIONS.



CONDITION U
HIGH EAVE AT SIMPLE WALL

BI9004

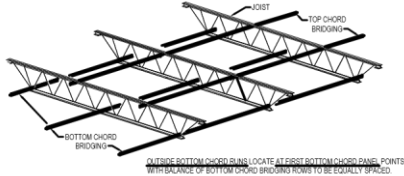
1) N/A

07.24.20 (2020.008)

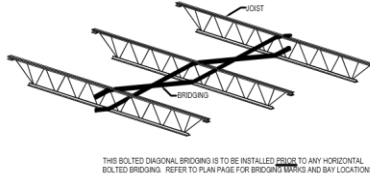
BI9005 - WELDED ROOF BRIDGING (STANDING SEAM ONLY)

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

**WELDED HORIZONTAL
JOIST BRIDGING DETAIL**

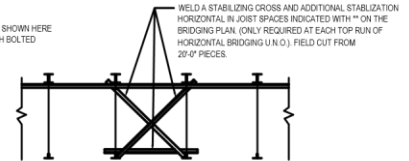


**BOLTED DIAGONAL
JOIST BRIDGING DETAIL**



ERECTION NOTE:

WELDED STABILIZING CROSSES SHOWN HERE ARE NOT TO BE CONFUSED WITH BOLTED DIAGONAL BRIDGING.



CONDITION X

Detailer Notes:

- 1) SEE THE WELDED BRIDGING EXAMPLE DRAWINGS. ALL THE JOISTS ARE SAVED AS BLOCKS IN MODEL SPACE. FOR LARGER PROJECTS YOU MAY NEED MORE THAN ONE OF THESE DETAILS.
- 2) THIS DETAIL IS TO ONLY BE USED AT STANDING SEAM ROOFS. THIS IS TO HELP THE ERECTORS TO PROPERLY LOCATE WELDED LOCATIONS OF THE HORIZONTAL BRIDGING.

09.02.20 (MR2020.009)

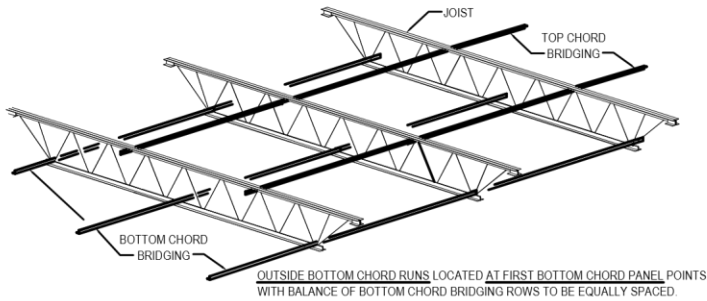
BI9006 - BOLTED ROOF BRIDGING

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

Detailer Notes:

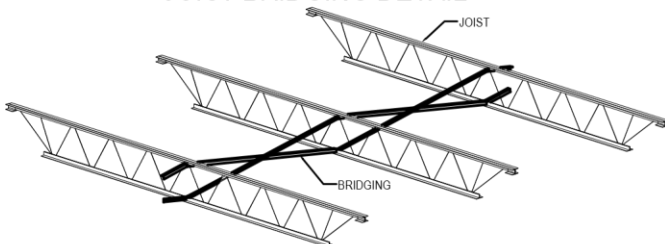
BOLTED HORIZONTAL

JOIST BRIDGING DETAIL



BOLTED DIAGONAL

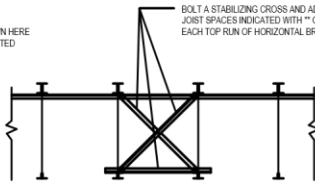
JOIST BRIDGING DETAIL



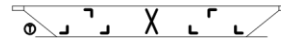
THIS BOLTED DIAGONAL BRIDGING IS TO BE INSTALLED PRIOR TO ANY HORIZONTAL BOLTED BRIDGING. REFER TO PLAN PAGE FOR BRIDGING MARKS AND BAY LOCATIONS.

ERECTION NOTE:
BOLTED STABILIZING CROSSES SHOWN HERE ARE NOT TO BE CONFUSED WITH BOLTED DIAGONAL BRIDGING

BOLT A STABILIZING CROSS AND ADDITIONAL STABILIZATION HORIZONTAL IN THE JOIST SPACES INDICATED WITH ** ON THE BRIDGING PLAN (ONLY REQUIRED AT EACH TOP RUN OF HORIZONTAL BRIDGING U.N.O.)

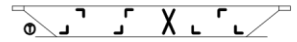


CONDITION X



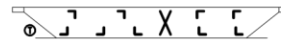
CONDITION A

2 ROWS H TOP, 4 ROWS H BOTTOM, 1 ROW X



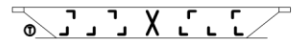
CONDITION B

3 ROWS H TOP, 4 ROWS H BOTTOM, 1 ROW X



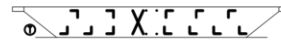
CONDITION C

4 ROWS H TOP, 5 ROWS H BOTTOM, 1 ROW X



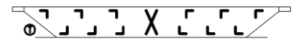
CONDITION D

4 ROWS H TOP, 6 ROWS H BOTTOM 1 ROW X



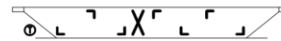
CONDITION E

5 ROWS H TOP, 7 ROWS H BOTTOM, 1 ROW X



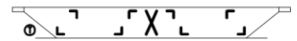
CONDITION F

6 ROWS H TOP & 6 ROWS H BOTTOM, 1 ROW X



CONDITION G

3 ROWS H TOP, 4 ROWS H BOTTOM, 1 ROW X



CONDITION H

4 ROWS H TOP, 4 ROWS H BOTTOM, 1 ROW X



CONDITION J

OTHER



CONDITION K

BRIDGING REQUIREMENT CONDITIONS FOR ROOF

NOTES:

H = HORIZONTAL WELDED
BRIDGING X = BOLTED
DIAGONAL BRIDGING

-LOCATE THE FIRST ROW OF BOTTOM CHORD BRIDGING AT
THE FIRST BOTTOM CHORD PANEL POINT, AT EACH END.

Detailer Notes:

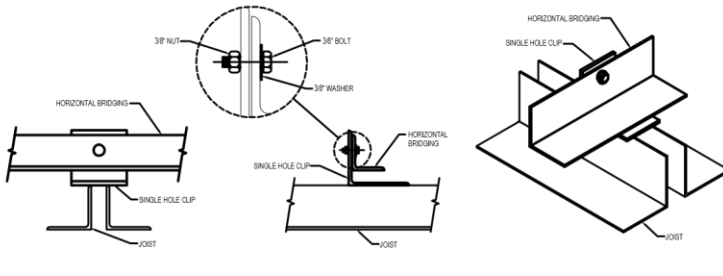
1) N/A

09.02.20 (MR2020.009)

BI9007 - BOLTED HORIZONTAL BRIDGING

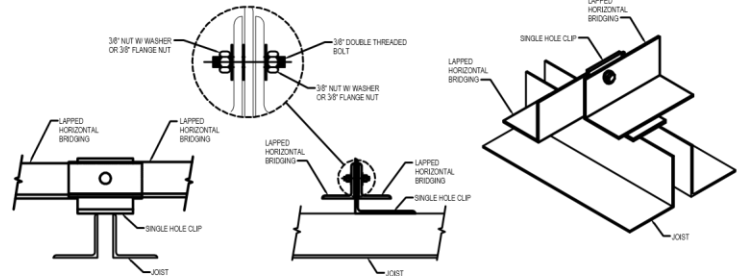
[Download the DWG file by clicking here.](#)

Detailer Notes:



BRIDGING DETAIL AT NON-LAPPED CONDITION

NOTE: USE (1) 3/8\" DIA. BOLT, NUT AND WASHER.
WASHERS ARE NOT REQUIRED WHERE A FLANGED NUT (WHEN PROVIDED) IS USED

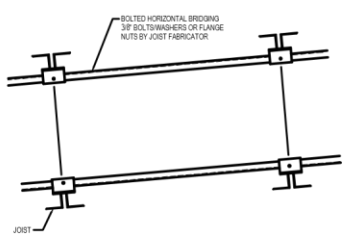


BOLTED HORIZONTAL BRIDGING

BRIDGING DETAIL AT LAPPED CONDITION

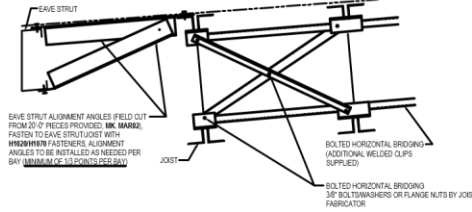
NOTE: USE (1) 3/8\" DIA. DOUBLE THREADED BOLT, (2) NUTS
AND (2) WASHERS.

NOTE:
ONLY FLANGE CLIPS WHERE REQUIRED BASED ON BRIDGING LOCATIONS



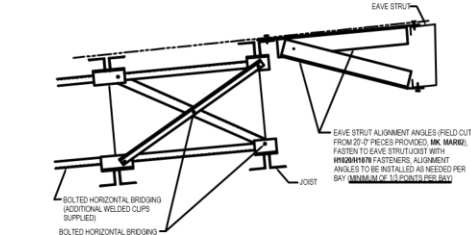
CONDITION M STANDARD

NOTE:
WHEN TOP & BOTTOM CHORD HORIZONTAL BRIDGING DOES NOT LINE UP,
LOCATE BRIDGING CLIP ON TOP CHORD TO LINE UP WITH BOTTOM CHORD
HORIZONTAL BRIDGING LOCATIONS FOR ATTACHMENT OF CROSS BRIDGING.



CONDITION R LOW EAVE AT EAVE STRUT

NOTE: WASHERS ARE NOT REQUIRED WHERE A FLANGED NUT (WHEN PROVIDED) IS USED

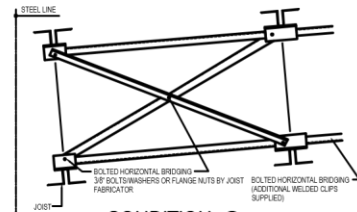


CONDITION X HIGH EAVE AT EAVE STRUT

B19007

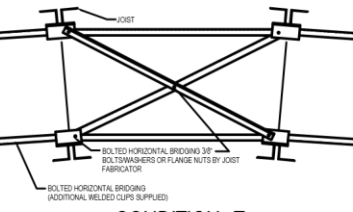
NOTES: TERMINATION CROSS BRIDGING WILL BE LOCATED AT ALL TOP & BOTTOM CHORD ROWS. BRIDGING DOES NOT TYPICALLY LINE UP FROM TOP TO BOTTOM. PROVIDE ACCESSORIES TO ACCOMMODATE.

NOTE:
WHEN TOP & BOTTOM CHORD HORIZONTAL BRIDGING DOES NOT LINE UP,
LOCATE BRIDGING CLIP ON TOP CHORD TO LINE UP WITH BOTTOM CHORD
HORIZONTAL BRIDGING LOCATIONS FOR ATTACHMENT OF CROSS BRIDGING.



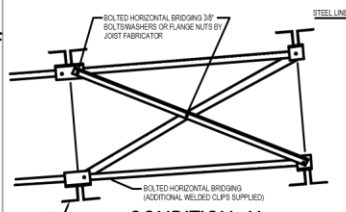
CONDITION S TERMINATION AT EAVE JOIST

NOTE:
WHEN TOP & BOTTOM CHORD HORIZONTAL BRIDGING DOES NOT LINE UP,
LOCATE BRIDGING CLIP ON TOP CHORD TO LINE UP WITH BOTTOM CHORD
HORIZONTAL BRIDGING LOCATIONS FOR ATTACHMENT OF CROSS BRIDGING.



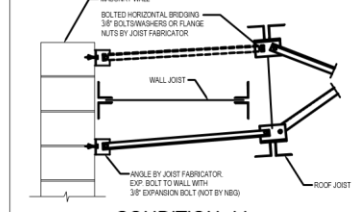
CONDITION T STANDARD RIDGE TERMINATION

NOTE:
WHEN TOP & BOTTOM CHORD HORIZONTAL BRIDGING DOES NOT LINE UP,
LOCATE BRIDGING CLIP ON TOP CHORD TO LINE UP WITH BOTTOM CHORD
HORIZONTAL BRIDGING LOCATIONS FOR ATTACHMENT OF CROSS BRIDGING.



CONDITION U HIGH EAVE TERMINATION

NOTE:
IF TOP & BOTTOM CHORD HORIZONTAL BRIDGING DOES NOT LINE UP, LOCATE
BRIDGING CLIP AT BOTH TOP & BOTTOM CHORD HORIZONTAL BRIDGING
LOCATIONS



CONDITION V LOW EAVE AT MASONRY WALL

Detailer Notes:

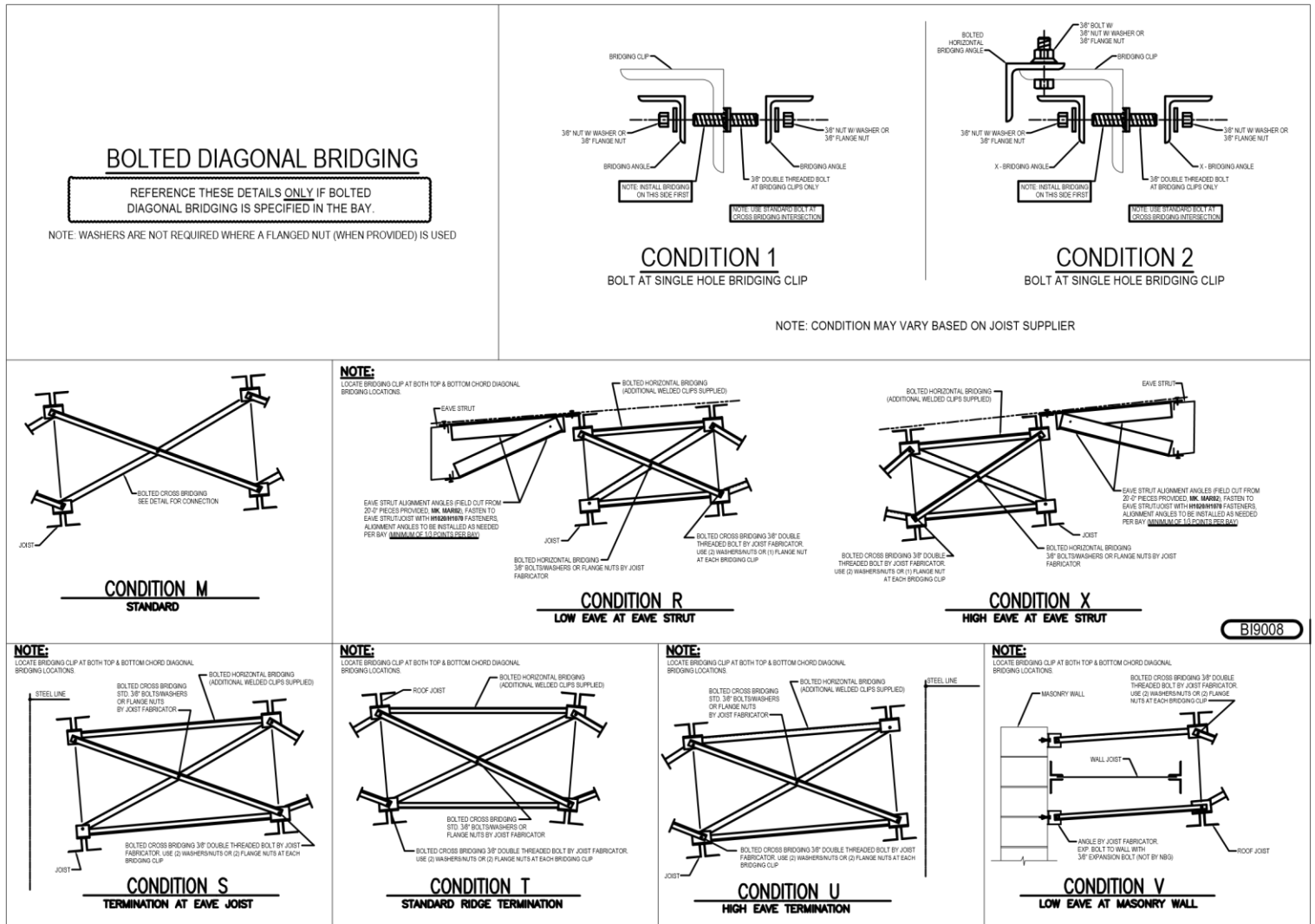
1) N/A

07.24.20 (2020.008)

Detailer Notes:

BI9008 - BOLTED DIAGONAL BRIDGING

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



Detailer Notes:

1) CONDITION STYLES VARY PER VULCRAFT DIVISION.

03.30.21 (MR2021.04)

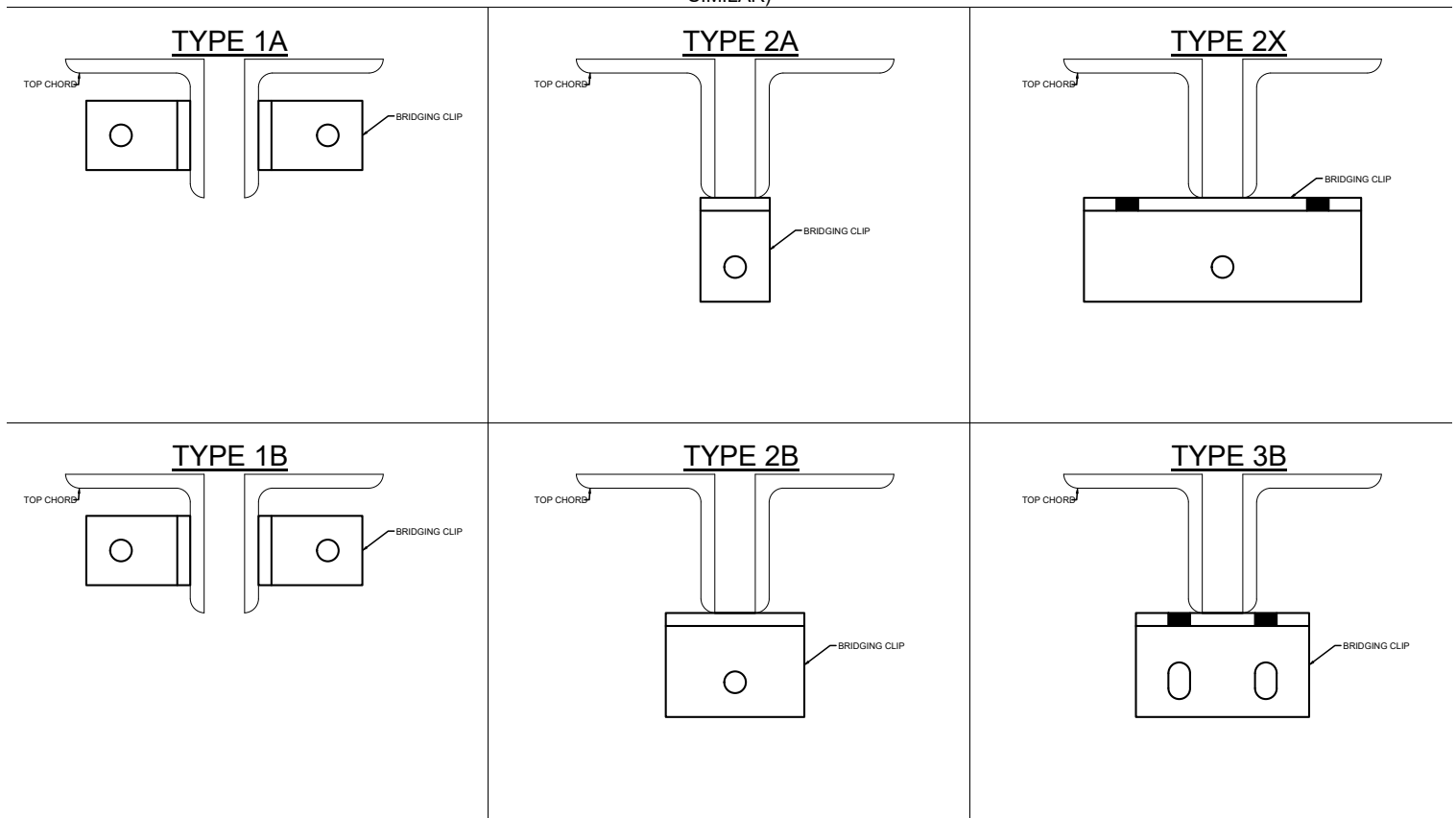
CF

BI9009 - BOLTED BRIDGING CLIP STYLES

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

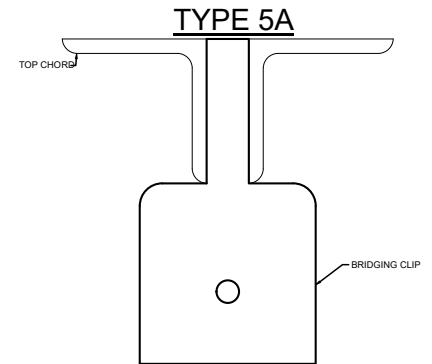
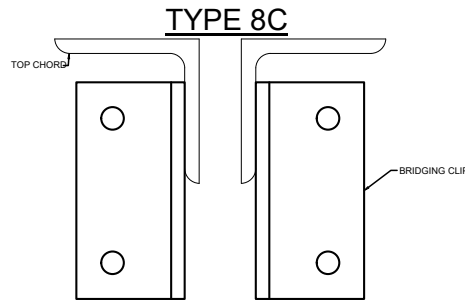
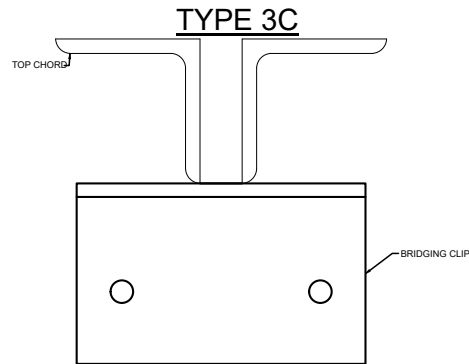
BOLTED BRIDGING CLIP STYLES

NOTE: STYLES MAY VARY DEPENDING ON JOIST
SUPPLIER. (TOP CHORD SHOWN / BOTTOM CHORD
SIMILAR)



Detailer Notes:

1) N/A



BI9009

1) BRIDGING CLIP STYLES VARY PER VULCRAFT DIVISION.

03.30.21 (MR2021.04)
CF

3 X 3

BI9026 - MEZZANINE COVER PAGE

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

MEZZANINE BRIDGING

Detailer Notes:

REQUIREMENTS AND INSTALLATION DETAILS

MEZZANINE JOIST BRIDGING ERECTION NOTE:

The manufacturer of the mezzanine joists under the Valley Steel Building Group Contract for this project has determined the bridging requirements for stability and safety. The joist manufacturer has selected a bridging "Condition" for each bay of joist and has identified these conditions on the Joist Bridging Plan. Cross reference the plan with the details to determine the bridging requirements in each joist bay.

Detailer Notes:

1) N/A

BI9027 - MEZZANINE FRAMING PLAN NOTES

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



ERECTION NOTE:
IDENTIFY THE JOIST BRIDGING 'CONDITIONS' ON THIS PLAN FOR EACH BAY, AND

REFER TO THE FOLLOWING DETAIL SHEETS FOR SPECIFIC INSTALLATION AND SAFETY REGULATIONS AND WELDING PERFORMED BY A.W.S. QUALIFIED WELDERS

TERMINATION GUIDANCE. JOIST MUST BE ERECTED IN ACCORDANCE WITH O.S.H.A.

FOR THE WELDING PROCESSES AND POSITIONS INDICATED.

JOIST BRIDGING
PLAN

Detailer Notes:

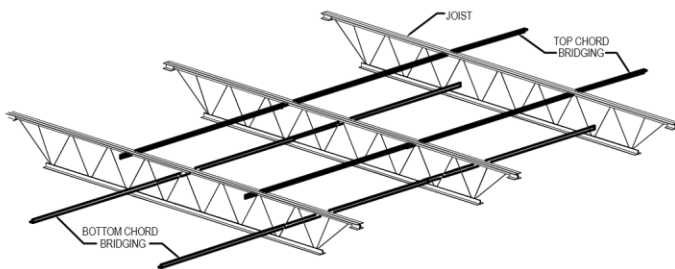
1) CONDITION "R" SHOWN FOR REFERENCE ONLY, ADJUST AS REQUIRED.

BI9028 - STANDARD MEZZANINE BRIDGING

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

WELDED HORIZONTAL

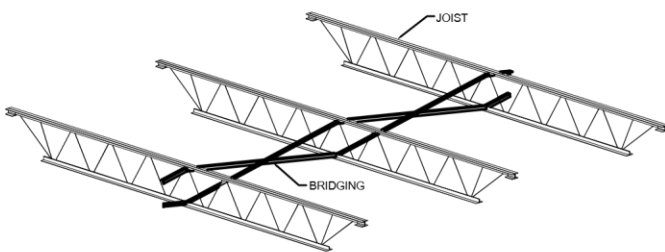
JOIST BRIDGING DETAIL



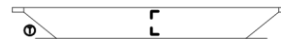
WELD HORIZONTAL BRIDGIN AT ALL CONTACT POINTS.
FIELD CUT FROM 20'-0" PIECES AS REQUIRED.

BOLTED DIAGONAL

JOIST BRIDGING DETAIL



THIS BOLTED DIAGONAL BRIDGING IS TO BE INSTALLED PRIOR TO ANY
HORIZONTAL WELDED BRIDGING. REFER TO PLAN PAGE FOR RIDGING MARKS
AND BAY LOCATIONS.

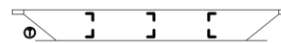


CONDITION A

1 ROW H TOP, 1 ROW H BOTTOM

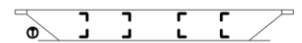


CONDITION B

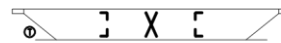


CONDITION C

3 ROWS H TOP, 3 ROWS H BOTTOM

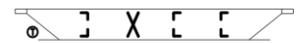


CONDITION D



CONDITION E

2 ROWS H TOP & BOTTOM, 1 ROW X



CONDITION F



CONDITION G

OTHER



CONDITION H



CONDITION J

OTHER



CONDITION K

BRIDGING REQUIREMENT CONDITIONS FOR MEZZANINE

NOTES:

H = HORIZONTAL WELDED BRIDGING
X = BOLTED DIAGONAL BRIDGING

BI9028 

2 ROWS H TOP, 2 ROWS H BOTTOM

Detailer Notes:

1) N/A

4 ROWS H TOP, 4 ROWS H BOTTOM

3 ROWS H TOP & BOTTOM, 1 ROW X

OTHER

OTHER

- TOP AND BOTTOM BRIDGING ROWS SHOULD BE EQUALLY
SPACED AND BOTTOM CHORD BRIDGING IS ALIGNED WITH TOP
CHORD BRIDGING.

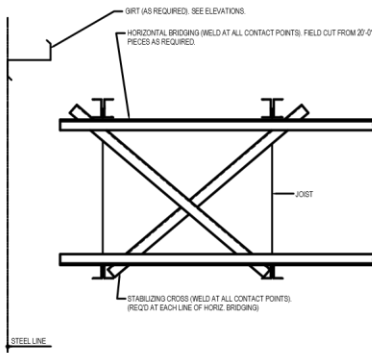
BI9029 - WELDED MEZZANINE BRIDGING TERMINATIONS

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

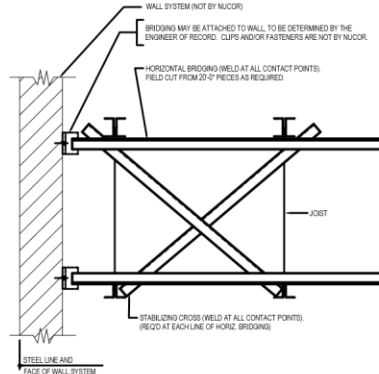
Detailer Notes:

1) N/A

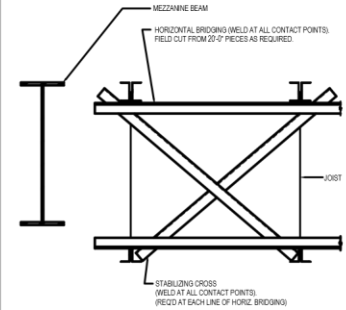
WELDED HORIZONTAL BRIDGING TERMINATION CONDITIONS
REFERENCE THESE DETAILS ONLY IF WELDED DIAGONAL BRIDGING IS SPECIFIED IN THE BAY.



CONDITION N
MEZZANINE TERMINATION
@ GIRT WALL

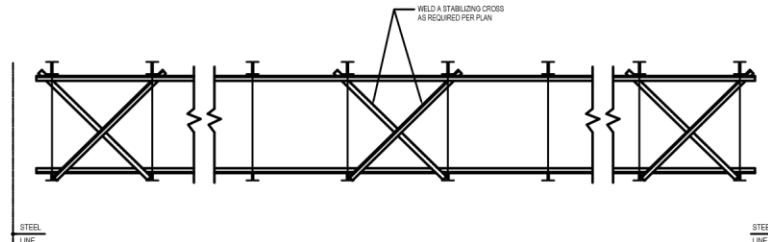


CONDITION P
MEZZANINE TERMINATION
@ ALTERNATE WALL



CONDITION R
MEZZANINE TERMINATION
@ MEZZANINE BEAM

ERECTION NOTE:
WELDED STABILIZING CROSSES SHOWN HERE ARE NOT TO BE
CONFUSED WITH BOLTED DIAGONAL BRIDGING.



CONDITION S

BI9029

BI9030 - BOLTED MEZZANINE BRIDGING TERMINATIONS

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

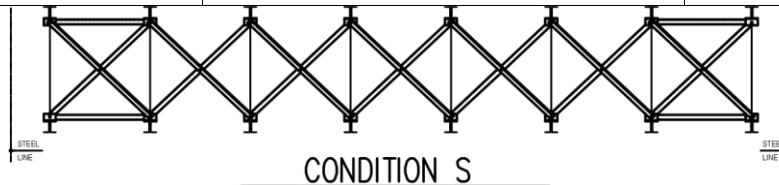
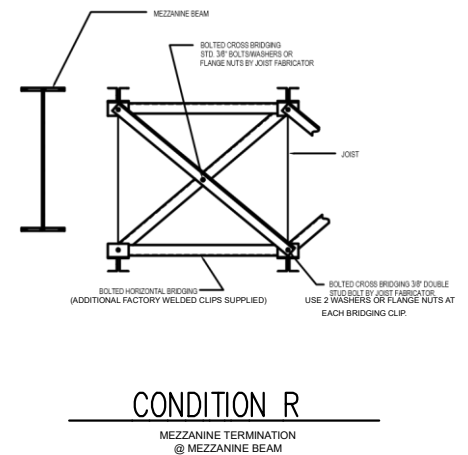
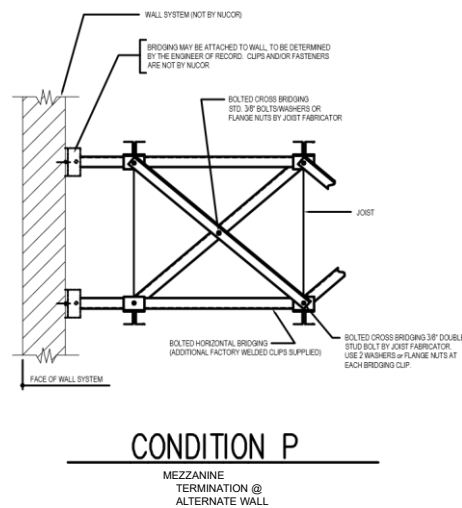
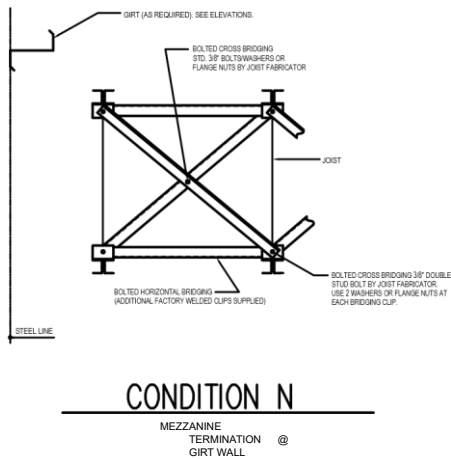
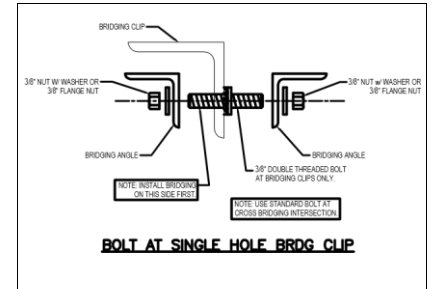
Detailer Notes:

- 1) N/A

BOLTED DIAGONAL BRIDGING TERMINATION CONDITIONS

REFERENCE THESE DETAILS ONLY IF BOLTED DIAGONAL BRIDGING IS SPECIFIED IN THE BAY.

NOTE: WASHERS ARE NOT REQUIRED WHERE A FLANGED NUT (WHEN PROVIDED) IS USED



BI9030

BI9031 - BOLTED MEZZANINE BRIDGING

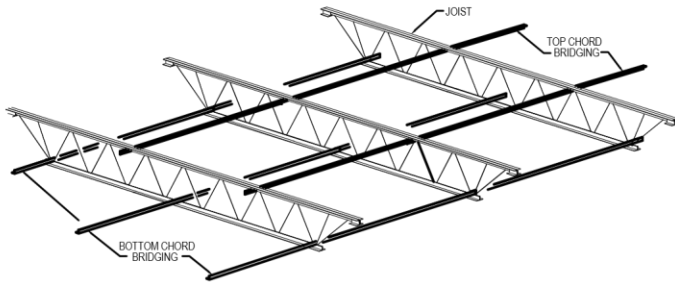
[Download the DWG file by clicking here.](#)

Detailer Notes:

1) N/A

BOLTED HORIZONTAL

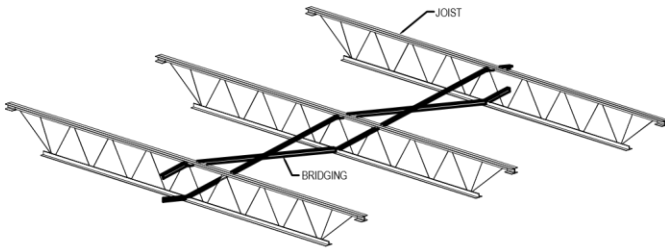
JOIST BRIDGING DETAIL



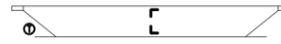
OUTSIDE BOTTOM CHORD RUNS LOCATED AT FIRST BOTTOM CHORD PANEL POINTS
WITH BALANCE OF BOTTOM CHORD BRIDGING ROWS TO BE EQUALLY SPACED

BOLTED DIAGONAL

JOIST BRIDGING DETAIL



THIS BOLTED DIAGONAL BRIDGING IS TO BE INSTALLED PRIOR TO ANY HORIZONTAL
BOLTED BRIDGING. REFER TO PLAN PAGE FOR BRIDGING MARKS AND BAY LOCATIONS

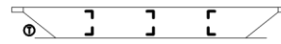


CONDITION A

1 ROW H TOP, 1 ROW H BOTTOM

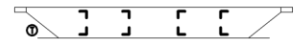


CONDITION B

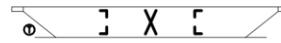


CONDITION C

3 ROWS H TOP, 3 ROWS H BOTTOM

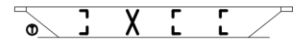


CONDITION D



CONDITION E

2 ROWS H TOP & BOTTOM, 1 ROW X



CONDITION F



CONDITION G

OTHER



CONDITION H



CONDITION J

OTHER



CONDITION K

BRIDGING REQUIREMENT CONDITIONS FOR MEZZANINE

NOTES:

H = HORIZONTAL BOLTED BRIDGING
X = BOLTED DIAGONAL

BI9031

2 ROWS H TOP, 2 ROWS H BOTTOM

4 ROWS H TOP, 4 ROWS H BOTTOM

3 ROWS H TOP & BOTTOM, 1 ROW X

Detailer Notes:

1) N/A

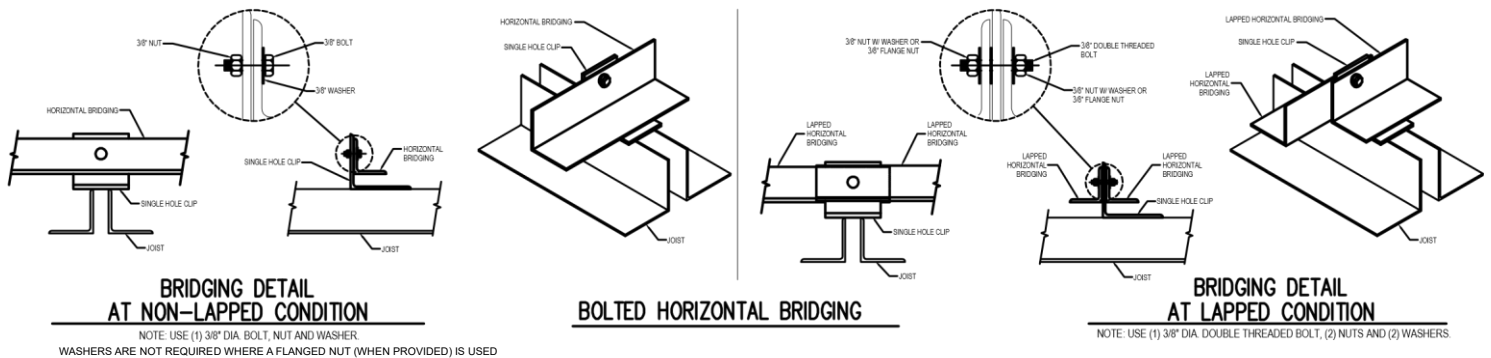
OTHER

OTHER

- TOP AND BOTTOM BRIDGING ROWS SHOULD BE EQUALLY SPACED.
AND BOTTOM CHORD BRIDGING IS ALIGNED WITH TOP CHORD BRIDGING.

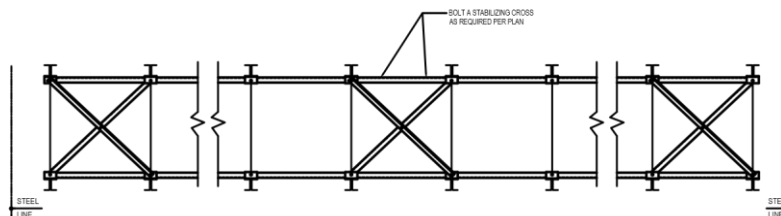
BI9032 - BOLTED MEZZANINE BRIDGING

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



WALL SYSTEM (NOT BY VALLEY STEEL)

CONDITION S

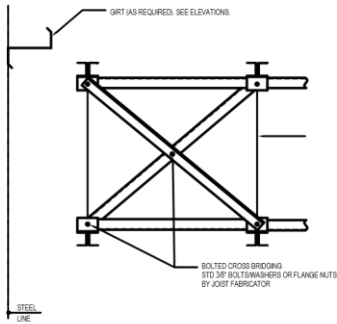


ERECTION NOTE:
BOLTED STABILIZING CROSSES SHOWN HERE ARE NOT TO BE
CONFUSED WITH BOLTED DIAGONAL BRIDGING.

Detailer Notes:

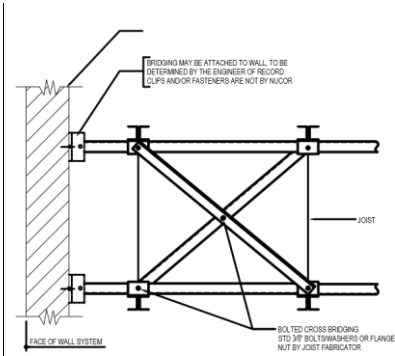
1) N/A

BI9032



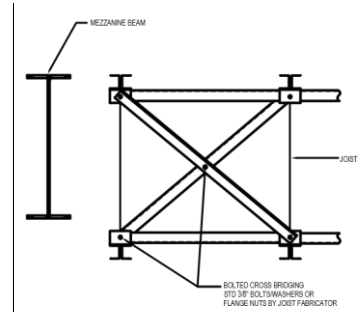
CONDITION N

JOIST
MEZZANINE TERMINATION @ GIRT WALL



CONDITION P

MEZZANINE TERMINATION @ ALTERNATE WALL



CONDITION R

MEZZANINE TERMINATION @ MEZZANINE BEAM

Detailer Notes:

1) N/A