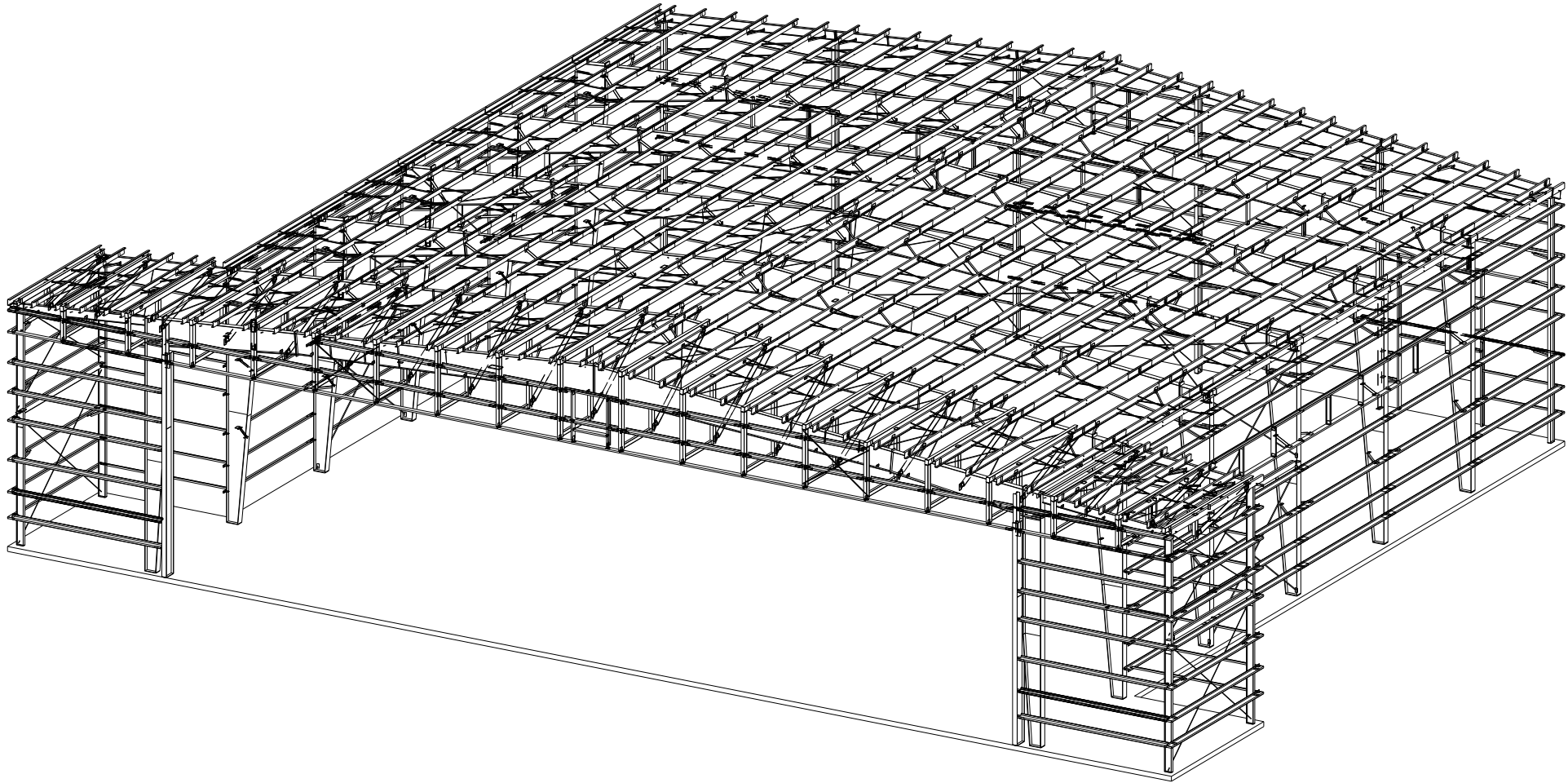




DRAWING TITLE	SHEET NUMBER
COVER SHEETS	C1 ~ C4
ANCHOR ROD PLANS	AB1 ~ AB2
PLANS AND ELEVATIONS	E1 ~ E18
STRUCTURAL DETAILS	D1 ~ D9

NUCOR

BUILDING SYSTEMS GROUP

PHONE: (435) 919-3100

FAX: (435) 919-3101

MBMA

MEMBER

IAS

ACCREDITED

Met Building Systems

AL 42

CWB

CERTIFIED

CSA W47.1

CSA

W47.1

CSA

W47.1

JOB NUMBER

U21X1224A

PROJECT NAME

KUHN AVIATION HANGAR

ADDRESS

375 CO RD 352
RIFLE, CO 81650

CUSTOMER NAME

CRUSAK, INC.

DRAWING STATUS

FOR PERMITS ONLY

SHEET

C1

DRAWING TITLE

C1

DATE

11/24/2021

ENG

JIL

DWN / CHK

NBS / EOP

RELEASE / REVISION

Anchor Bolts for Construction

#

0

DATE

12/02/2021

ENG

JIL

DWN / CHK

NBS / EOP

RELEASE / REVISION

Rev. 1 Anchor Bolts for Const.

#

1

DATE

12/15/2021

ENG

JIL

DWN / CHK

NBS / EVT

RELEASE / REVISION

Building Department Review

#

2

DATE

03/07/2022

ENG

JIL

DWN / CHK

NBS / EOP

RELEASE / REVISION

Rev. 2 Anchor Bolts for Const.

#

3

DATE

03/22/2022

ENG

JIL

DWN / CHK

TKL / MBH

RELEASE / REVISION

Rev. 1 Build. Depart. Review

#

4

NOT FOR CONSTRUCTION

03/22/2022 10:48:16am

53985

03/22/2022

PROFESSIONAL ENGINEER

TREVOR W. BLAIR

COLORADO LICENSED

<u>1. MATERIALS</u>	<u>ASTM DESCRIPTION</u>	<u>MATERIALS</u>	<u>ASTM DESCRIPTION</u>
STRUCTURAL STEEL PLATE	AS529 / A572 / A1011	ROOF AND WALL SHEETING	A653 / A792
HOT ROLLED MILLS SHAPES	A36 / A529 / A572 / A500	BOLTS	A307 / A325 / A490
HSS ROUND	A500	CABLE	A475
HSS RECTANGULAR	A500	RODS	A529 / A572
COLD FORM SHAPES	A653 / A1011		

SHOP COAT PRIMER IS INTENDED TO PROTECT THE STEEL FRAMING FOR A SHORT PERIOD OF TIME. STORAGE IN EXTREME COLD TEMPERATURES OR WINTER SNOW CONDITIONS, INCLUDING TRANSPORTATION ON SALTED OR CHEMICALLY TREATED ROADS WILL ADVERSELY AFFECT THE DURABILITY AND LONGEVITY OF THE PRIMER. THE COAT OF SHOP PRIMER DOES NOT PROVIDE THE UNIFORMITY OF APPEARANCE, OR THE DURABILITY AND CORROSION RESISTANCE OF A FIELD APPLIED FISH COAT OF PAINT OVER THE SHOP PRIMER. MINOR ABRASIONS TO THE SHOP COAT PRIMER WILL CAUSE LOCAL WEAR DURING SHIPPING, HANDLING AND STORAGE. THIS IS UNAVOIDABLE AND ARE NOT THE RESPONSIBILITY OF THE METAL BUILDING MANUFACTURER. METAL BUILDING MANUFACTURER IS NOT RESPONSIBLE FOR THE DETERIORATION OF THE PRIMER OR CORROSION THAT MAY RESULT FROM ATMOSPHERIC AND ENVIRONMENTAL CONDITIONS NOR THE COMPATIBILITY OF THE PRIMER TO ANY FIELD APPLIED COATING.

THE GENERAL CONTRACTOR AND/OR ERECTOR IS RESPONSIBLE TO SAFELY AND PROPERLY ERECT THE METAL BUILDING SYSTEM IN CONFORMANCE WITH THESE DRAWINGS, OSHA REQUIREMENTS AND EITHER MBMA OR CSA S16 STANDARDS PERTAINING TO PROPER ERECTION. TEMPORARY SUPPORTS SUCH AS GUYS, BRACES, FALSEWORK, CRIBBING OR OTHER ELEMENTS FOR ERECTION ARE TO BE DETERMINED, FURNISHED AND INSTALLED BY THE ERECTOR. THESE SUPPORTS MUST SECURE THE STEEL FRAMING, OR PARTLY ASSEMBLED STEEL FRAMING, AGAINST DISTURBANCE AND PREVENT INADEQUATELY TO BESS. COORDINATE THE STRUCTURE DESIGNER IN ADDITION TO LOADS RESULTING FROM THE ERECTION OPERATION. SECONDARY WALL AND ROOF FRAMING (PURLINS, GIRTS AND/OR JOIST) ARE NOT DESIGNED TO FUNCTION AS A WORKING PLATFORM OR TO PROVIDE AS AN ANCHORAGE POINT FOR A FALL ARREST /SAFETY TIE OFF.

SPECIAL INSPECTIONS AND TESTING THAT MAY BE REQUIRED BY GOVERNMENTAL OR OTHER AUTHORITY DURING CONSTRUCTION AND/OR STEEL FABRICATION (COLLECTIVELY, "INSPECTIONS") ARE NOT THE RESPONSIBILITY OF NBG, AND TO THE EXTENT REQUIRED IT SHALL BE THE RESPONSIBILITY OF THE BUILDER AND/OR OWNER. IN THE EVENT THE INSPECTIONS ARE REQUIRED, THE BUILDER AND/OR OWNER SHALL EMPLOY A THIRD PARTY QUALITY ASSURANCE TESTING AGENCY APPROVED BY THE RELEVANT AUTHORITY. IF SUCH REQUIREMENTS ARE NOT SPECIFICALLY INCLUDED IN NBG SALES DOCUMENTS, NO INSPECTIONS BY NBG OR AT ANY NBG FACILITY SHALL BE MADE. ALL NBG FACILITIES ARE ACCREDITED BY IAS AC472.

IT IS THE RESPONSIBILITY OF THE ERECTOR TO ENSURE PROPER BOLT TIGHTNESS IN ACCORDANCE WITH APPLICABLE REGULATIONS. FOR PROJECTS IN THE UNITED STATES SEE THE RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS OR FOR PROJECTS IN CANADA, SEE THE CAN/CSA S16 LIMIT STATES DESIGN OF STEEL STRUCTURES FOR MORE INFORMATION.

A) ALL A490 BOLTS SHALL BE "FULLY-PRETENSIONED".

B) ALL A325 BOLTS IN PRIMARY FRAMING (RIGID FRAMES AND BRACING) MAY BE "SNUG-TIGHT" EXCEPT AS FOLLOWS: "FULLY-PRETENSION" A325 BOLTS IF:

- a) BUILDING SUPPORTS A CRANE SYSTEM WITH A CAPACITY GREATER THAN 5 TONS.
- b) BUILDING SUPPORTS MACHINERY THAT CREATES VIBRATION, IMPACT OR STRESS-REVERSALS ON THE CONNECTIONS. THE ENGINEER-OF-RECORD FOR THE PROJECT SHOULD BE CONSULTED TO EVALUATE FOR THIS CONDITION.
- c) THE PROJECT SITE IS LOCATED IN A HIGH SEISMIC AREA. FOR IBC-BASED CODES, "HIGH SEISMIC AREA" IS DEFINED AS "SEISMIC DESIGN CATEGORY" OF "D", "E", OR "F". SEE THE "BUILDING LOADS" SECTION OF THIS PAGE FOR THE DEFINED SEISMIC DESIGN CATEGORY FOR THIS PROJECT.
- d) ANY CONNECTION DESIGNATED IN THESE DRAWINGS AS "A325-SC", "SLIP-CRITICAL (SC)" CONNECTIONS MUST BE FREE OF PAINT, OIL, OR OTHER MATERIALS THAT REDUCE FRICTION AT CONTACT SURFACES. GALVANIZED OR LIGHTLY RUSTED SURFACES ARE ACCEPTABLE.

SECONDARY MEMBERS (PURLINS, GIRTS, OPENING FRAMING, ETC.) AND FLANGE BRACE CONNECTIONS MAY ALWAYS BE "SNUG-TIGHT", UNLESS INDICATED OTHERWISE IN THESE DRAWINGS.

- 1) ALL STRUCTURAL STEEL SECTIONS AND WELDED PLATE MEMBERS ARE DESIGNED IN ACCORDANCE WITH ANSI/AISC 360 "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS" OR THE CAN/CSA S16 "LIMIT STATES DESIGN OF STEEL STRUCTURES", AS REQUIRED BY THE SPECIFIED BUILDING CODE.
- 2) ALL WELDING OF STRUCTURAL STEEL IS BASED ON EITHER AWS D1.1 "STRUCTURAL WELDING CODE – STEEL" OR CAN/CSA W59 "WELDED STEEL CONSTRUCTION (METAL ARC WELDING)", AS REQUIRED BY THE SPECIFIED BUILDING CODE.
- 3) ALL COLD FORMED MEMBERS ARE DESIGNED IN ACCORDANCE WITH ANSI/AISI S100 OR THE CAN/CSA S136 "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS", AS REQUIRED BY THE SPECIFIED BUILDING CODE.
- 4) ALL WELDING OF COLD FORMED STEEL IS BASED ON AWS D1.3 "STRUCTURAL WELDING CODE – SHEET STEEL" OR CAN/CSA W59 "WELDED STEEL CONSTRUCTION (METAL ARC WELDING)", AS REQUIRED BY THE SPECIFIED BUILDING CODE.
- 5) ALL NUCOR BUILDING GROUP FACILITIES ARE IAS AC-472 ACCREDITED FOR DESIGN AND FABRICATION OF METAL BUILDING SYSTEMS. FOR PROJECTS IN CANADA, DESIGN AND FABRICATION ARE DONE ONLY IN FACILITIES THAT ARE ALSO CAN/CSA A660 AND W471 CERTIFIED.
- 6) IF JOISTS ARE INCLUDED WITH THIS PROJECT, THEY ARE SUPPLIED AS A PART OF THE SYSTEMS ENGINEERED METAL BUILDING AND ARE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 1926.758 OF OSHA SAFETY STANDARDS FOR STEEL ERECTION, DATED JANUARY 18, 2001.
- 7) COLUMN BASE PLATES ARE DESIGNED NOT TO EXCEED THE ALLOWABLE BEARING STRESS OF CONCRETE THAT HAS A MINIMUM COMPRESSIVE STRENGTH OF 3000 P.S.I. AT 28 DAYS.

A.B. = ANCHOR RODS	MAX = MAXIMUM	REQ'D = REQUIRE
BS = BOTH SIDES	M.B. = MACHINE BOLTS	REV. = REVISION
B.U. = BUILT-UP	MBS = METAL BUILDING SUPPLIER	SIM = SIMILAR
DIA = DIAMETER	TBD = TO BE DETERMINED	SL = STEEL LINE
FLG = FLANGE	N/A = NOT APPLICABLE	SN = NEAR SIDE
F.S. = FEAR SIDE	NIC = NOT IN CONTRACT	MIN = MINIMUM
GA. = GAUGE	SLV = SHORT LEG VERTICAL	TYP = TYPICAL
H.S.B. = HIGH STRENGTH BOLTS	O.C.L. = OVERALL LENGTH	PL = PLATE
HT. = HEIGHT	O.C. = ON CENTER	
LLV = LONG LEG VERTICAL	U.N.O. = UNLESS NOTED OTHERWISE	
?? = PART MARK TO BE DETERMINED AND WILL BE UPDATED ON CONSTRUCTION DRAWINGS		

MAX = MAXIMUM
M.B. = MACHINE BOLTS
MBS = METAL BUILDING SUPPLIER
TBD = TO BE DETERMINED
N/A = NOT APPLICABLE
NIC = NOT IN CONTRACT
SLV = SHORT LEG VERTICAL
O.A.L. = OVERALL LENGTH
O.C. = ON CENTER
U.N.O. = UNLESS NOTED OTHERWISE

REQ'D = REQUIRED
REV. = REVISION
SIM = SIMILAR
SL = STEEL LINE
N.S. = NEAR SIDE
MIN = MINIMUM
TYP = TYPICAL
PL = PLATE

***Design wind pressures to be used for wall exterior component and cladding materials not provided by Nucor Building Systems.

THE DRAWINGS AND THE METAL BUILDING THEY REPRESENT ARE THE PRODUCT OF THE METAL BUILDING MANUFACTURER. THE REGISTERED PROFESSIONAL ENGINEER'S SEAL PERTAINS ONLY TO THE REQUIREMENTS LISTED HEREIN FOR THE MATERIALS DESIGNED AND SUPPLIED BY THE METAL BUILDING MANUFACTURER. THE REGISTERED PROFESSIONAL ENGINEER WHOSE SEAL APPEARS ON THESE DRAWINGS IS EMPLOYED OR ENGAGED BY THE METAL BUILDING MANUFACTURER AND DOES NOT SERVE AS OR REPRESENT THE PROJECT ENGINEER OF RECORD AND SHALL NOT BE CONSTRUED AS SUCH.

GRAY

TYPE: CFR, 24 GAGE, FINISH: GALVALUME

ROOF PANEL CLIP TYPE: TALL SLIDING

THERMAL BLOCKS: YES EPS FOAM SPACERS: NO

ROOF INSULATION(NOT BY NBS). THICKNESS: 4 3/8" WITH 8" CAVITY FILL

ROOF LINE TRIM, COLOR: DARK BRONZE

GUTTERS. COLOR: DARK BRONZE

DOWNSPOUTS. COLOR: SLATE GRAY/DARK BRONZE

TYPE: REVERSE CLASSIC WALL, 26 GAGE, FINISH: SLATE GRAY/DARK BRONZE

WALL CORNER TRIM. COLOR: SLATE GRAY/DARK BRONZE

WALL BASE TRIM. COLOR: SLATE GRAY/DARK BRONZE

WALL INSULATION(NOT BY NBS). THICKNESS: 4 3/8" WITH 8" CAVITY FILL

TYPE: CLASSIC, 26 GAGE, FINISH: POLAR WHITE

LINER TRIM. COLOR: POLAR WHITE

(3) 3070 PREASSEMBLED WALKDOOR(S). COLOR: BRONZE

Design Code: IBC 2015

MBMA Occupancy Class:	II - Standard Buildings	Name	Bldg A	Bldg B	Bldg C
Roof Live Load:	30.00 PSF	Roof Dead (PSF)*	3.5	3.5	3.5
NOT REDUCIBLE PER CODE		Primary Collateral (PSF)	5.0	5.0	5.0
Ground Snow Load:	40.00 PSF	Secondary Collateral (PSF)	5.0	5.0	5.0
Snow Exposure Factor, Ce:	1.00	Snow Ct	1.1	1.1	1.1
Snow Importance Factor, Is:	1.00	Snow Cs	1.00	1.00	1.00
Seismic Information:	Ss: 0.307 S1: 0.080	Roof Snow Ps (PSF)	30.80	30.80	30.80
Seismic Sds/Sd1:	(0.318) / (0.128)	Roof Snow **Pm (PSF)	40.00	40.00	40.00
Site Class:	D	Wind Enclosure	Enclosed	Enclosed	Enclosed
Seismic Imp. Factor Ie:	1.00	GCpi	+/- 0.18	+/- 0.18	+/- 0.18
Seismic Design Category:	B	Seismic R	3.00	3.00	3.00
Analysis Procedure:	Equivalent Lateral Force Procedure	Seismic Cs	0.106	0.106	0.106
Basic SFRS:	NOT DETAILED FOR SEISMIC	Base Shear (KIPS)	47.9	1.4	1.4

Wind (MPH):	(115)
***C & C Pressures (PSF):	(30) / (-40)
Exposure:	C
Wind Importance Factor, Iw:	1.00
UL90:	No

***Design wind pressures to be used for wall exterior component and cladding materials not provided by Nucor Building Systems.

1) Collateral dead loads, unless otherwise noted, are assumed to be uniformly distributed. When suspended sprinkler systems, lighting, HVAC equipment, ceilings, etc., are suspended from roof members, consult the M.B.S. If these concentrated loads exceed 500 pounds (using the web mount detail) or 200 lbs (using the flange mount detail), or if individual members are loaded significantly more than others.

2) The design of structural members supporting gravity loads is controlled by the more critical effect of roof live load or roof snow load, as determined by the applicable code.

3) **Pm is based on the minimum roof snow load calculated per building code or the contract specified roof snow load, whichever is greater. This value, Pm, is only applied in combination with the dead and collateral loads. Roof snow in other loading conditions is determined per the specified building code.

	#	RELEASE / REVISION	DWN / CHK	ENG	DATE
	0	Anchor Bolts for Construction	NBS / EOP	JIL	11/24/2021
	1	Rev. 1 Anchor Bolts for Const.	NBS / EOP	JIL	12/02/2021
	2	Building Department Review	MBS / EVT	JIL	12/15/2021
	3	Rev. 2 Anchor Bolts for Const.	NBS / EOP	JIL	03/07/2022
	4	Rev. 1 Build. Depart. Review	TKL / MBH	JIL	03/22/2022

NUCOR
BUILDING SYSTEMS GROUP MEMBER

PROJECT NAME
KUH AVIATION HANGAR

JOB NUMBER
U21X1224A

ADDRESS
375 CO RD 352
RIFLE, CO 81650

CUSTOMER NAME
CRUSAK, INC.

DRAWING STATUS
FOR PERMITS ONLY

SHEET
C2

****NOT FOR CONSTRUCTION****

DRAWING TITLE
Building Info Sheet

03/22/2022 10:48:24am

General Notes

For Occupancy (Risk) Category I or II, IBC provisions indicate that single-story buildings shall have "no drift limit provided that interior walls, partitions, ceilings and exterior wall systems have been designed to accommodate the seismic story drifts. Interior walls, partitions, ceilings or exterior wall systems not provided by the metal building manufacturer shall be designed and detailed by others to accommodate the seismic story drifts. Seismic drift values may be obtained from the metal building manufacturer.

This Building System design is based on uniformly applying the contract-specified live load and roof snow load. In addition, the design is based on applying a code-defined live load (including applicable reductions) and a code-defined snow load (based on contract-specified ground snow) for all partial loading and unbalanced snow load conditions.

Accessories (doors, windows, etc.) not provided by the metal building manufacturer must be designed as "components and cladding" in accordance with the specific wind provisions of the referenced building code displayed on the cover page of this drawing packet.

Framed openings have been designed to support wind load normal to the wall based on the standard building code criteria. Framed openings have not been designed for any additional moment or catenary forces from the door. Any change to the information shown here will require an engineering investigation and possible building reinforcement.

STRUCTURAL OBSERVATIONS, TESTS AND INSPECTION:

- 1) WHEN STRUCTURAL OBSERVATIONS ARE REQUIRED AS PER IBC 1704.5, OBSERVATIONS SHALL BE PERFORMED BY AN INDEPENDENT ENGINEERING AGENCY EMPLOYED BY THE ARCHITECT OR OWNER.
- 2) THE SPECIAL INSPECTOR'S DUTIES ARE AS DESCRIBED IN SPECIAL INSPECTION. THE SPECIAL INSPECTOR'S DUTIES ARE AS DESCRIBED IN IBC 1704.3 AND IBC 1705
- 3) ALL TESTS AND INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT TESTING AND INSPECTION AGENCY EMPLOYED BY THE OWNER OR ARCHITECT.
- 4) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE TEST AND INSPECTION FIRM WITH A SCHEDULE TO FACILITATE THE PROPER COORDINATION OF WORK.
- 5) PORTIONS OF WORK REQUIRING SPECIAL INSPECTION:

AGENCY RESPONSIBLE FOR INSPECTION AND TESTING TO BE NAMED BY OWNER LATER.

A. STRUCTURAL STEEL:

1. MILL REPORTS AND IDENTIFICATION OF STEEL (AFFIDAVIT OF COMPLIANCE) _____

2. SAMPLING AND TESTING OF SPECIMENS

B. WELDING:

1. ALL STRUCTURAL WELDING (INCLUDES DECKING AND WELDED STUDS), EXCEPT WELDING IN APPROVED SHOPS PER IBC 1704.2.5.2 _____

2. ULTRASONIC TESTING OF FULL PENETRATION WELD CONNECTIONS AT MOMENT FRAMES, BRACED FRAMES, BEAM SPLICES, AND FIELD WELDS. _____

3. STRUCTURAL LIGHT GAGE METAL FRAME WELDING

C. BOLTING:

1. HIGH STRENGTH BOLT A325SC AND A490SC (PRETENSION VERIFICATION)

2. HIGH STRENGTH BOLT A325N AND A490X (PER COVER SHEET NOTES) _____

3. EXPANSION/ADHESIVE ANCHORS IN CONCRETE OR MASONRY

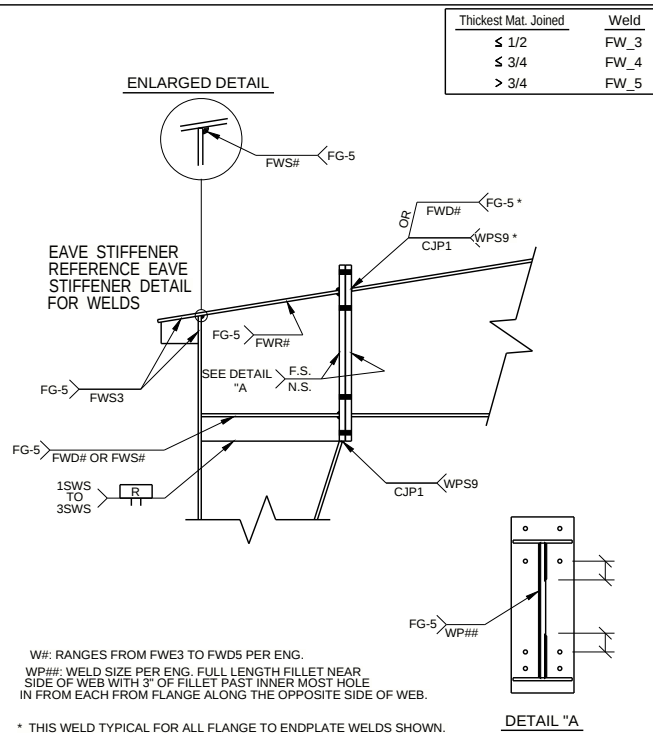
YES	NO	N/A
☐	☒	☐
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0	Anchor Bolts for Construction	NBS / EOP	JIL	11/24/2021
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4	Rev. 1 Build. Depart. Review	TKL / MBH	JIL	03/22/2022

PROJECT NAME KUHN AVIATION HANGAR	ADDRESS 375 CO RD 352 RIFLE, CO 81650	DRAWING STATUS FOR PERMITS ONLY	NUCOR BUILDING SYSTEMS GROUP PHONE: (435) 919-3100 FAX: (435) 919-3101	     	DRAWING TITLE Building Info Sheet
JOB NUMBER U21X1224A	CUSTOMER NAME CRUSAK, INC.	SHEET C3	03/22/2022 10:48:25am		

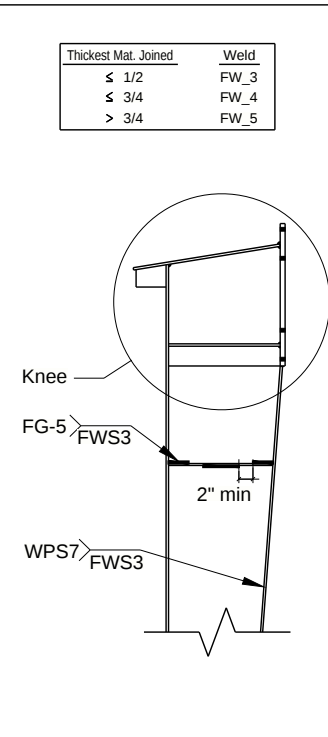


STANDARD WELDS AND LEGEND



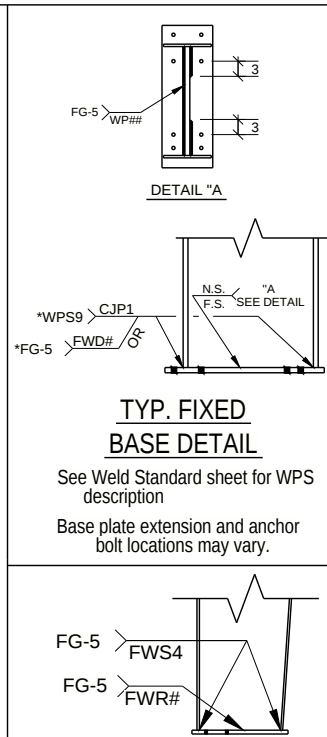
Perpendicular Knee Column

See Weld Standard sheet for WPS description



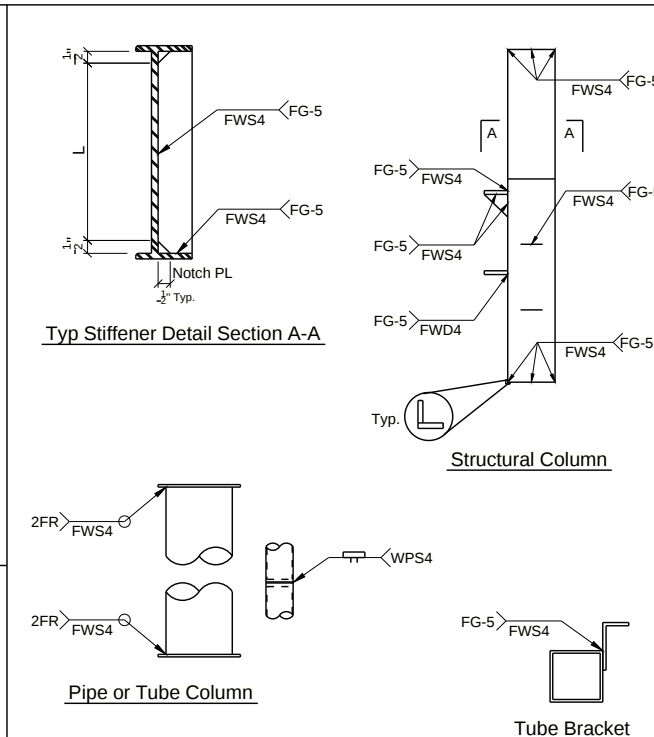
Typical Column

See Weld Standard sheet
for WPS description



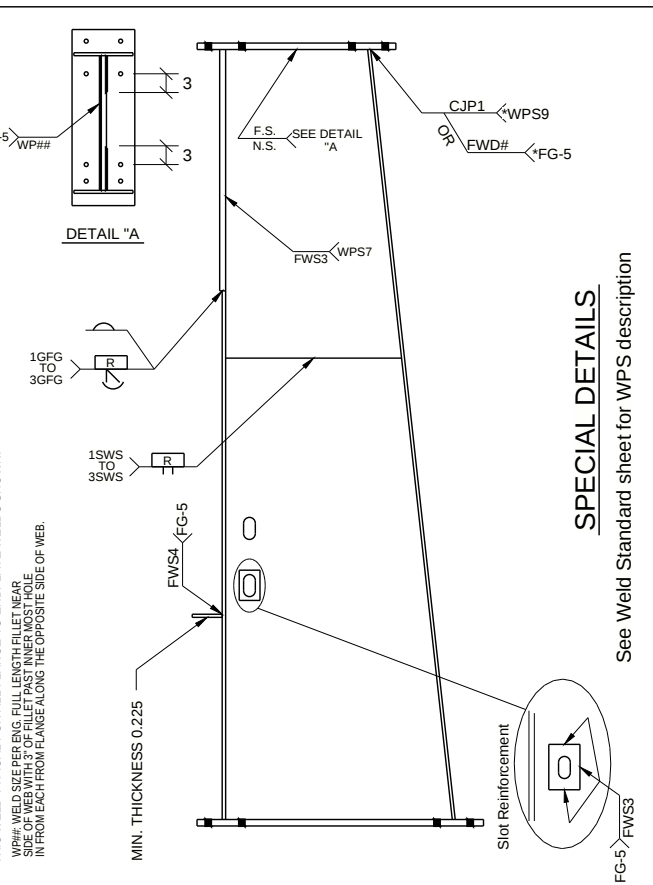
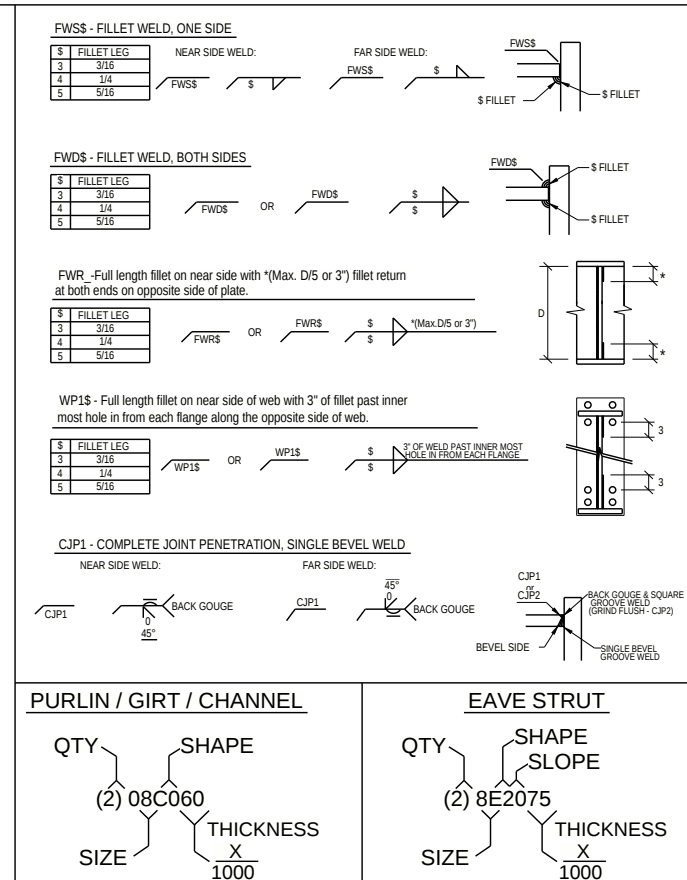
TYP. PINNED
BASE DETAIL

See Weld Standard sheet for WPS description



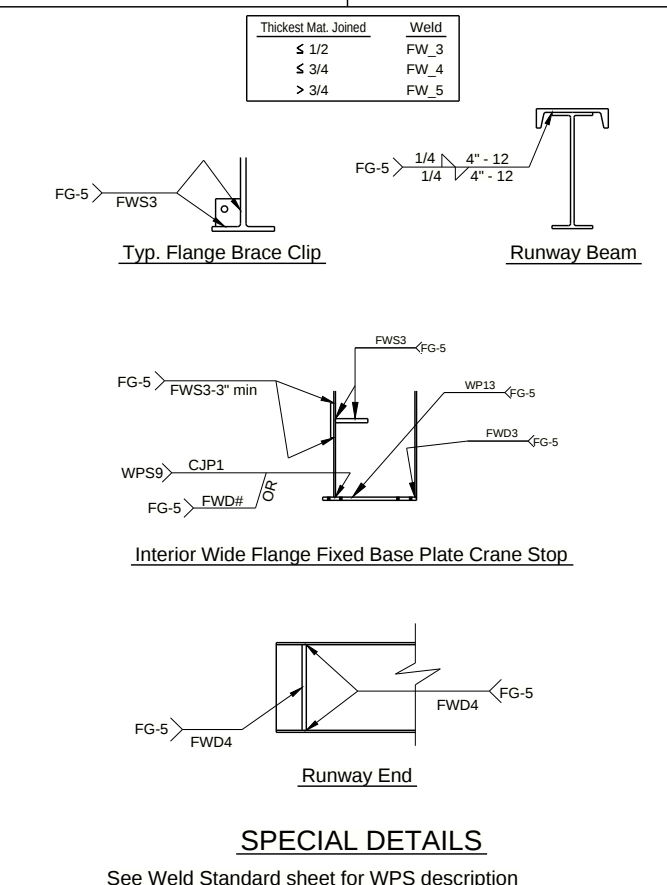
Structural Details

See Weld Standard sheet for WPS description



SPECIAL DETAILS

See Weld Standard sheet for WPS description

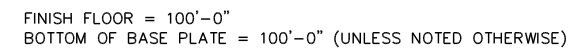


SPECIAL DETAILS

See Weld Standard sheet for WPS description

WPS #	Description	Weld Code	Process	Preq	Position	Limitation	Plant Location		
							UT	IN	SC TX
FG-4	3/8" & 1/2" multi-pass fillet weld	AWSD1.1-10	GMW (1/2" multi-pass fillet weld)	PQR	1G	3/16" 5/16"	X	X	X
FG-5	3/16" & 5/16" single-pass fillet weld	AWSD1.1-10	GMW (3/16" - 5/16" single-pass fillet weld)	PQR	2F	1/8" - 1/2"	X	X	X
1FGF	3/8" through 1" flange splice	AWSD1.1-10	GMW (3/8" - 1" flange splice)	PQR	1G	3/8" - 1"	X	X	X
2FGF	5/16" flange splice	AWSD1.1-10	GMW (5/16" flange splice)	PQR	1G	3/16" 5/16"	X	X	X
3FGF	1/2" to 3/4" flange splice	AWSD1.1-10	GMW (1/2" - 3/4" flange splice)	PQR	1G-2F	Group 1A	X	X	X
2036	5/8" to 5/16" flange splice	AWSD1.1-10	GMW (5/8" - 5/16" flange splice)	PQR	1G-2F	Group 1B	X	X	X
5FGF	1" flange splice	AWSD1.1-10	GMW (1" flange splice)	PQR	1G-2F	Group 1C	X	X	X
1SWS	web splice for 0.275" through 0.313" thick	AWSD1.1-10	SAW (0.275-0.313" Web splice)	PQR	1G	0.275 - 0.313	X	X	X
2SWS	web splice for 0.125" through 0.150" thick	AWSD1.1-10	SAW (0.125-0.150" Web splice)	PQR	1G	0.125 - 0.150	X	X	X
3SWS	web splice for 0.175" through 0.250" thick	AWSD1.1-10	SAW (0.175-0.250" Web splice)	PQR	1G	0.175 - 0.250	X	X	X
2038	web splice for 0.375" through 0.500" thick	AWSD1.1-10	SAW (0.375-0.500" Web splice)	PQR	1G	0.375 - 0.500	X	X	X
2FR	pipe to engplate weld	AWSD1.1-10	GMW (Pipe to Engplate Weld)	PQR	2F	6" thru 10"	X	X	X
FBG-1	Rod to plate/angle weld	AWSD1.1-10	GMW (Rod to Plate Weld)	PQR	1G	Diameter: 1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 1/4"	X	X	X
WPS4	pipe splice for 0.134" through 0.375" thick	AWSD1.1-10	GMW (Pipe Splice, 0.134" - 0.375")	YES	1G	Diameter: 6, 10	X	X	X
WPS5	pipe splices for 0.375" through 0.500" thick	AWSD1.1-10	GMW (Pipe Splice, 0.375" - 0.500")	YES	1G	0.375 - 0.500	X	X	X
WPS6	wide-flange beam splice, all sizes	AWSD1.1-10	GMW (Wide-Flange Splice Weld)	YES	1G	0.313 - 1.50	X	X	X
WPS7	flange to web weld made by autowelder using 0.002" electrode	AWSD1.1-10	SAW (Autowelder Weld)	YES	2F	0.105 - 1.00	X	X	X
WPS8	flange to web weld made by autowelder using 0.032" electrode	AWSD1.1-10	SAW (Small Autowelder Welds)	YES	2F	0.105 - 1.00	X	X	X
WPS9	complete penetration groove weld for tee connection, 3/8" thick	AWSD1.1-10	GMW (Flange to engplate weld)	YES	1G	0.375 - 1.00	X	X	X
WPS11	vertical tack-fitters	AWSD1.1-10	GMW (Vertical tack-fitters)	YES	3F	0.125 - Unlimited	X	X	X
WPS-1	Cold-Form seam stitch weld	AWSD1.3-08	GMW (CF seam stitch weld)	PQR	FLAT	0.0925" - 0.210	X	X	X
WPS-1a	Cold-Form seam stitch weld (galvanized)	AWSD1.3-08	GMW (CF seam stitch weld) (galvanized)	PQR	FLAT	0.0925" - 0.210	X	X	X
WPS-2	Cold-Form seam weld	AWSD1.3-08	GMW (CF seam weld)	PQR	HORIZ	0.110-0.025" - 0.215	X	X	X
WPS-2a	Cold-Form seam weld (galvanized)	AWSD1.3-08	GMW (CF seam weld) (galvanized)	PQR	HORIZ	0.110-0.025" - 0.215	X	X	X
WPS-3	cold-form seam weld to support steel ≥ 0.1125" thick	AWSD1.3-08	GMW (CF seam weld to support steel)	PQR	HORIZ	0.110-0.025" - 0.215" - 0.3125"	X	X	X
WPS-3a	cold-form seam weld to support steel ≥ 0.3125" thick (galvanized)	AWSD1.3-08	GMW (CF seam weld to support steel) (galvanized)	PQR	HORIZ	0.110-0.025" - 0.215" - 0.3125"	X	X	X
WPS-4	cold-form tee connection fillet weld	AWSD1.3-08	GMW (CF tee fillet weld)	PQR	HORIZ	0.110-0.025" - 0.215	X	X	X
WPS-4a	cold-form tee connection fillet weld (galvanized)	AWSD1.3-08	GMW (CF tee fillet weld) (galvanized)	PQR	HORIZ	0.110-0.025" - 0.215	X	X	X
WPS-5	cold-form tee connection fillet weld to support steel ≥ 0.313" thick	AWSD1.3-08	GMW (CF tee fillet to support steel)	PQR	HORIZ	0.110-0.025" - 0.215" - 0.3125"	X	X	X
WPS-5a	cold-form tee connection fillet weld to support steel ≥ 0.313" thick (galvanized)	AWSD1.3-08	GMW (CF tee fillet to support steel) (galvanized)	PQR	HORIZ	0.110-0.025" - 0.215" - 0.3125"	X	X	X
WPS-6	cold-form lap fillet weld	AWSD1.3-08	GMW (CF lap fillet weld)	PQR	HORIZ	0.110-0.025" - 0.215	X	X	X
WPS-6a	cold-form lap fillet weld (galvanized)	AWSD1.3-08	GMW (CF lap fillet weld) (galvanized)	PQR	HORIZ	0.110-0.025" - 0.215	X	X	X
WPS-7	cold-form lap fillet weld to support steel ≥ 0.3125" thick	AWSD1.3-08	GMW (CF lap fillet to support steel)	PQR	HORIZ	0.110-0.025" - 0.215" - 0.3125"	X	X	X
WPS-7a	cold-form lap fillet weld to support steel ≥ 0.3125" thick (galvanized)	AWSD1.3-08	GMW (CF lap fillet to support steel) (galvanized)	PQR	HORIZ	0.110-0.025" - 0.215" - 0.3125"	X	X	X

[illegible]



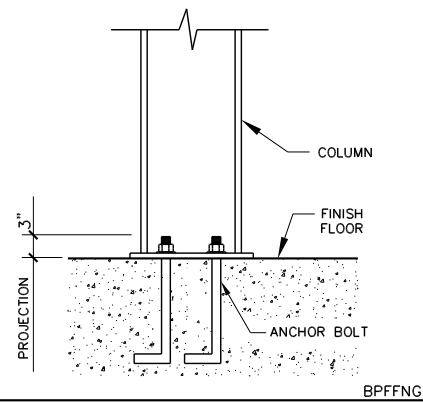
ANCHOR BOLT SCHEDULE			
QUANTITY	SIZE	MAT'L	PROJECTION
48	3/4"	Gr 55	3" FROM BOTTOM OF BPL
48	1-1/4"	Gr 55	3" FROM BOTTOM OF BPL
---	---	---	3" FROM BOT. OF BPL
---	---	---	3" FROM BOT. OF BPL
---	---	---	3" FROM BOT. OF BPL



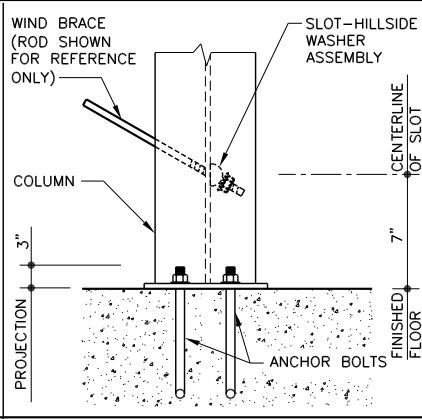
JOB NUMBER U21X1224A	PROJECT NAME KUHN AVIATION HANGAR	
ADDRESS 375 CO RD 352 RIFLE, CO 81650	CUSTOMER NAME CRUSAK, INC.	
DRAWING STATUS FOR PERMITS ONLY	**NOT FOR CONSTRUCTION**	
SHEET AB1	DRAWING TITLE Anchor Bolt Plan	PHONE: (435) 949-3100 FAX: (435) 949-3101 
03/22/2022 10:49:07am		

GENERAL NOTES

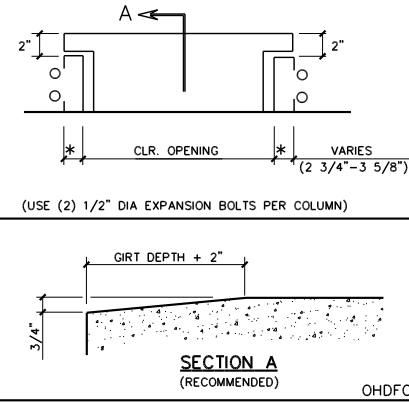
1. THE SPECIFIED ANCHOR ROD DIAMETER ASSUMES F1554 GRADE 55 UNLESS NOTED OTHERWISE. ANCHOR ROD MATERIAL OF EQUAL DIAMETER MEETING OR EXCEEDING THE STRENGTH REQUIREMENTS SET FORTH ON THESE DRAWINGS MAY BE UTILIZED AT THE DISCRETION OF THE FOUNDATION DESIGN ENGINEER. ANCHOR ROD EMBEDMENT LENGTH SHALL BE DETERMINED BY THE FOUNDATION DESIGN ENGINEER.
2. THE METAL BUILDING MFR. IS NOT RESPONSIBLE FOR PROJECT FOUNDATION DESIGN. THE FOUNDATION DESIGN IS THE RESPONSIBILITY OF A REGISTERED PROFESSIONAL ENGINEER, FAMILIAR WITH LOCAL SITE CONDITIONS.
3. ALL ANCHOR RODS, FLAT WASHERS FOR ANCHOR RODS, EXPANSION BOLTS, AS WELL AS ALL CONCRETE/MASONRY EMBED PLATES ARE NOT BY THE METAL BUILDING MFR.
4. THIS DRAWING IS NOT TO SCALE.
5. FINISHED FLOOR ELEVATION = 100'-0" UNLESS NOTED OTHERWISE.
6. "SINGLE" CEE COLUMNS SHALL BE ORIENTED WITH THE "TOES" TOWARD THE LOW EAVE UNLESS NOTED OTHERWISE.
7. THE ANCHOR BOLT LOCATIONS PROVIDED BY THE METAL BUILDING MANUFACTURER SATISFY ANY PERTINENT REQUIREMENTS FOR THE DESIGN OF THE MATERIALS SUPPLIED BY THE METAL BUILDING MANUFACTURER. PLEASE NOTE THAT THESE REQUIREMENTS MAY NOT SATISFY ALL ANCHOR BOLT CONCRETE EDGE DISTANCE REQUIREMENTS DEPENDING ON THE DETAILS OF THE FOUNDATION DESIGN. BECAUSE FOUNDATION DESIGN IS NOT WITHIN THE SCOPE OF WORK OF THE METAL BUILDING MANUFACTURER, IT IS THE RESPONSIBILITY OF THE QUALIFIED PROFESSIONAL DESIGNING THE FOUNDATION TO VERIFY THAT SUFFICIENT CONCRETE EDGE DISTANCE IS PROVIDED FOR THE ANCHOR BOLTS IN THE DETAILS THEREOF.
8. THE ANCHOR BOLT SETTINGS SHOWN ON THESE DRAWINGS NOT ONLY INDICATE WHERE THE ANCHOR BOLTS ARE TO BE PLACED, BUT ALSO THE FOOTPRINT OF THE METAL BUILDING. IT IS ESSENTIAL THAT THESE BOLT PATTERNS BE FOLLOWED. IN THE EVENT THAT THESE SETTINGS DIFFER FROM THE ARCHITECTURAL FOUNDATION PLAN, THE METAL BUILDING MANUFACTURER MUST BE CONTACTED IMMEDIATELY, PREFERABLY BEFORE CONCRETE IS PLACED.
- CROSS BRACING



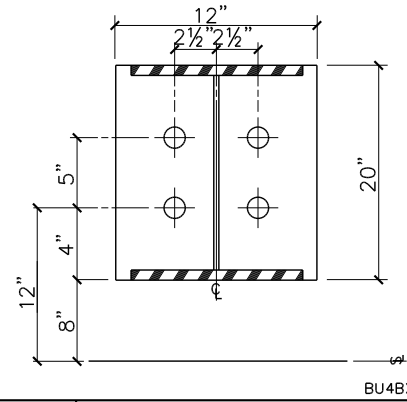
TYPICAL COLUMN BASE PLATE DETAIL



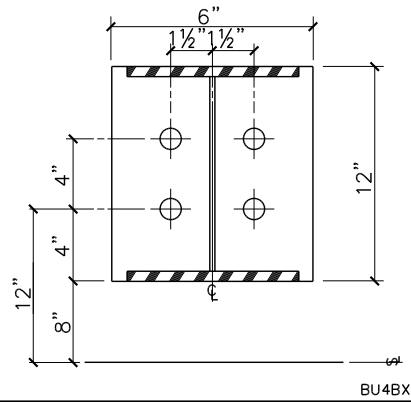
TYPICAL COLUMN BASE PLATE DETAIL
AT SLOT-HILLSIDE WASHER LOCATION



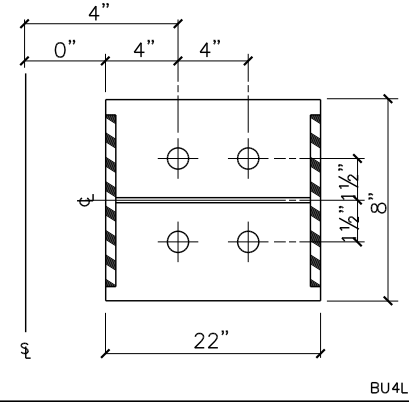
TYPICAL OVERHEAD DOOR
FRAMED OPENING



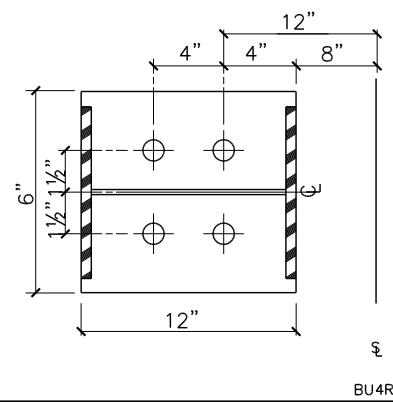
A	(4) 1-1/4" Ø ANCHOR BOLTS WITH A 3" PROJECTION
---	---



BU4BX



BU4LX



BU4RX

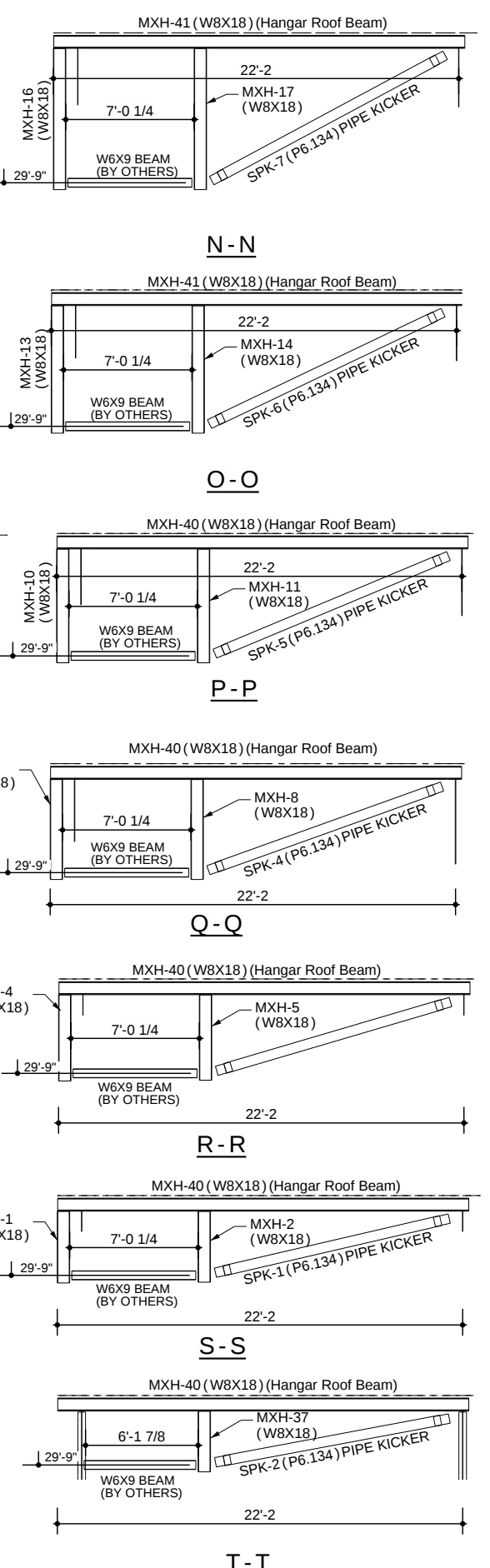
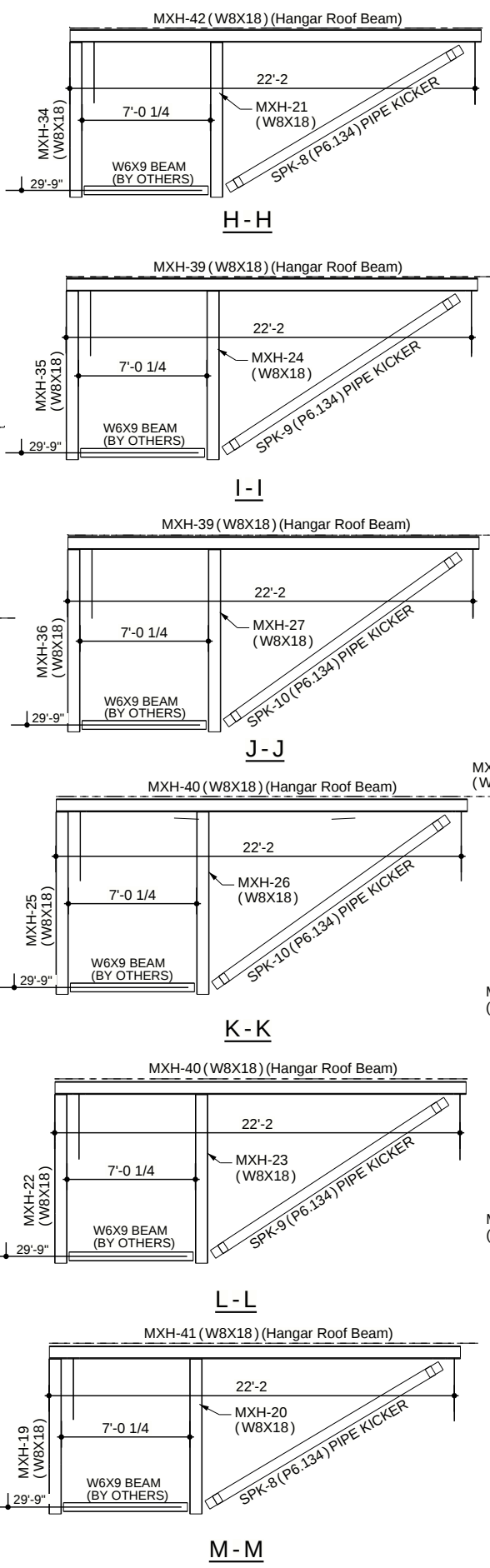
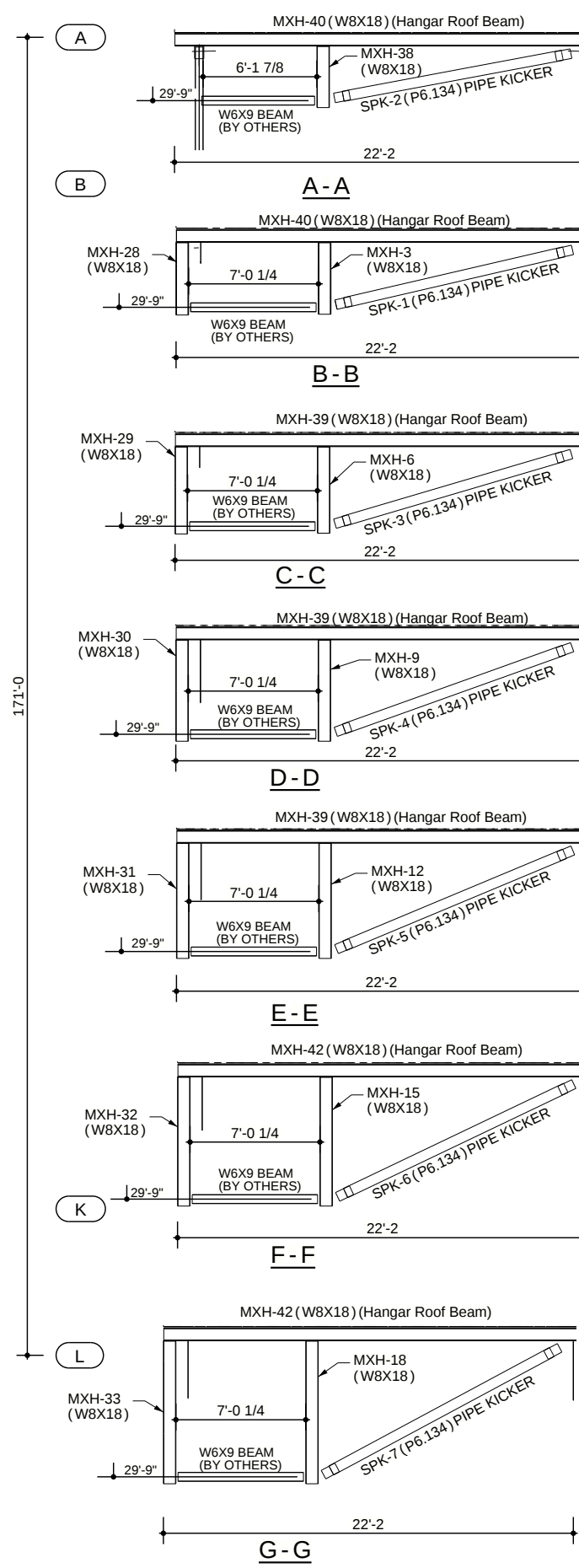
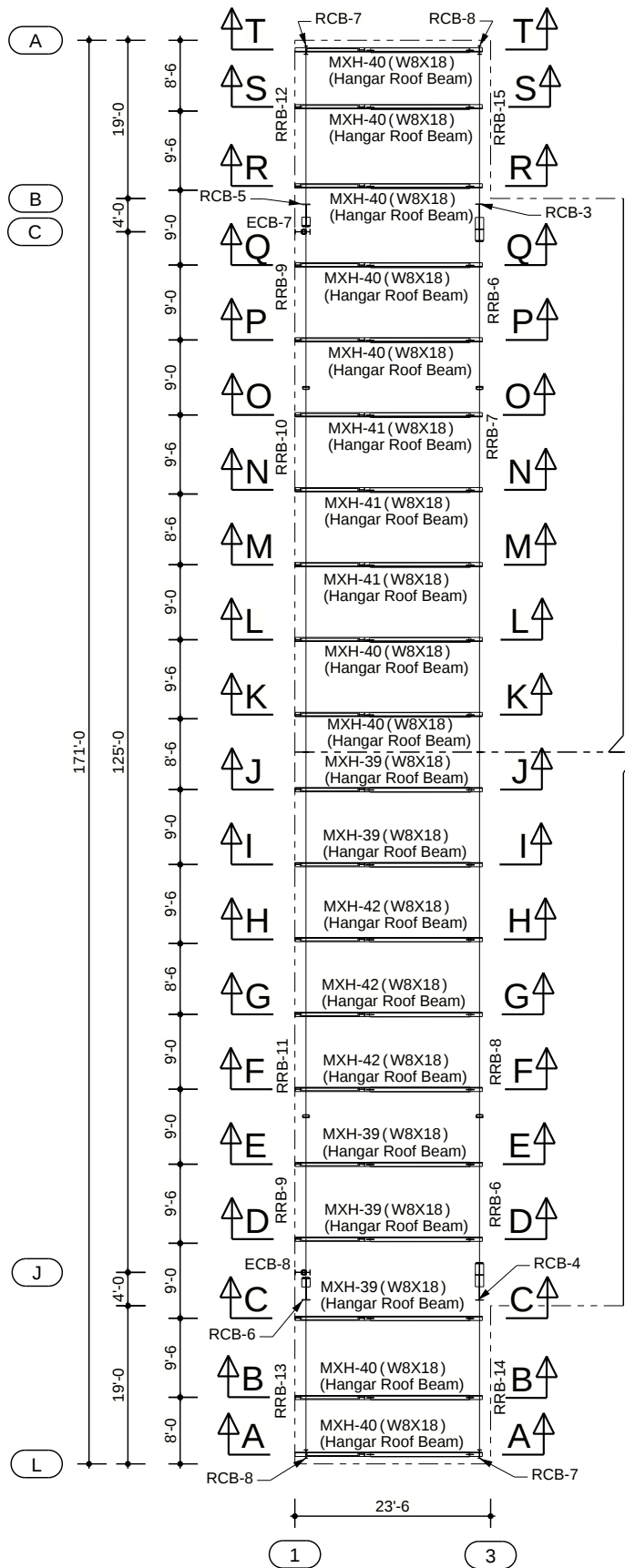
FOUNDATION DESIGN NOTE:

THE ORIENTATION OF THE ANCHOR BOLT DETAILS SHOWN ON THIS PAGE MAY NOT COINCIDE WITH THE ACTUAL COLUMN ORIENTATION SHOWN ON PAGE F1. PLEASE REFERENCE THE STEEL LINES AND/OR CENTER LINE OF ADJACENT COLUMN SHOWN ON THE ANCHOR BOLT DETAILS WITH THE ANCHOR BOLT PLAN ON PAGE F1 DURING LAYOUT OF COLUMN AND ANCHOR BOLT LOCATIONS.

#	RELEASE / REVISION	DWN / CHK	ENG	DATE
0	Anchor Bolts for Construction	NBS / EOP	JIL	11/24/2021
1	Rev. 1 Anchor Bolts for Const.	NBS / EOP	JIL	12/02/2021
2	Building Department Review	MBS / EVT	JIL	12/15/2021
3	Rev. 2 Anchor Bolts for Const.	NBS / EOP	JIL	03/07/2022
4	Rev. 1 Build. Depart. Review	TKL / MBH	JIL	03/22/2022

JOB NUMBER U21X1224A	PROJECT NAME KUHN AVIATION HANGAR	NUCOR BUILDING SYSTEMS GROUP PHONE: (435) 919-3100 FAX: (435) 919-3101	 	 JLZ 072
ADDRESS 375 CO RD 352 RIFLE, CO 81650		CUSTOMER NAME CRUSAK, INC.	DRAWING STATUS FOR PERMITS ONLY	**NOT FOR CONSTRUCTION**
SHEET AB2	DRAWING TITLE Anchor Bolt Details			
03/22/2022 10:49:08am				





Notes:
 PLACE METAL TAGGED END OF RAFTERS TOWARD THE LOW EAVE.
 RAFTERS CENTERED ON RIDGE: IF NOT SYMMETRICAL, "M" INDICATES THE TAGGED END.
 OTHERWISE, THEY ARE SYMMETRICAL AND CAN BE ORIENTED EITHER DIRECTION.
 REFERENCE CROSS SECTIONS FOR ORIENTATION OF INTERIOR COLUMNS.

MBMA
BUILDING SYSTEMS GROUP

NUCOR

PHONE: (435) 919-3100
FAX: (435) 919-3101

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Metal Building Systems
CSA W47.1

CSBP
CERTIFIED
STEEL BUILDING PROFESSIONAL

CSBP
CERTIFIED
STEEL BUILDING PROFESSIONAL

PROJECT NAME
KUHN AVIATION HANGAR

JOB NUMBER
U21X1224A

ADDRESS
375 CO RD 352
RIFLE, CO 81650

CUSTOMER NAME
CRUSAK, INC.

DRAWING STATUS
FOR PERMITS ONLY

DRAWING TITLE
Hangar Door Framing Shakeout Plan

SHEET
E2

#	RELEASE / REVISION	DWN / CHK	ENG	DATE
0	Anchor Bolts for Construction	NBS / EOP	JIL	11/24/2021
1	Rev. 1 Anchor Bolts for Const.	NBS / EOP	JIL	12/02/2021
2	Building Department Review	MBS / EVT	JIL	12/15/2021
3	Rev. 2 Anchor Bolts for Const.	NBS / EOP	JIL	03/07/2022
4	Rev. 1 Build. Depart. Review	TKL / MBH	JIL	03/22/2022

****NOT FOR CONSTRUCTION****

03/22/2022 10:49:20am



FRAME CROSS SECTION GENERAL NOTES:

FN1: FOR COLUMN AND RAFTER MARK NUMBERS, SEE SHAKEOUT PLAN.

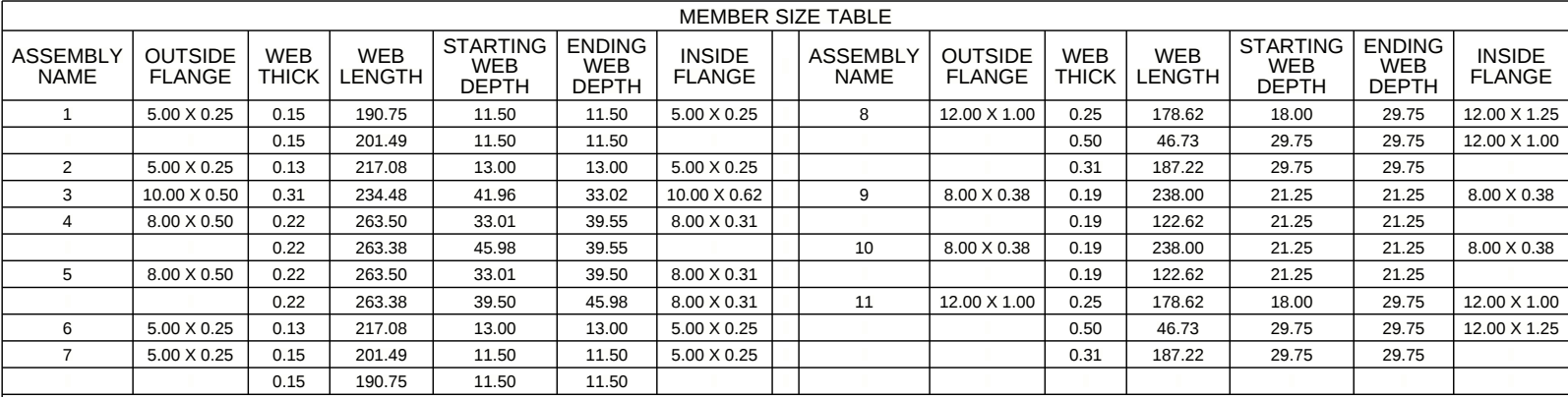
FN2: (2) INDICATES THAT FLANGE BRACING IS REQUIRED ON BOTH SIDES OF THE FRAME LINE.

FN3: FOR EXPANDABLE ENDWALL RIGID FRAMES, IF FLANGE BRACING IS REQUIRED ON BOTH SIDES (2) OF AN EXPANDABLE ENDFRAME, THE OPPOSITE SIDE FLANGE BRACE WILL HAVE TO BE INSTALLED AT THE TIME OF EXPANSION. THESE FLANGE BRACES HAVE BEEN PROVIDED, AS REQUIRED, FOR THIS FUTURE CONDITION.

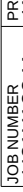
FN4: IF (2) IS NOT INDICATED, ONLY ONE FLANGE BRACE IS REQUIRED AND CAN BE LOCATED ON EITHER SIDE OF THE FRAME.

FN5: "*" INDICATES THE LONG SIDE OF THE INTERIOR COLUMNS. COLUMNS AT THE RIDGE ARE TYPICALLY "FLAT-TOP" COLUMNS, UNLESS INDICATED BY THE "*" SYMBOL.

FN6: RIGID FRAMES SHALL HAVE 50% OF THEIR BOLTS INSTALLED AND TIGHTENED ON BOTH SIDES OF THE WEB ADJACENT TO EACH FLANGE BEFORE THE HOISTING EQUIPMENT IS RELEASED.



NOTE: UNITS ARE DECIMAL INCH.

SPLICE BOLT TABLE				
SPLICE	BOLTS	CLEAR TO F.F.	PLATE SIZE	PLATE SIZE
A	(16)1 1/4 X 3 1/2 A325T	29'-4 1/4	1'-0" X 1"	1'-0" X 1"
B	(12) 3/4 X 3 A325T	32'-10 9/16	8" X 5/8	10" X 5/8
C	(16) 3/4 X 3 A325T	35'-7 1/4	8" X 3/4	8" X 3/4
D	(12) 3/4 X 3 A325T	32'-10 9/16	8" X 5/8	10" X 5/8
E	(16)1 1/4 X 3 1/2 A325T	29'-4 1/4	1'-0" X 1"	1'-0" X 1"

FRAME CROSS SECTION GENERAL NOTES:

FN1: FOR COLUMN AND RAFTER MARK NUMBERS, SEE SHAKEOUT PLAN.

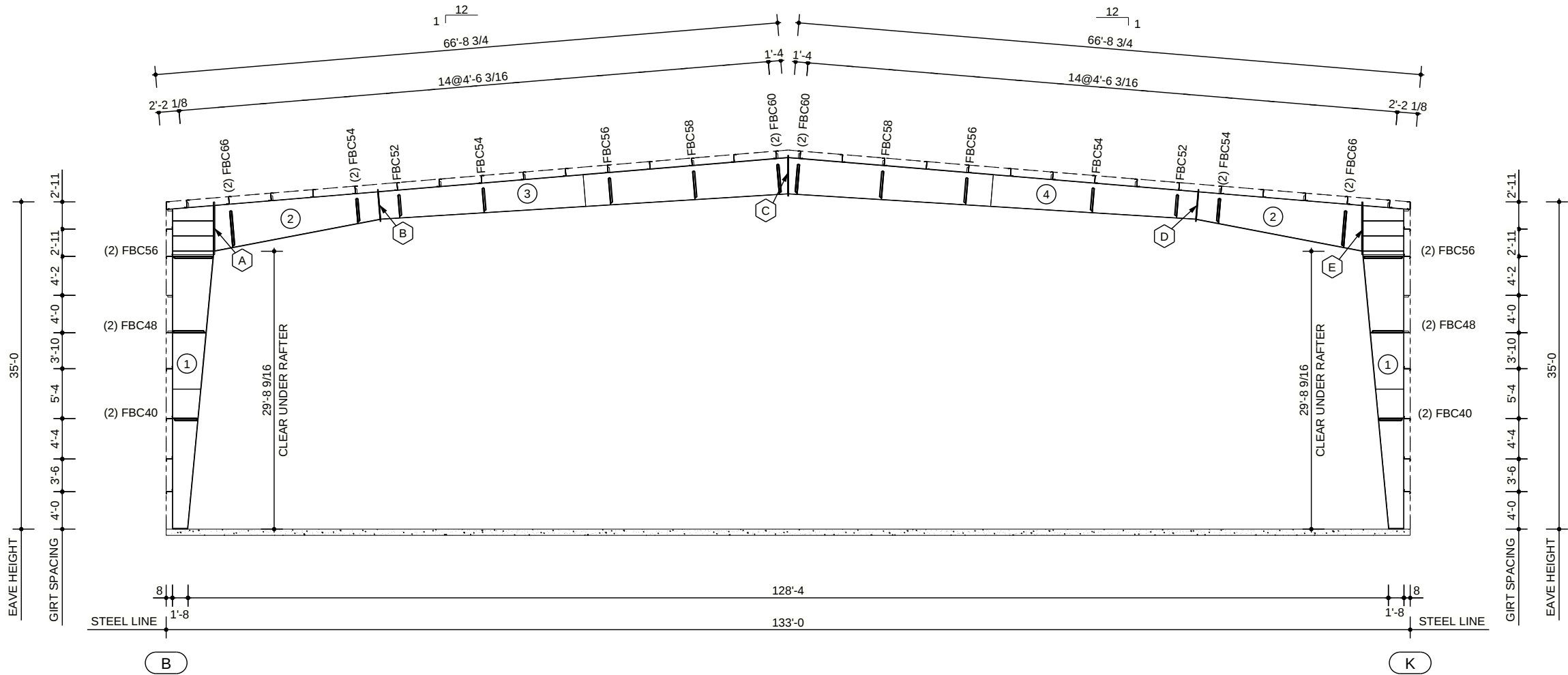
FN2: (2) INDICATES THAT FLANGE BRACING IS REQUIRED ON BOTH SIDES OF THE FRAME LINE.

FN3: FOR EXPANDABLE ENDWALL RIGID FRAMES, IF FLANGE BRACING IS REQUIRED ON BOTH SIDES (2) OF AN EXPANDABLE ENDFRAME, THE OPPOSITE SIDE FLANGE BRACE WILL HAVE TO BE INSTALLED AT THE TIME OF EXPANSION. THESE FLANGE BRACES HAVE BEEN PROVIDED, AS REQUIRED, FOR THIS FUTURE CONDITION.

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FN6: RIGID FRAMES SHALL HAVE 50% OF THEIR BOLTS INSTALLED AND TIGHTENED ON BOTH SIDES OF THE WEB ADJACENT TO EACH FLANGE BEFORE THE HOISTING EQUIPMENT IS RELEASED.



MEMBER SIZE TABLE						
ASSEMBLY NAME	OUTSIDE FLANGE	WEB THICK	WEB LENGTH	STARTING WEB DEPTH	ENDING WEB DEPTH	INSIDE FLANGE
1	12.00 X 0.38	0.28	178.62	19.00	35.78	12.00 X 0.75
		0.31	62.87	52.00	52.00	12.00 X 0.62
		0.31	172.63	35.78	52.00	
2	10.00 X 0.38	0.38	214.36	57.89	35.07	10.00 X 0.62
3	8.00 X 0.62	0.28	263.37	35.01	40.54	8.00 X 0.38
		0.22	263.26	45.98	40.54	
4	8.00 X 0.50	0.28	263.38	35.01	40.50	8.00 X 0.38
		0.22	263.26	40.50	45.98	8.00 X 0.38

NOTE: UNITS ARE DECIMAL INCH.

JOB NUMBER U21X1224A		PROJECT NAME KUHN AVIATION HANGAR		DATE 11/24/2021	
ADDRESS 375 CO RD 352 RIFLE, CO 81650		CUSTOMER NAME CRUSAK, INC.		DATE 12/02/2021	
DRAWING STATUS FOR PERMITS ONLY		DRAWING TITLE Frame Cross Section at Line 6		DATE 03/07/2022	
SHEET E7		SHEET E7		DATE 03/22/2022	
#	RELEASE / REVISION	DWN / CHK	ENG	DATE	
0	Anchor Bolts for Construction	NBS / EOP	JIL	11/24/2021	
1	Rev. 1 Anchor Bolts for Const.	NBS / EOP	JIL	12/02/2021	
2	Building Department Review	MBS / EVT	JIL	12/15/2021	
3	Rev. 2 Anchor Bolts for Const.	NBS / EOP	JIL	03/07/2022	
4	Rev. 1 Build. Depart. Review	TKL / MBH	JIL	03/22/2022	



MBMA
BUILDING SYSTEMS GROUP
PHONE: (435) 919-3100
FAX: (435) 919-3101

NUCOR
BUILDING SYSTEMS GROUP
PHONE: (435) 919-3100
FAX: (435) 919-3101

IAS
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Web Training Systems
#142

CSWB
CERTIFIED
CSA W47.1

CSWB
CERTIFIED
CSA W47.1

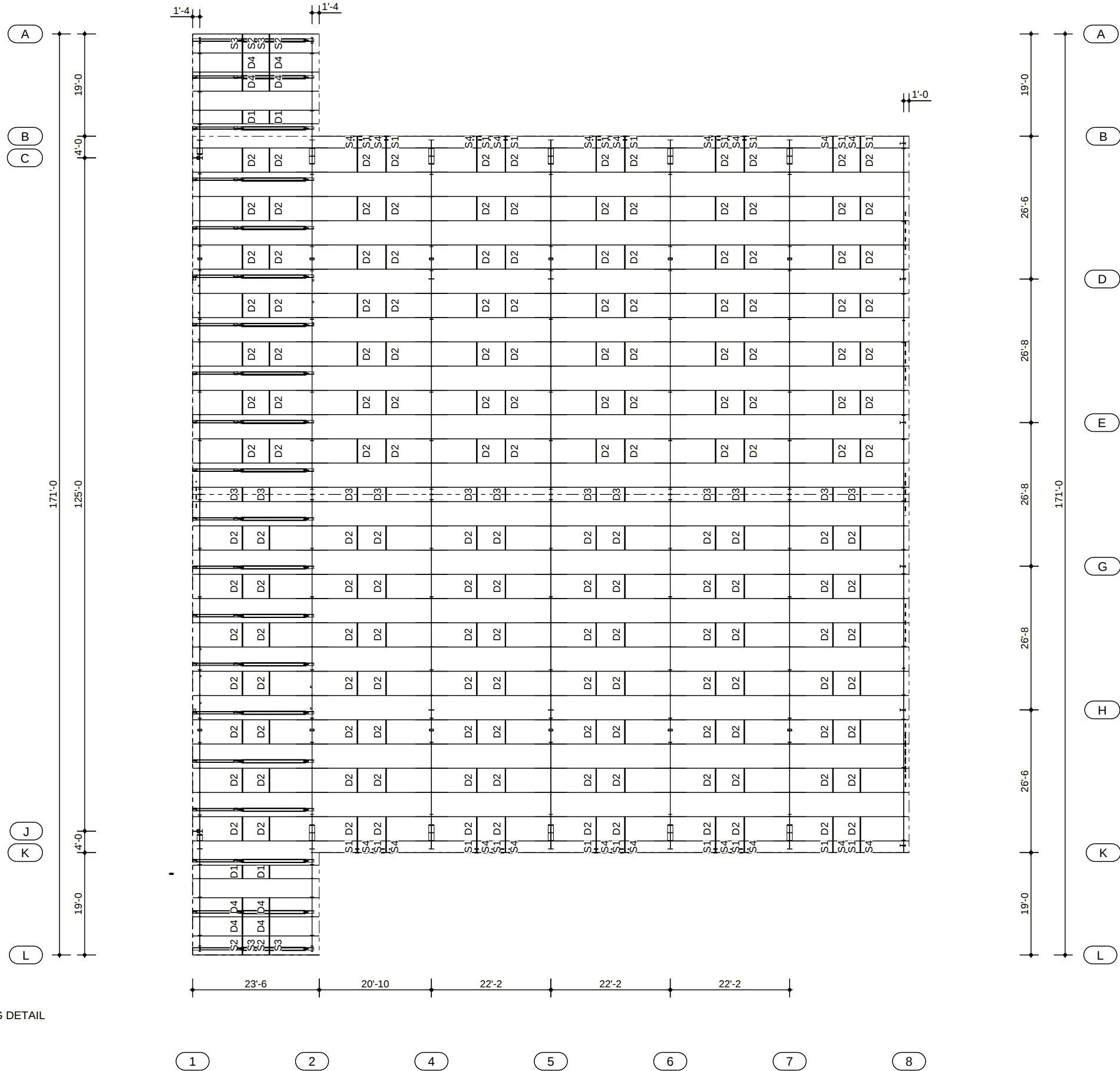
CSWB
CERTIFIED
CSA W47.1

03/22/2022 10:50:00am

SHORTENED MARKS	
SHOWN	ACTUAL
D1	(2)PB930
D2	(2)PB954
D3	(2)PBR110
D4	(2)PBX-2
S1	PB927
S2	PBX-1
S3	PBX-2
S4	PBX-6

NOTES:

PB___ - INDICATES PURLIN BRACING. SEE ROOF FRAMING DETAIL
BE0001 FOR MORE INFORMATION.





NUCOR

BUILDING SYSTEMS GROUP

PHONE: (435) 919-3100

FAX: (435) 919-3101

MEMBER

IAS

REGISTERED
Professional Engineer
#422

JOB NUMBER U21X1224A	PROJECT NAME KUHN AVIATION HANGAR										
ADDRESS											
375 CO RD 352 RIFLE, CO 81650											
CUSTOMER NAME											
CRUSAK, INC.											
DRAWING STATUS											
FOR PERMITS ONLY											
SHEET											
E11											
DRAWING TITLE											
Roof Purlin Bracing Plan											

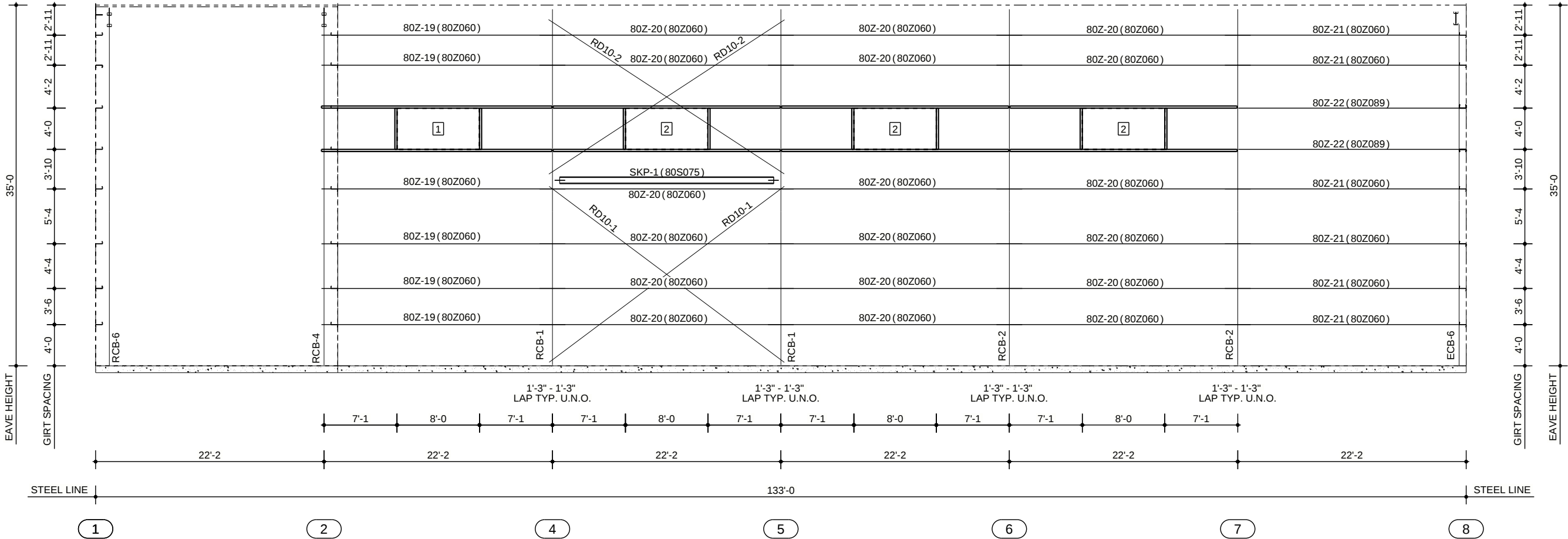
#	RELEASE / REVISION	DWN / CHK	ENG	DATE
0	Anchor Bolts for Construction	NBS / EOP	JIL	11/24/2021
1	Rev. 1 Anchor Bolts for Const.	NBS / EOP	JIL	12/02/2021
2	Building Department Review	NBS / EVT	JIL	12/15/2021
3	Rev. 2 Anchor Bolts for Const.	NBS / EOP	JIL	03/07/2022
4	Rev. 1 Build. Depart. Review	TKL / MBH	JIL	03/22/2022

NOT FOR CONSTRUCTION**

03/22/2022 10:51:09am

RD=ROD BRACING CA=CABLE BRACING	
CODE	DIAMETER
02	1/4"
03	3/8"
04	1/2"
05	5/8"
06	3/4"
07	7/8"
08	1"
09	1 1/8"
10	1 1/4"

FRAMED OPENING TABLE								
MARK	WIDTH	HEIGHT	HEADER	LEFT JAMB	RIGHT JAMB	SILL	SILL HEIGHT	FIELD LOCATED
1	8'-0"	4'-0"	80C-13 (80C060)	80C-14 (80C060)	80C-14 (80C060)	80C-13 (80C060)	21'-0"	N
2	8'-0"	4'-0"	80C-15 (80C060)	80C-14 (80C060)	80C-14 (80C060)	80C-15 (80C060)	21'-0"	N



NOTES:

SEE CROSS SECTION DRAWING FOR MAIN FRAME FLANGE BRACING.

SEE WALL FRAMING DETAILS FOR STANDARD GIRT ORIENTATION DETAIL.

RD___ INDICATES ROD BRACING. SEE PRIMARY DETAILS FOR ROD BRACE ASSEMBLY.

AT FLUSH OR INSET GIRT CONDITION, FIELD SLOT GIRT WEBS, TO ALLOW PASSAGE OF CABLE\ROD BRACING.
SEE PRIMARY DETAILS FOR GUIDELINES.

CUT AND DRILL GIRTS AS NECESSARY FOR FIELD LOCATED FRAMED OPENINGS.

JOB NUMBER U21X1224A		PROJECT NAME KUHN AVIATION HANGAR		DATE 11/24/2021		DWN / CHK NBS / EOP		RELEASE / REVISION	
ADDRESS 375 CO RD 352 RIFLE, CO 81650		CUSTOMER NAME CRUSAK, INC.		DATE 12/02/2021		NBS / EOP		Anchor Bolts for Construction	
DRAWING STATUS FOR PERMITS ONLY		DRAWING STATUS FOR PERMITS ONLY		DATE 12/15/2021		NBS / EVT		Rev. 1 Anchor Bolts for Const.	
SHEET E15		SHEET E15		DATE 03/07/2022		NBS / EOP		Rev. 2 Anchor Bolts for Const.	
DRAWING TITLE Wall Framing Elevation at Line K		DRAWING TITLE Wall Framing Elevation at Line K		DATE 03/22/2022		TKL / MBH		Rev. 1 Build. Depart. Review	



MBMA
MEMBER

NUCOR
BUILDING SYSTEMS GROUP

PHONE: (435) 919-3100
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Metal Building Systems

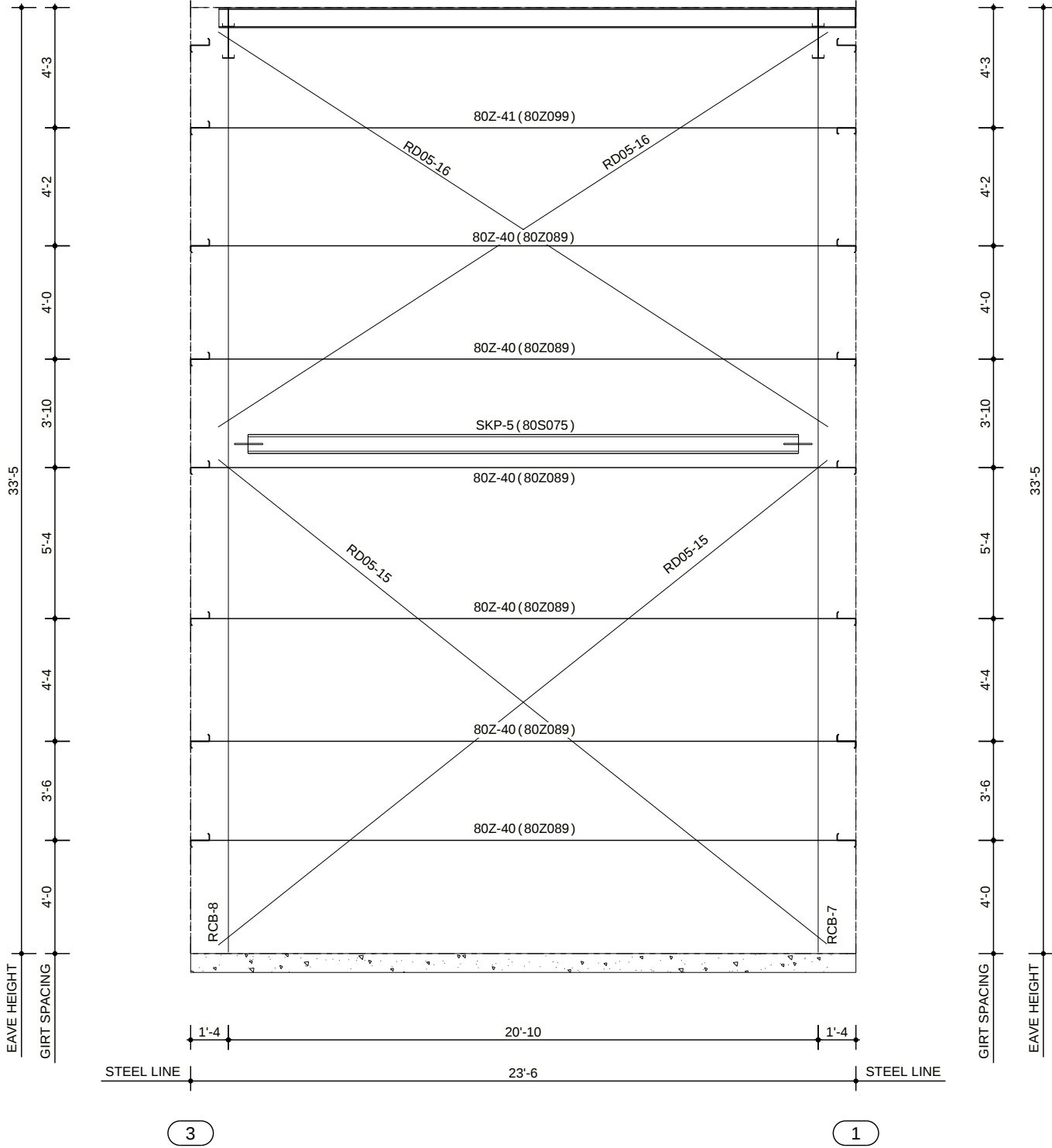
CSWB
CERTIFIED
CSA W47.1

CSWB
CERTIFIED
CSA W47.1

CSWB
CERTIFIED
CSA W47.1

03/22/2022 10:51:20am

RD=ROD BRACING CA=CABLE BRACING	
CODE	DIAMETER
02	1/4"
03	3/8"
04	1/2"
05	5/8"
06	3/4"
07	7/8"
08	1"
09	1 1/8"
10	1 1/4"

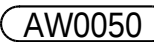


NOTES:

- SEE CROSS SECTION DRAWING FOR MAIN FRAME FLANGE BRACING.
- SEE WALL FRAMING DETAILS FOR STANDARD GIRT ORIENTATION DETAIL.
- RD___ INDICATES ROD BRACING. SEE PRIMARY DETAILS FOR ROD BRACE ASSEMBLY.
- AT FLUSH OR INSET GIRT CONDITION, FIELD SLOT GIRT WEBS, TO ALLOW PASSAGE OF CABLE/ROD BRACING. SEE PRIMARY DETAILS FOR GUIDELINES.
- CUT AND DRILL GIRTS AS NECESSARY FOR FIELD LOCATED FRAMED OPENINGS.



JOB NUMBER U21X1224A		PROJECT NAME KUHN AVIATION HANGAR		NUCOR BUILDING SYSTEMS GROUP		MBMA MEMBER	
ADDRESS 375 CO RD 352 RIFLE, CO 81650		CUSTOMER NAME CRUSAK, INC.		PHONE: (435) 919-3100 FAX: (435) 919-3101		IAS ACCREDITED Metal Building Systems #142	
DATE 11/24/2021		DWN / CHK NBS / EOP		ENG JIL		CSWB CERTIFIED CSA W47.1	
DATE 12/02/2021		DWN / CHK NBS / EOP		ENG JIL		CSWB CERTIFIED CSA W47.1	
DATE 12/15/2021		DWN / CHK NBS / EVT		ENG JIL		CSWB CERTIFIED CSA W47.1	
DATE 03/07/2022		DWN / CHK NBS / EOP		ENG JIL		CSWB CERTIFIED CSA W47.1	
DATE 03/22/2022		DWN / CHK TKL / MBH		ENG JIL		CSWB CERTIFIED CSA W47.1	
#		RELEASE / REVISION		DWN / CHK		ENG	
0		Anchor Bolts for Construction		NBS / EOP		JIL	
1		Rev. 1 Anchor Bolts for Const.		NBS / EOP		JIL	
2		Building Department Review		MBS / EVT		JIL	
3		Rev. 2 Anchor Bolts for Const.		NBS / EOP		JIL	
4		Rev. 1 Build. Depart. Review		TKL / MBH		JIL	
DRAWING STATUS FOR PERMITS ONLY		DRAWING TITLE Wall Framing Elevation at Line A		DATE 03/22/2022		TIME 10:51:31am	



PURLIN FLANGE (BOTTOM)

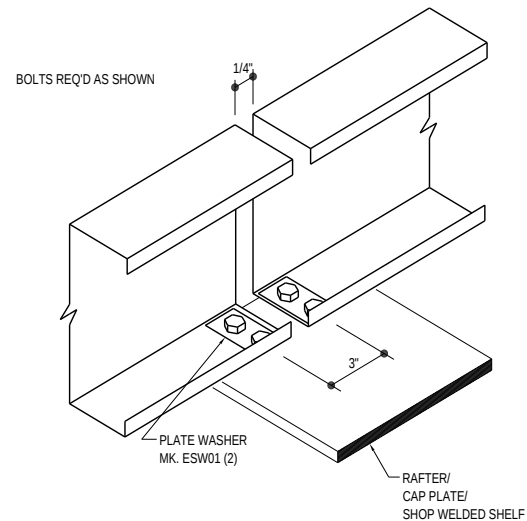
PURLIN STIFFENING LIP

PURLIN FLANGE (TOP)

PURLIN WEB

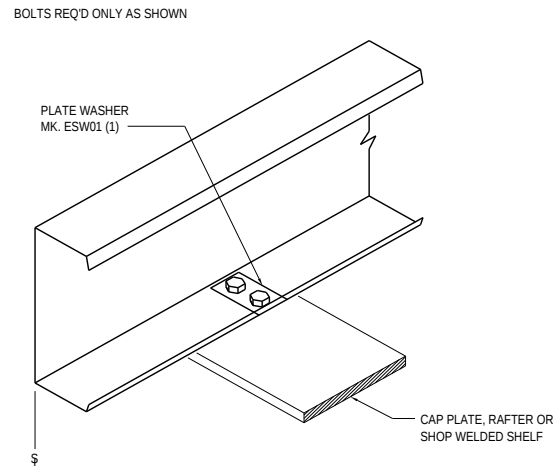
CENTERLINE OF THE SUPPORT MUST BE
1" FROM CENTERLINE OF PURLIN WEB

B00010



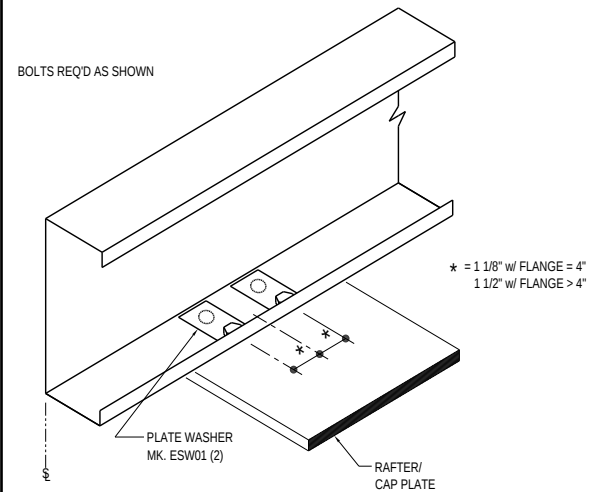
LOW EAVE BYPASS SW GIRT CONDITION
USE (4) 1/2" X 2" A325 BOLT H0603/NUT H0300 U.N.O.

BA0020



BYPASS SIDEWALL CONDITION
USE (2) 1/2" x 2" A325 BOLT H0603/NUT H0300 U.N.O.

BA0030



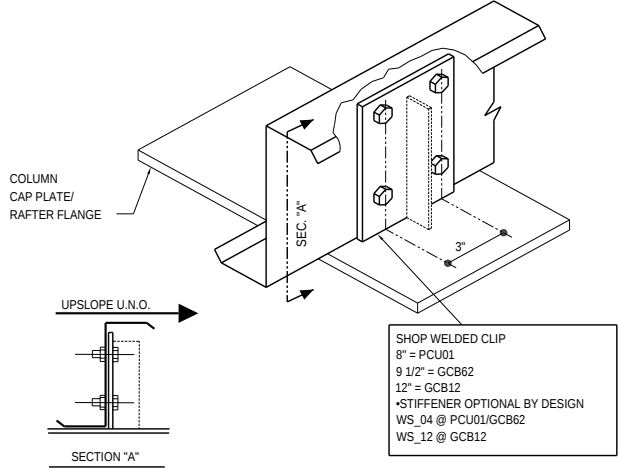
LOW EAVE - FLUSH/INSET SW GIRT CONDITION
USE (2) 1/2" x 2" A325 BOLT H0603/NUT H0300 U.N.O.

BA0040

#	RELEASE / REVISION	DWN / CHK	ENG	DATE
0	Anchor Bolts for Construction	NBS / EOP	JIL	11/24/2021
1	Rev. 1 Anchor Bolts for Const.	NBS / EOP	JIL	12/02/2021
2	Building Department Review	NBS / EVT	JIL	12/15/2021
3	Rev. 2 Anchor Bolts for Const.	NBS / EOP	JIL	03/07/2022
4	Rev. 1 Build. Depart. Review	TKL / MBH	JIL	03/22/2022

JOB NUMBER U21X1224A	PROJECT NAME KUHN AVIATION HANGAR		DRAWING STATUS FOR PERMITS ONLY	DRAWING TITLE Roof Framing Details	SHEET D4
	ADDRESS 375 CO RD 352 RIFLE CO 81650				
	CUSTOMER NAME CRUSAK, INC.	**NOT FOR CONSTRUCTION**			
BUILDING SYSTEMS GROUP			03/22/2022 10:51:36am		
PHONE: (435) 919-3100 FAX: (435) 919-3101					
NUCOR			MBMA MEMBER		
CSB			IAS ACCREDITED INDEPENDENT AUDITORS AL2E		
CERTIFIED CSA7471			CERTIFIED CSA7471		
CSB			CSB CERTIFIED CSA7471		

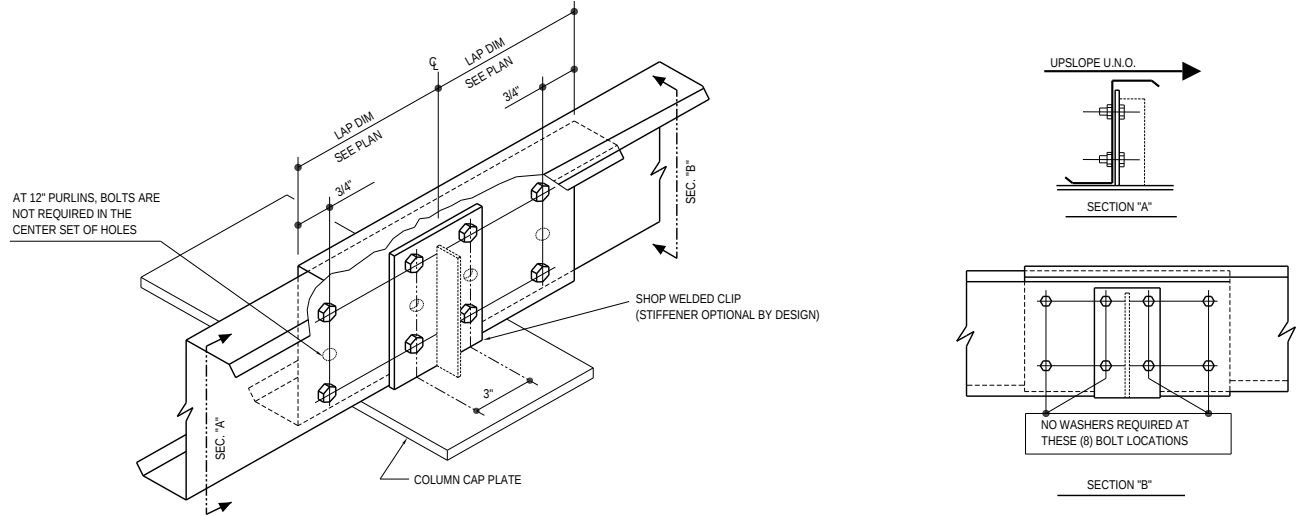




WELDED CLIP @ END FRAME

USE (4) 1/2" x 1 1/4" A307 BOLTS H0500/NUTS H0400 U.N.O.
REFERENCE ERECTOR NOTE FOR TYP. WASHER REQUIREMENTS

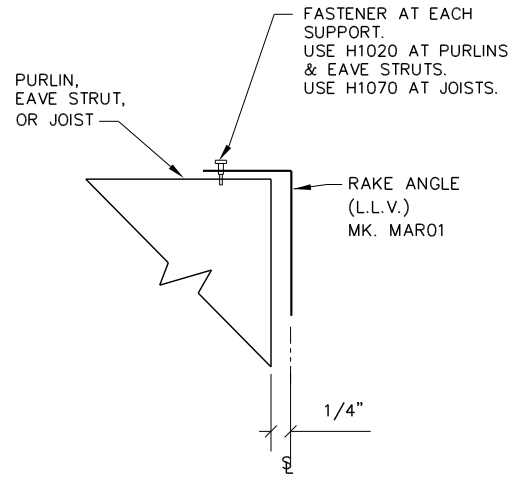
BB0050



WELDED CLIP @ INTERIOR FRAME

USE (8) 1/2" x 1 1/4" A307 BOLTS H0500/NUTS H0400 U.N.O.

BB0055



RAKE ANGLE ATTACHMENT
AT ENDWALL STEEL LINE

BD0120

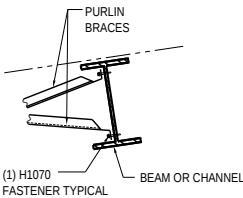
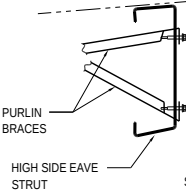
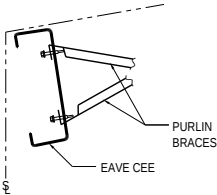
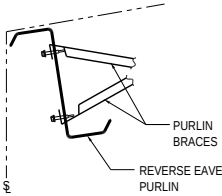
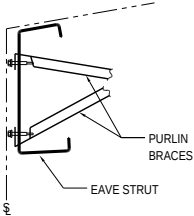


JOB NUMBER U21X1224A		PROJECT NAME KUHN AVIATION HANGAR		MBMA BUILDING SYSTEMS GROUP	
ADDRESS 375 CO RD 352 RIFLE, CO 81650		CUSTOMER NAME CRUSAK, INC.		PHONE: (435) 919-3100 FAX: (435) 919-3101	
RELEASE / REVISION		DWN / CHK	ENG	DATE	**NOT FOR CONSTRUCTION** DRAWING STATUS FOR PERMITS ONLY SHEET D5
0	Anchor Bolts for Construction	NBS / EOP	JIL	11/24/2021	
1	Rev. 1 Anchor Bolts for Const.	NBS / EOP	JIL	12/02/2021	
2	Building Department Review	MBS / EVT	JIL	12/15/2021	
3	Rev. 2 Anchor Bolts for Const.	NBS / EOP	JIL	03/07/2022	
4	Rev. 1 Build. Depart. Review	TKL / MBH	JIL	03/22/2022	

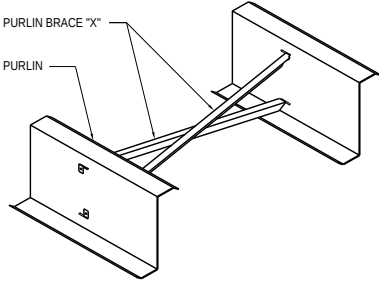
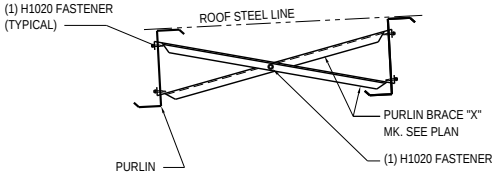
03/22/2022 10:51:37am

INSTALLATION INSTRUCTIONS

- 1) FOR PURLIN BRACE "X", INSERT ANGLES "BACK-TO-BACK" INTO THE FACTORY PUNCHED SLOTS. BEND TABS AS SHOWN AND FASTEN THROUGH TAB WITH (1) H1020 FASTENER PER END.
- 2) CONNECT PURLIN BRACE "X" AT THE ANGLE INTERSECTION WITH (1) H1020 FASTENER.
- 3) PURLIN BRACING IS NOT TO DISTORT OR ALTER PURLINS FROM THEIR INTENDED SHAPE OR LOCATION.
- 4) SEE DETAILS BELOW FOR ADDITIONAL INFORMATION WHEN ATTACHING TO ALTERNATE FRAMING MEMBERS.



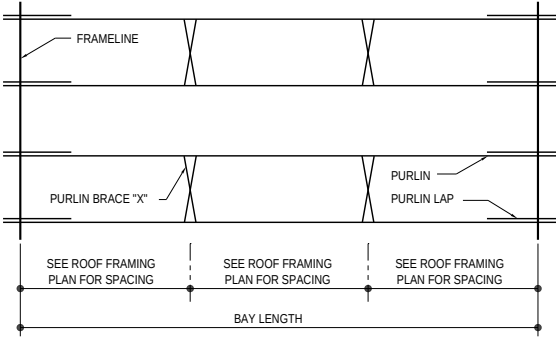
NOTE: IF CHANNEL, IT MAY BE TOED UP OR DOWN.



NOTE: PURLIN BRACING ATTACHMENT METHOD IS THE SAME REGARDLESS OF THE SECONDARY MEMBER TYPE (ZEE, CEE, EAVE STRUT, BEAM, ETC.)

PLAN VIEW OF PURLIN BRACING LOCATIONS PER BAY

- 1) SEE ROOF FRAMING PLAN(S) FOR PURLIN BRACE MARK NUMBERS, QUANTITIES AND LOCATIONS.
- 2) (2) ROWS OF PURLIN BRACING IS SHOWN BELOW FOR REFERENCE ONLY, ACTUAL NUMBER OF ROWS MAY VARY PER BAY AND PER PROJECT, SEE ROOF FRAMING PLAN(S) FOR SPACING.



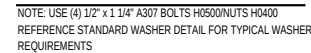
PURLIN BRACING ATTACHMENT METHODS

BE0001

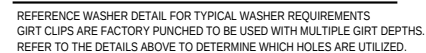


JOB NUMBER U21X1224A		PROJECT NAME KUN AVIATION HANGAR		MBMA BUILDING SYSTEMS GROUP	
ADDRESS 375 CO RD 352 RIFLE, CO 81650		PHONE: (435) 919-3100 FAX: (435) 919-3101		IAS ACCREDITED Metal Building Systems #142	
CUSTOMER NAME CRUSAK, INC.		DRAWING STATUS FOR PERMITS ONLY		CSA W47.1 CERTIFIED CSA W47.1	
DATE 11/24/2021		DATE 12/02/2021		CSA W47.1 CERTIFIED CSA W47.1	
ENG JIL		ENG JIL		CSA W47.1 CERTIFIED CSA W47.1	
DWN / CHK NBS / EOP		DWN / CHK NBS / EOP		CSA W47.1 CERTIFIED CSA W47.1	
RELEASE / REVISION Anchor Bolts for Construction		RELEASE / REVISION Rev. 1 Anchor Bolts for Const.		CSA W47.1 CERTIFIED CSA W47.1	
# 0		# 1		CSA W47.1 CERTIFIED CSA W47.1	
Anchor Bolts for Construction		Rev. 1 Anchor Bolts for Const.		CSA W47.1 CERTIFIED CSA W47.1	
1		2		CSA W47.1 CERTIFIED CSA W47.1	
Rev. 1 Anchor Bolts for Const.		Rev. 2 Anchor Bolts for Const.		CSA W47.1 CERTIFIED CSA W47.1	
2		3		CSA W47.1 CERTIFIED CSA W47.1	
Building Department Review		Rev. 1 Build. Depart. Review		CSA W47.1 CERTIFIED CSA W47.1	
3		4		CSA W47.1 CERTIFIED CSA W47.1	
Rev. 2 Anchor Bolts for Const.		Rev. 1 Build. Depart. Review		CSA W47.1 CERTIFIED CSA W47.1	
4		4		CSA W47.1 CERTIFIED CSA W47.1	
Rev. 1 Build. Depart. Review		Rev. 1 Build. Depart. Review		CSA W47.1 CERTIFIED CSA W47.1	
SHEET D6		DRAWING TITLE Roof Framing Details		03/22/2022 10:51:38am	

GIRT CLIPS ARE FACTORY PUNCHED TO BE USED WITH MULTIPLE GIRT DEPTHS. REFER TO THE STANDARD BOLT PLACEMENT DETAIL(S) FOR PROPER BOLT PLACEMENT.

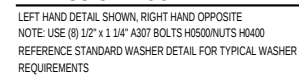


CF0250



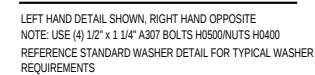
CF1001

GIRT CLIPS ARE FACTORY PUNCHED TO BE USED WITH MULTIPLE GIRT DEPTHS. REFER TO THE STANDARD BOLT PLACEMENT DETAIL(S) FOR PROPER BOLT PLACEMENT.



CF1010

LEFT HAND DETAIL SHOWN,
RIGHT HAND OPPOSITE



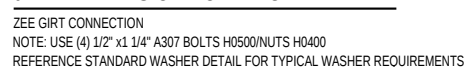
CF1200



CG0030



CG0050



CG0058

#	RELEASE / REVISION	DWN / CHK	ENG	DATE
0	Anchor Bolts for Construction	NBS / EOP	JIL	11/24/2021
1	Rev. 1 Anchor Bolts for Const.	NBS / EOP	JIL	12/02/2021
2	Building Department Review	NBS / EVT	JIL	12/15/2021
3	Rev. 2 Anchor Bolts for Const.	NBS / EOP	JIL	03/07/2022
4	Rev. 1 Build. Depart. Review	TKL / MBH	JIL	03/22/2022

JOB NUMBER U21X1224A	PROJECT NAME KUHN AVIATION HANGAR
ADDRESS 375 CO RD 352 RIFLE CO 81650	**NOT FOR CONSTRUCTION** DRAWING STATUS FOR PERMIT'S ONLY SHEET D8
CUSTOMER NAME CRUSAK, INC.	
DRAWING STATUS FOR PERMIT'S ONLY	
DRAWING TITLE Wall Framing Details	

6 TITLE

DRAWING TITLE
Wall Framing Details



