



Product Specifications

Bedford Standard Ladders

Disclaimer

BEDFORD REINFORCED PLASTICS INC. disclaims liability for any personal injury, property or other damages of any nature whatsoever, whether special, indirect, consequential or compensatory, directly or indirectly resulting from the publication, use of, or reliance on BEDFORD REINFORCED PLASTICS INC. documents. BEDFORD REINFORCED PLASTICS INC. also makes no guaranty or warranty as to the accuracy or completeness of any information published herein. Anyone using this document should rely on his or her own independent judgment or, as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given circumstances.

Product Specifications

BRP Standard Ladders

Scope

This specification covers the details about the design criteria, product description and installation details of BRP standard ladders.

Design Criteria

BRP ladder systems are designed to meet or exceed the minimum load requirements of Standard Caged Ladder as per OSHA 1910.27 and to meet 60 psf loading on the landing platforms.

BRP Ladder Systems

BRP offers standard caged ladders, access ladders, and access ladders with walk-through and return. The components of BRP ladder systems such as ladder side rails, rungs, cage hoops and straps are all made of BRP pultruded fiber-reinforced plastics.

The side rails are made of 2" x ¼" square tube. Ladder rungs are 1¼" dia. fluted tubes for added traction.

The components for caged ladders are: cage hoops made of 4" x ⅛" flat sheet and the cage straps or ribs made of 2½" x ⅜" flat sheet. Installation accessories such as stand-off clips and anchor clips are made of 8" x 2⅜" x ⅜" and 3" x ⅜" angle clips respectively.

All BRP ladders are shop assembled by mechanically fastening the fluted rungs to the side rails using ¼" dia. series 300 SS spring pins with the option of supplying pre-drilled stand-off clips and anchor clips for field attachments.

BRP Landing Platforms

BRP offers landing platforms that are required for fixed ladders exceeding 20 feet as per OSHA 1910.27. BRP landing platforms are capable to handle a uniform load of 60 psf. The landing platforms provide a landing area of maximum of 4' x 6' equipped with BRP standard handrail systems with kick plate along the perimeter of

the landing while providing an entry point as required to safely access the ladder. The landing platform framework shall be made of BRP standard structural shapes with 1½" x 1½" square grid molded grating and 300 series hardware shall be used for connections.

Product Description

All the fiberglass components used for BRP ladder systems are made with the pultrusion process using fiberglass reinforcement and resin systems necessary to meet the design requirements and minimum properties given in Table 1.

Glass Reinforcements: Pultruded structural shapes used for BRP ladder systems shall have the fiber reinforcement in the form of continuous rovings and continuous strand mat for adequate mechanical and physical properties and surface veil for UV protection and corrosion resistance.

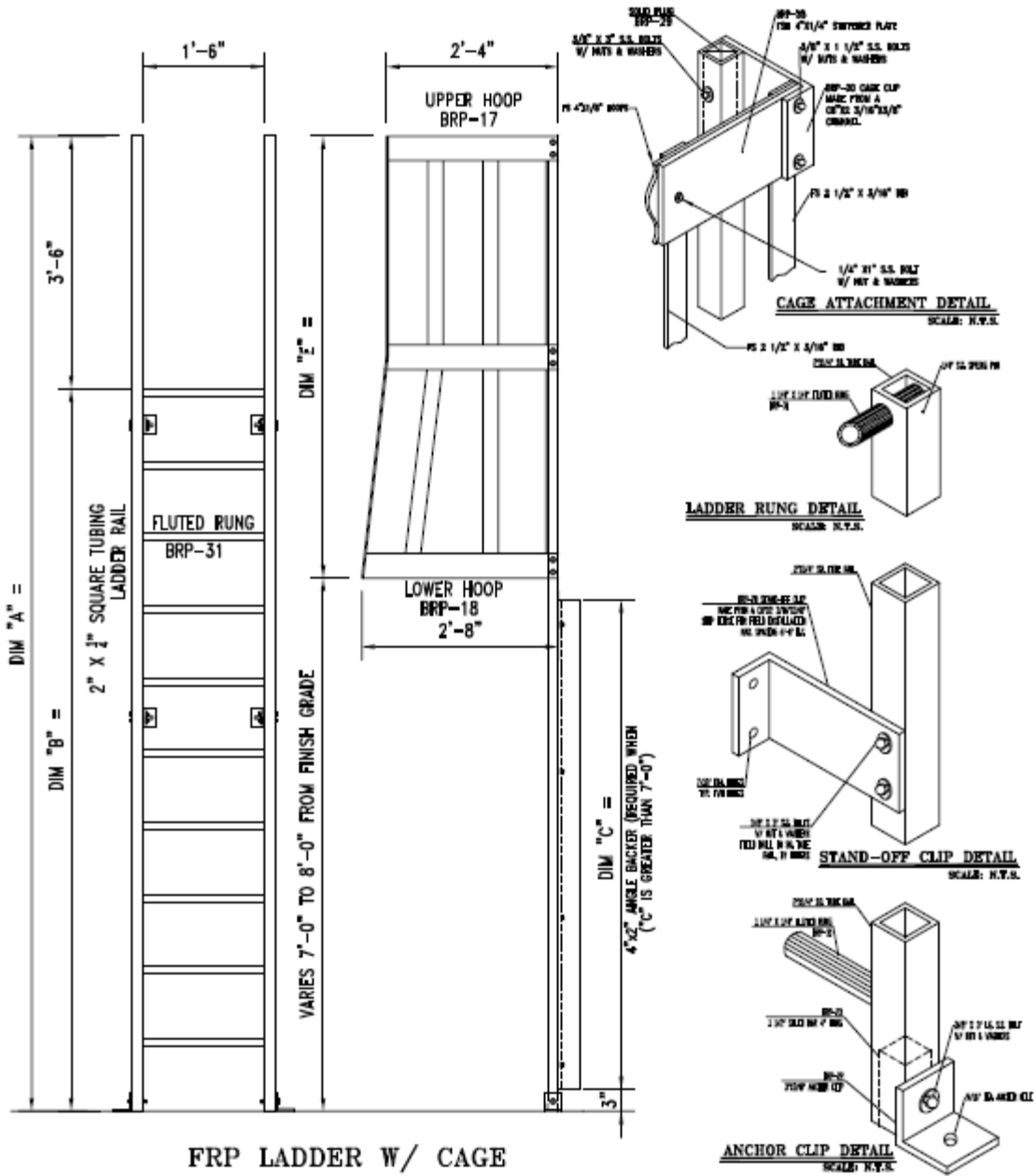
Resin Systems: Resin systems used in BRP ladder systems provide superior corrosion resistance and are available in FR Iso-Polyester and Vinylester resin systems with additives for superior fire resistance, UV protection and pigments. BRP ladder systems are typically pigmented yellow and can match other colors if needed.

Table 1. Minimum Properties

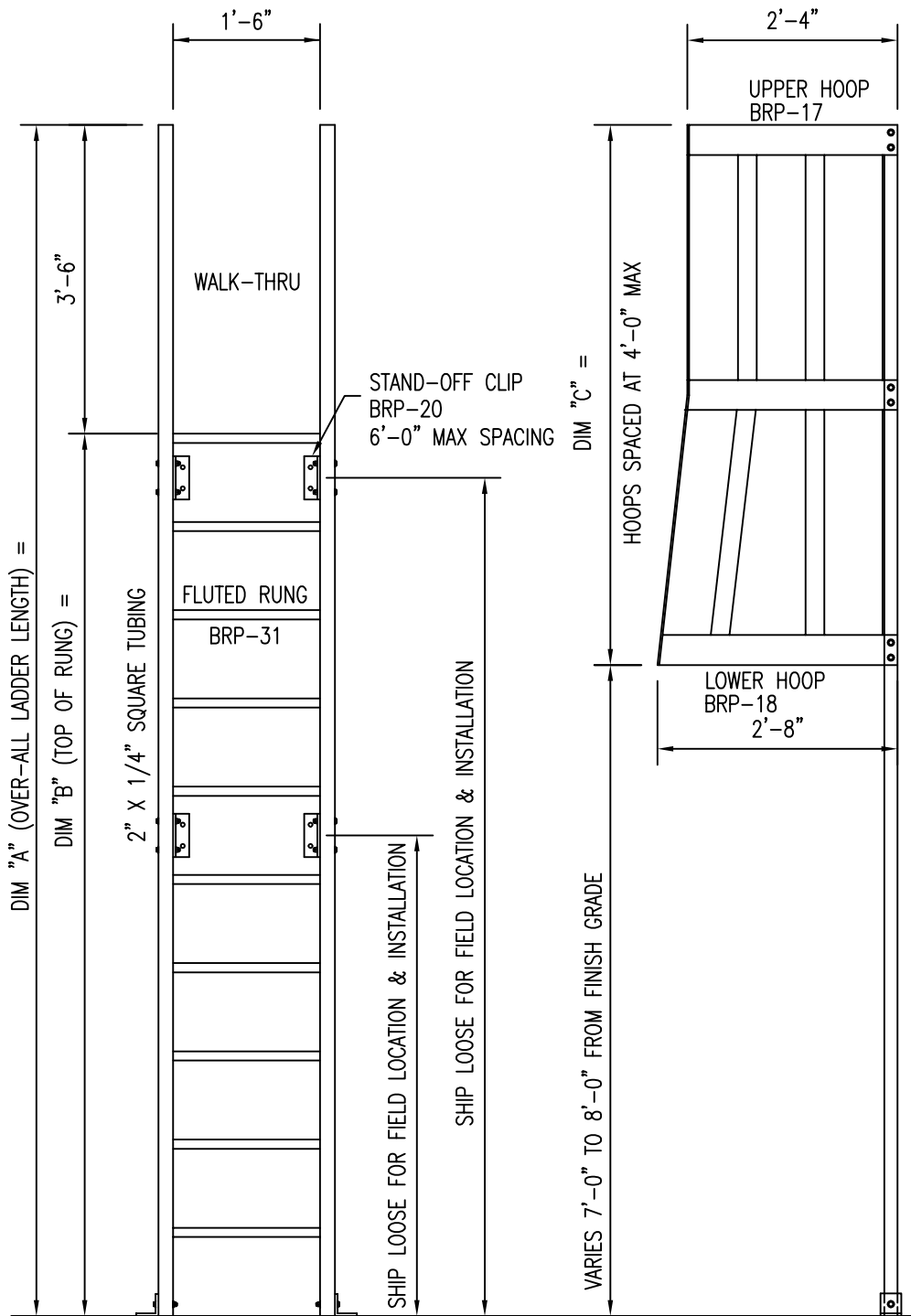
Property	ASTM	Value
Tensile Strength, psi	D 638	30000
Tensile Modulus, psi	D 638	2.5 x10 ⁶
Flexural Strength, psi	D 790	30000
Flexural Modulus, psi	D 790	1.8 x10 ⁶
Short Beam Shear, psi	D 2344	4500
Full Section Modulus, psi	N/A	2.8 x10 ⁶
Density, lb/in ³	D 792	0.062-0.07
Flame Spread	E 84	25 or less

Installation Methods

BRP ladder systems have to be installed as per the directions of approved assembly drawing or design engineer.



Typical BRP Standard Caged Ladder with Walk-Through



FRP LADDER WITH SAFETY CAGE



264 REYNOLDSDALE ROAD
BEDFORD, PENNSYLVANIA 15522

PHONE: 814-623-8125 WEB SITE: www.bedfordreinforced.com
FAX: 814-623-6032 EMAIL: sales@bedfordreinforced.com

TITLE:

FRP LADDER
WITH SAFETY CAGE

LADDER TYPE:

FR RESIN:

VE RESIN:

LADDER COLOR:

YELLOW:

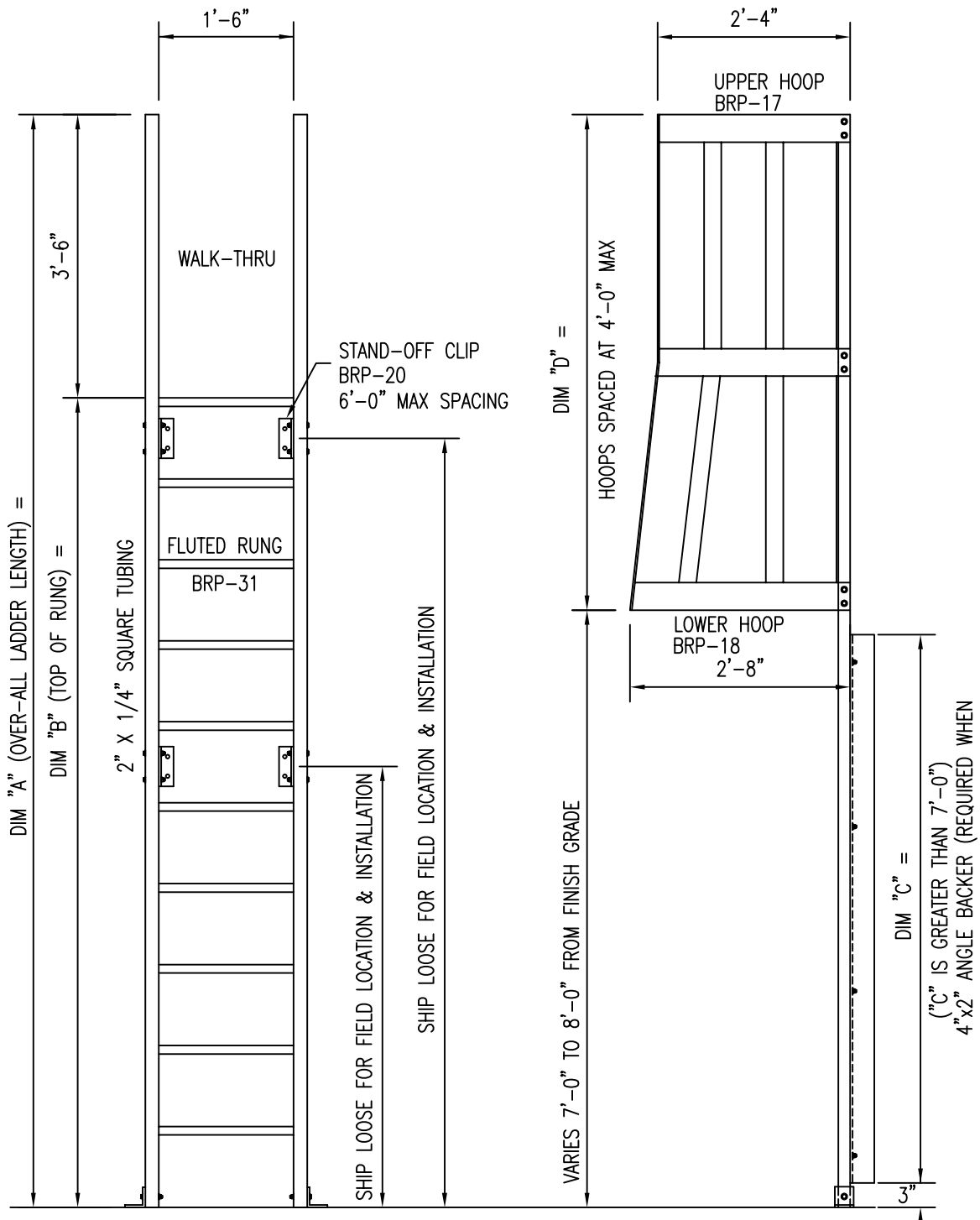
OTHER:

(IF OTHER PLEASE NOTE COLOR)

SCALE: N.T.S.

DATE: 5-15-14

DRAWN BY: BB



FRP LADDER WITH SAFETY CAGE, WALK-THRU AND BACKER



264 REYNOLDSDALE ROAD
BEDFORD, PENNSYLVANIA 15522

PHONE: 814-623-8125 WEB SITE: www.bedfordreinforced.com
FAX: 814-623-6032 EMAIL: sales@bedfordreinforced.com

TITLE:

FRP LADDER
WITH SAFETY CAGE
AND WALK-THRU
AND BACKER

LADDER TYPE:

FR RESIN:
VE RESIN:

LADDER COLOR:

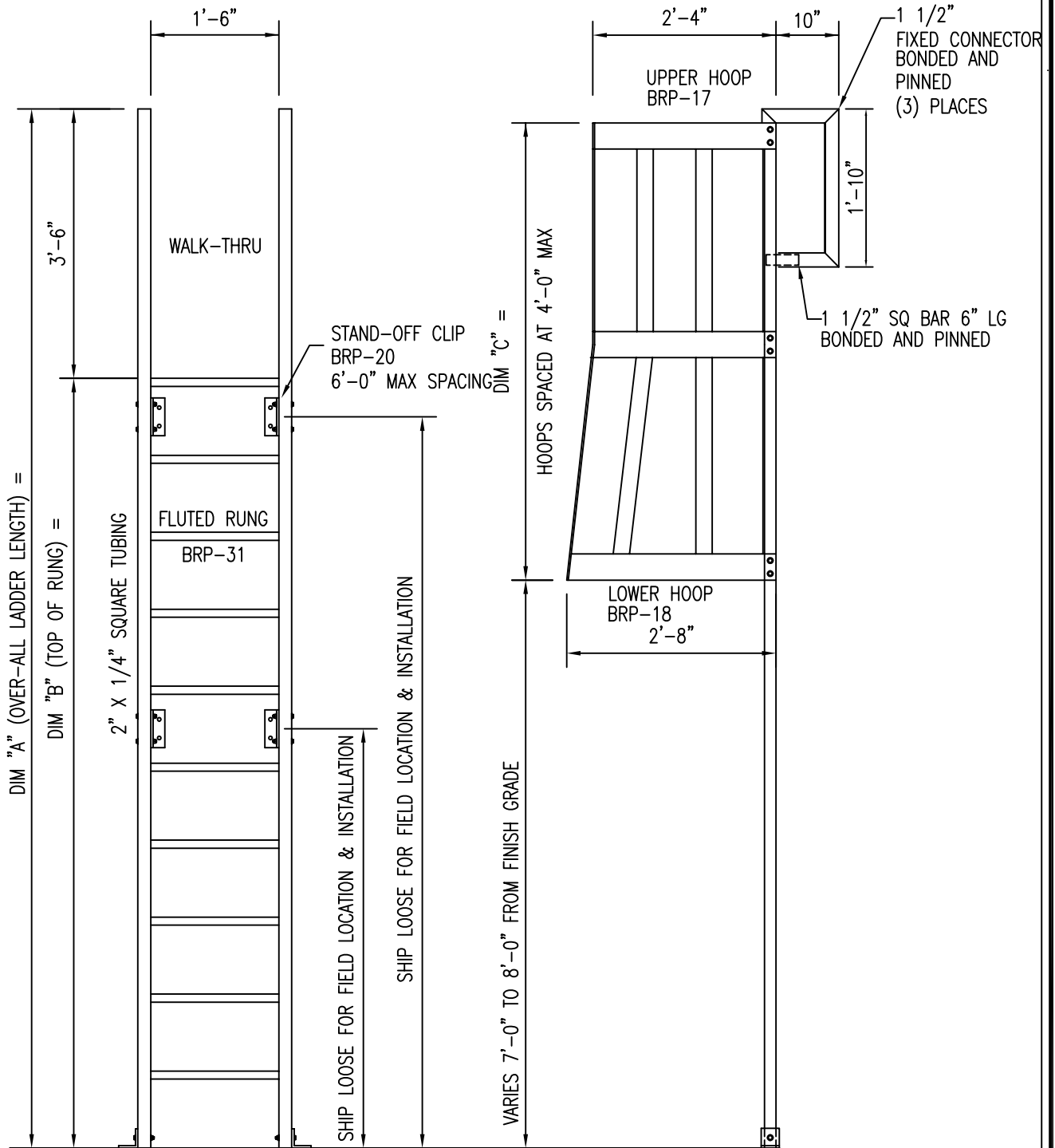
YELLOW:
OTHER:

(IF OTHER PLEASE NOTE COLOR)

SCALE: N.T.S.

DATE: 5-15-14

DRAWN BY: BB



FRP LADDER WITH SAFETY CAGE AND RETURN



264 REYNOLDSDALE ROAD
BEDFORD, PENNSYLVANIA 15522

PHONE: 814-623-8125 WEB SITE: www.bedfordreinforced.com
FAX: 814-623-6032 EMAIL: sales@bedfordreinforced.com

TITLE:

FRP LADDER
WITH SAFETY CAGE
AND RETURN

LADDER TYPE:

FR RESIN:

VE RESIN:

LADDER COLOR:

YELLOW:

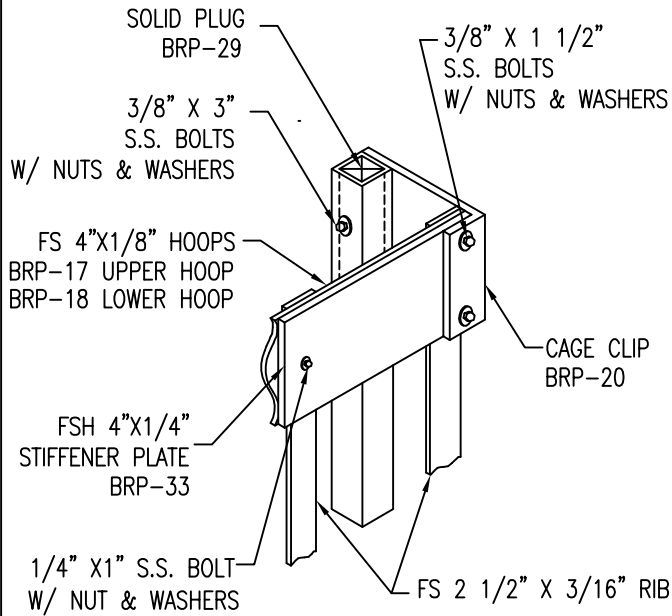
OTHER:

(IF OTHER PLEASE NOTE COLOR)

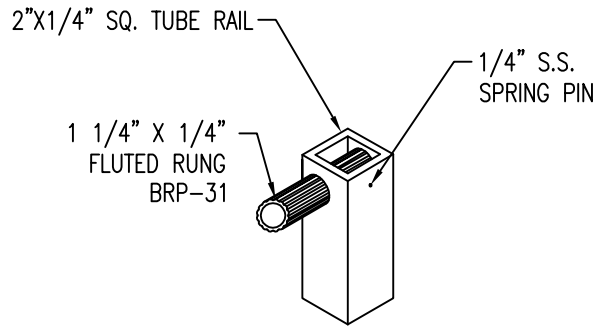
SCALE: N.T.S.

DATE: 5-15-14

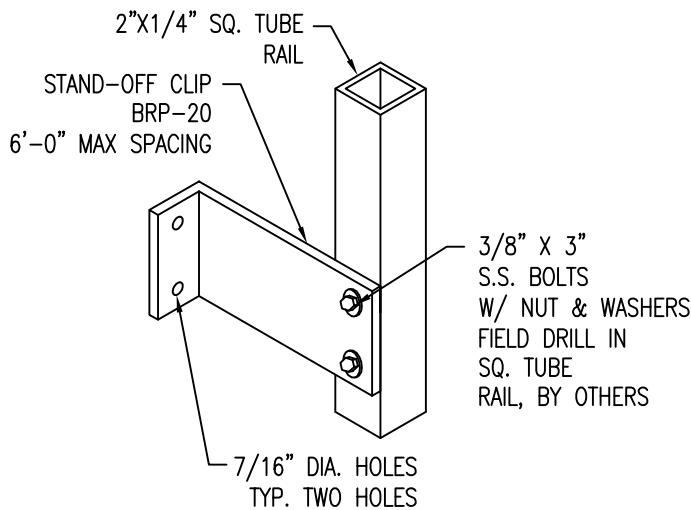
DRAWN BY: BB



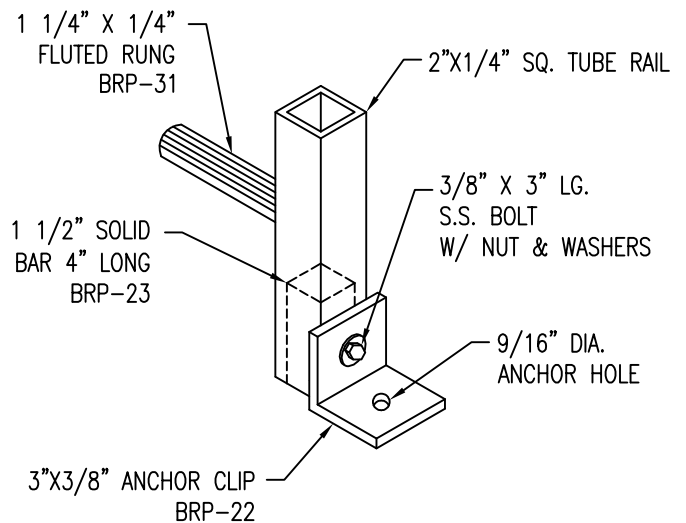
CAGE ATTACHMENT DETAIL
SCALE: N.T.S.



LADDER RUNG DETAIL
SCALE: N.T.S.



STAND-OFF CLIP DETAIL
SCALE: N.T.S.



ANCHOR CLIP DETAIL
SCALE: N.T.S.



264 REYNOLDSDALE ROAD
BEDFORD, PENNSYLVANIA 15522

PHONE: 814-623-8125 WEB SITE: www.bedfordreinforced.com
FAX: 814-623-6032 EMAIL: sales@bedfordreinforced.com

TITLE:

LADDER CONNECTION
DETAILS

LADDER TYPE:

FR RESIN:

VE RESIN:

LADDER COLOR:

YELLOW:

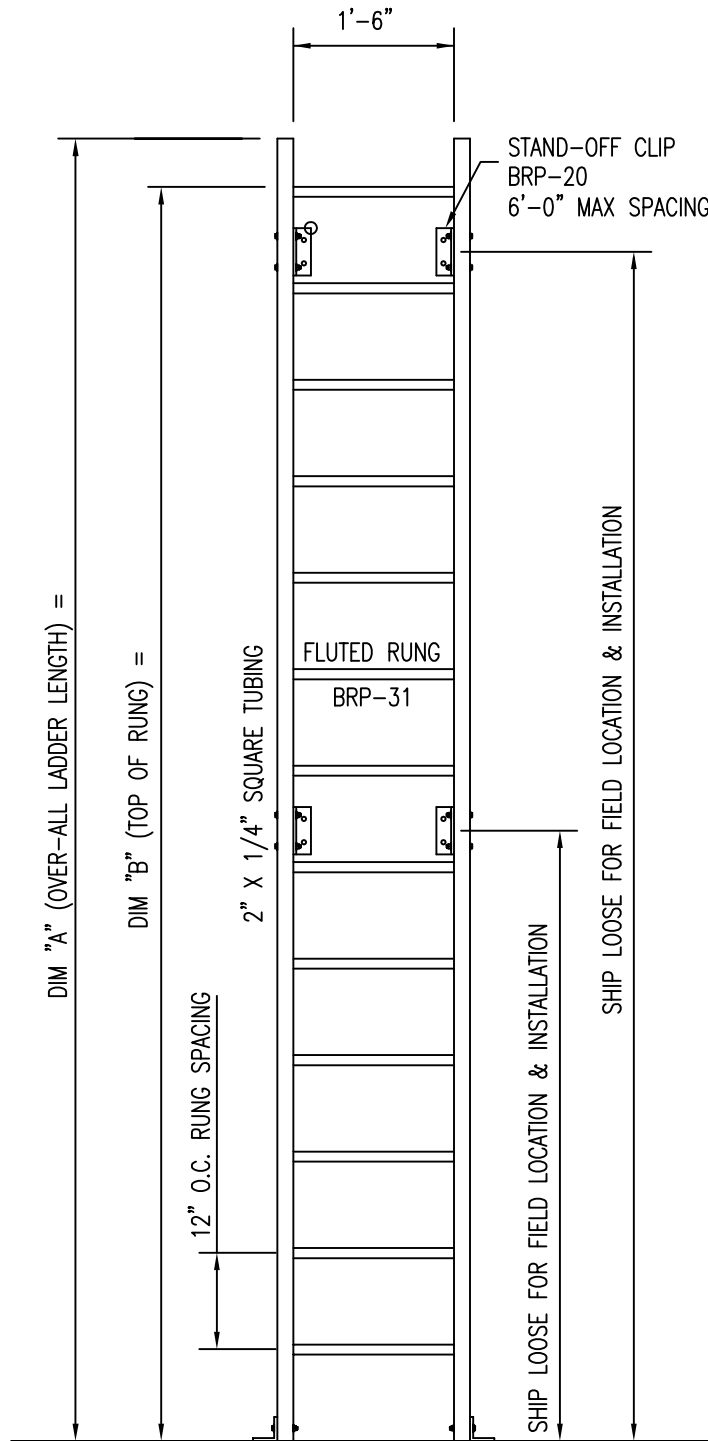
OTHER:

(IF OTHER PLEASE NOTE COLOR)

SCALE: N.T.S.

DATE: 5-15-14

DRAWN BY: BB



FRP ACCESS LADDER WITH RUNGS THROUGHOUT



264 REYNOLDSDALE ROAD
BEDFORD, PENNSYLVANIA 15522

PHONE: 814-623-8125 WEB SITE: www.bedfordreinforced.com
FAX: 814-623-6032 EMAIL: sales@bedfordreinforced.com

TITLE:

FRP ACCESS LADDER
WITH RUNGS THROUGHOUT

LADDER TYPE:

FR RESIN:

VE RESIN:

LADDER COLOR:

YELLOW:

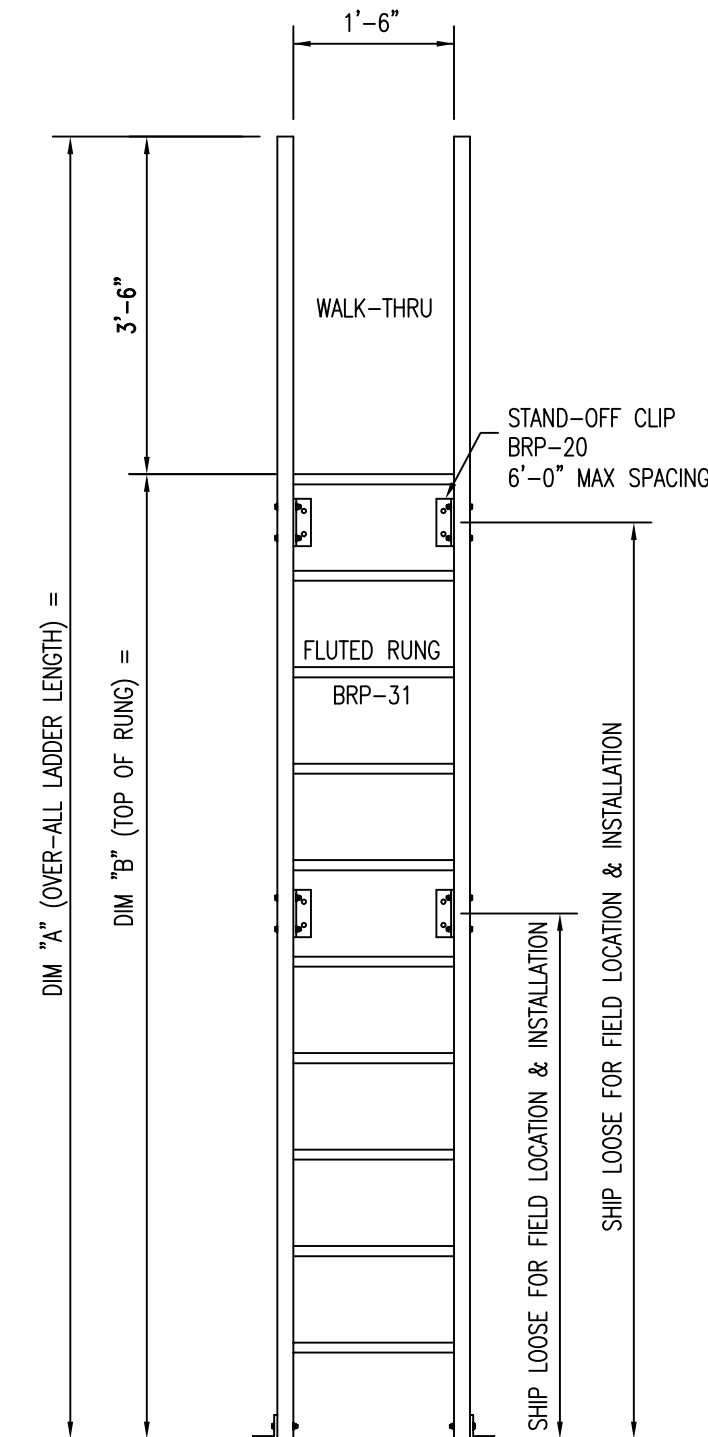
OTHER:

(IF OTHER PLEASE NOTE COLOR)

SCALE: N.T.S.

DATE: 5-15-14

DRAWN BY: BB



FRP ACCESS LADDER WITH WALK-THRU



264 REYNOLDSDALE ROAD
BEDFORD, PENNSYLVANIA 15522

PHONE: 814-623-8125 WEB SITE: www.bedfordreinforced.com
FAX: 814-623-6032 EMAIL sales@bedfordreinforced.com

TITLE:

FRP ACCESS LADDER
WITH WALK-THRU

LADDER TYPE:

FR RESIN:

VE RESIN:

LADDER COLOR:

YELLOW:

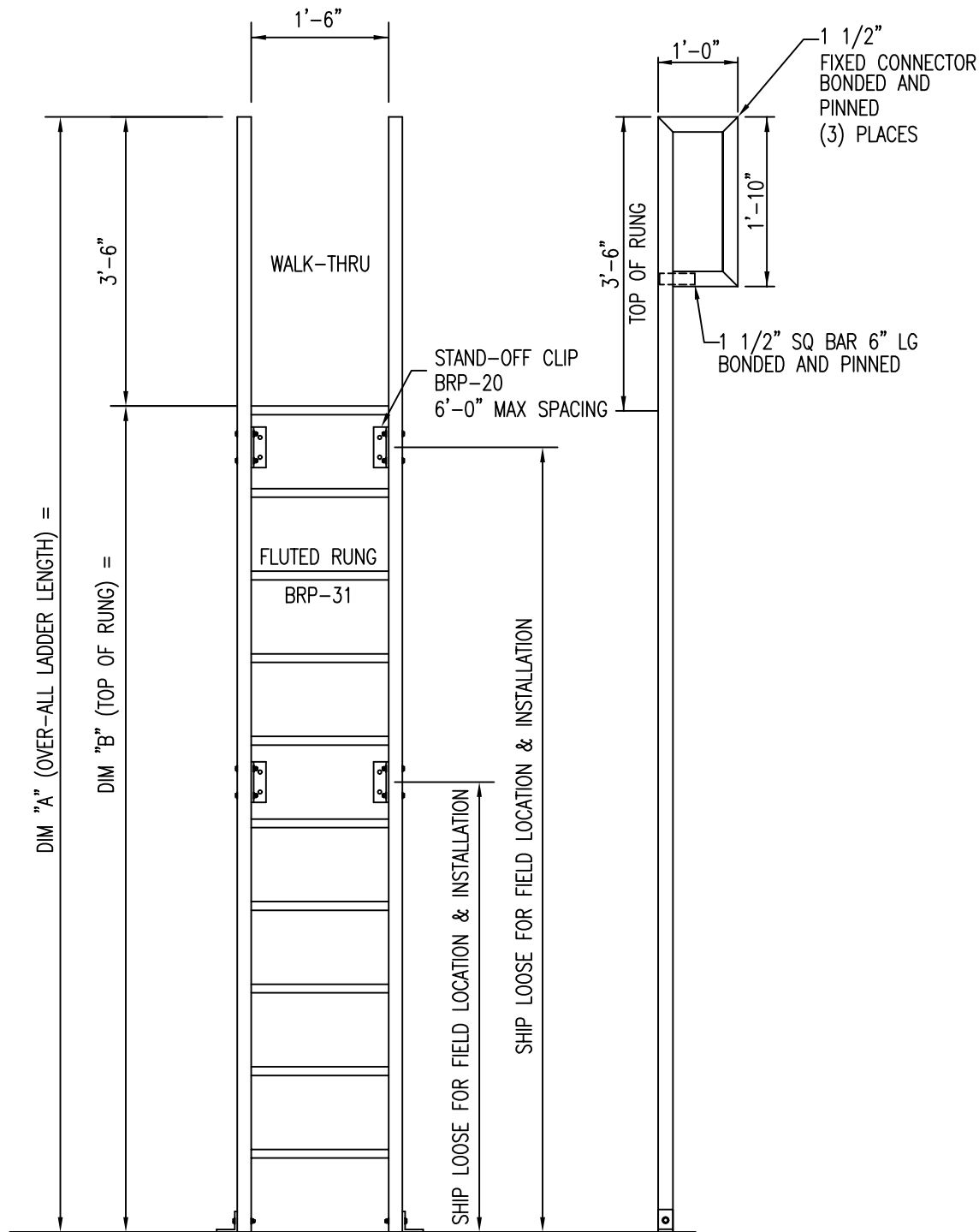
OTHER:

(IF OTHER PLEASE NOTE COLOR)

SCALE: N.T.S.

DATE: 5-15-14

DRAWN BY: BB



FRP ACCESS LADDER WITH WALK-THRU AND RETURN



264 REYNOLDSDALE ROAD
BEDFORD, PENNSYLVANIA 15522

PHONE: 814-623-8125 WEB SITE: www.bedfordreinforced.com
FAX: 814-623-6032 EMAIL: sales@bedfordreinforced.com

TITLE:

FRP ACCESS LADDER
WITH WALK-THRU
AND RETURN

LADDER TYPE:

FR RESIN:
VE RESIN:

LADDER COLOR:

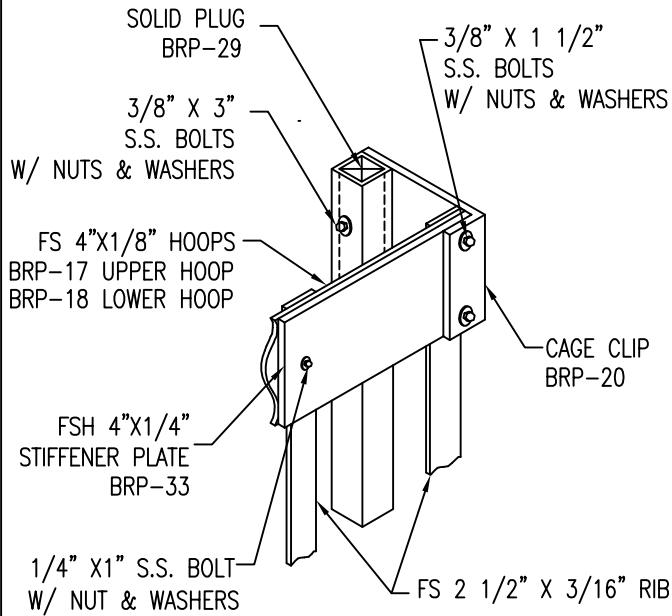
YELLOW:
OTHER:

(IF OTHER PLEASE NOTE COLOR)

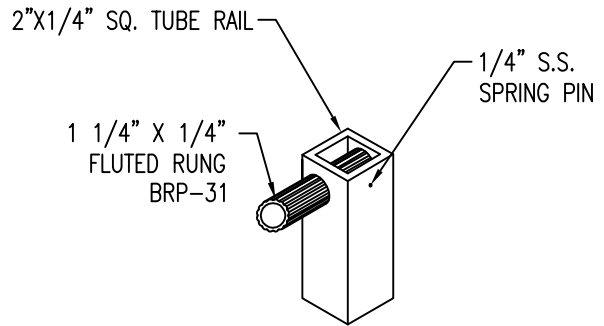
SCALE: N.T.S.

DATE: 5-15-14

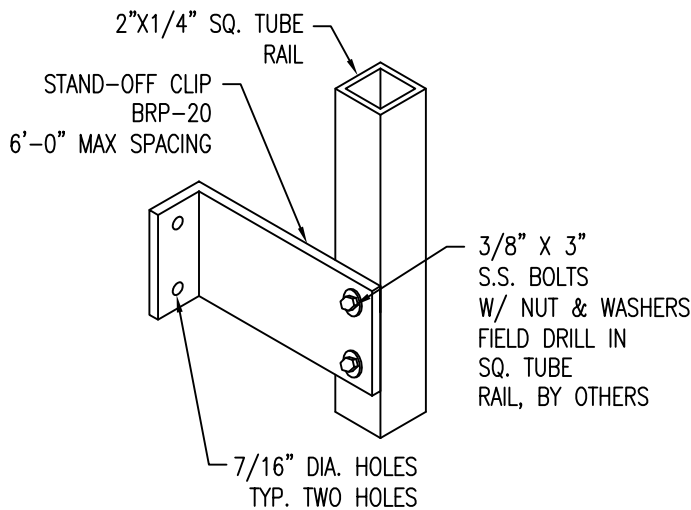
DRAWN BY: BB



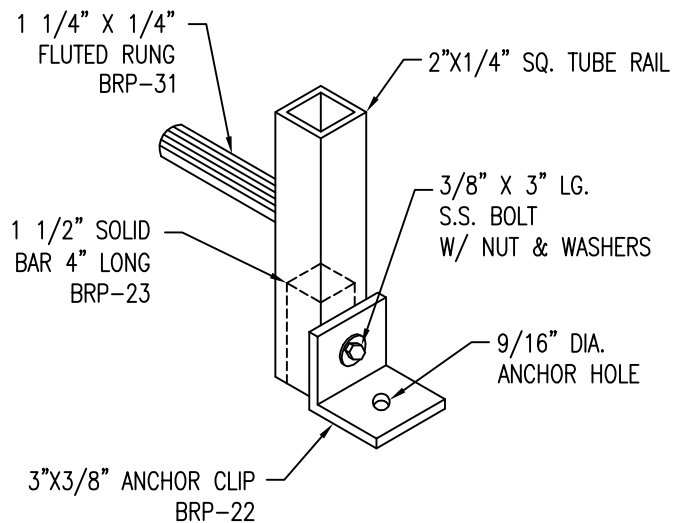
CAGE ATTACHMENT DETAIL
SCALE: N.T.S.



LADDER RUNG DETAIL
SCALE: N.T.S.



STAND-OFF CLIP DETAIL
SCALE: N.T.S.



ANCHOR CLIP DETAIL
SCALE: N.T.S.



264 REYNOLDSDALE ROAD
BEDFORD, PENNSYLVANIA 15522

PHONE: 814-623-8125 WEB SITE: www.bedfordreinforced.com
FAX: 814-623-6032 EMAIL: sales@bedfordreinforced.com

TITLE:

LADDER CONNECTION
DETAILS

LADDER TYPE:

FR RESIN:

VE RESIN:

LADDER COLOR:

YELLOW:

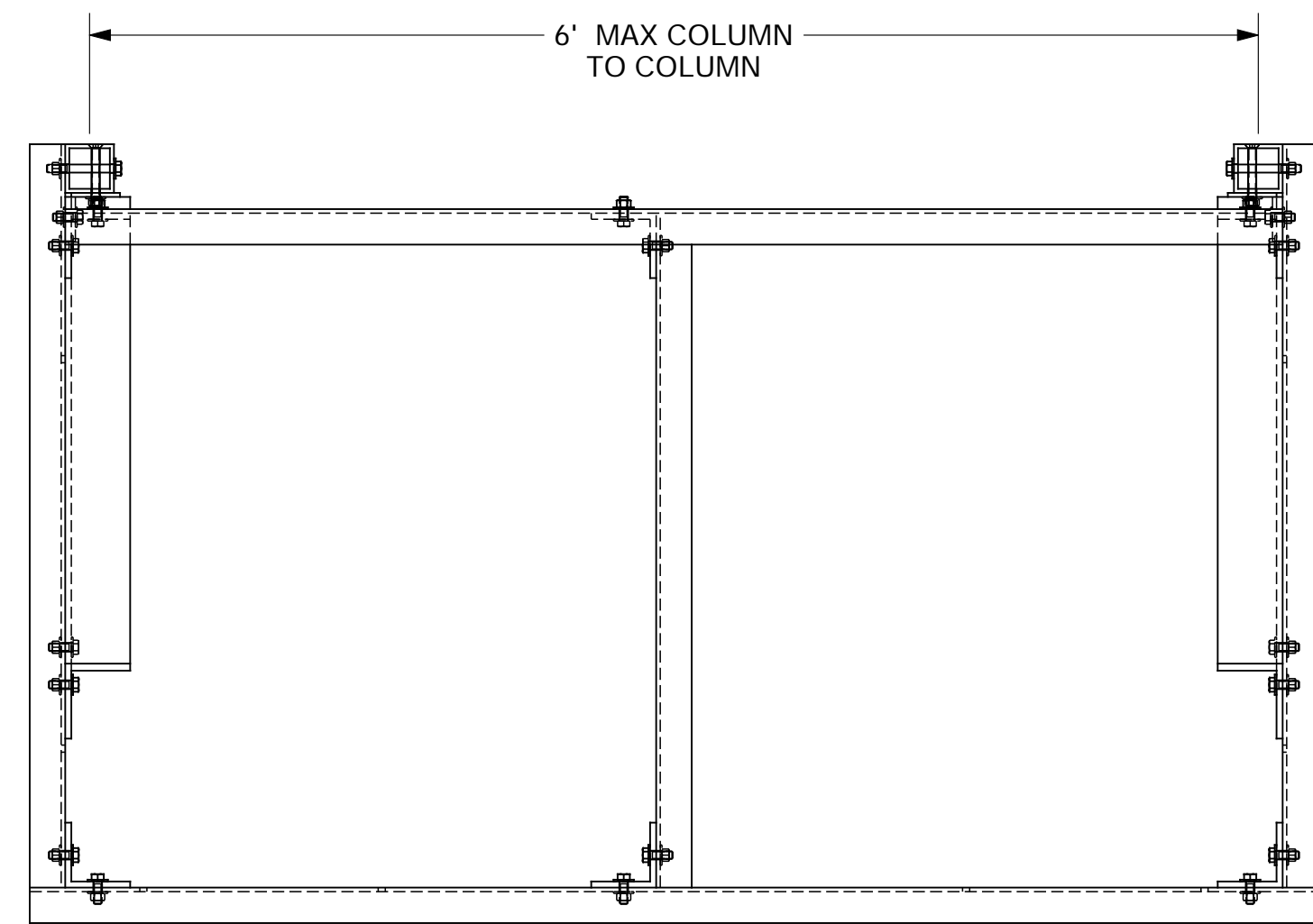
OTHER:

(IF OTHER PLEASE NOTE COLOR)

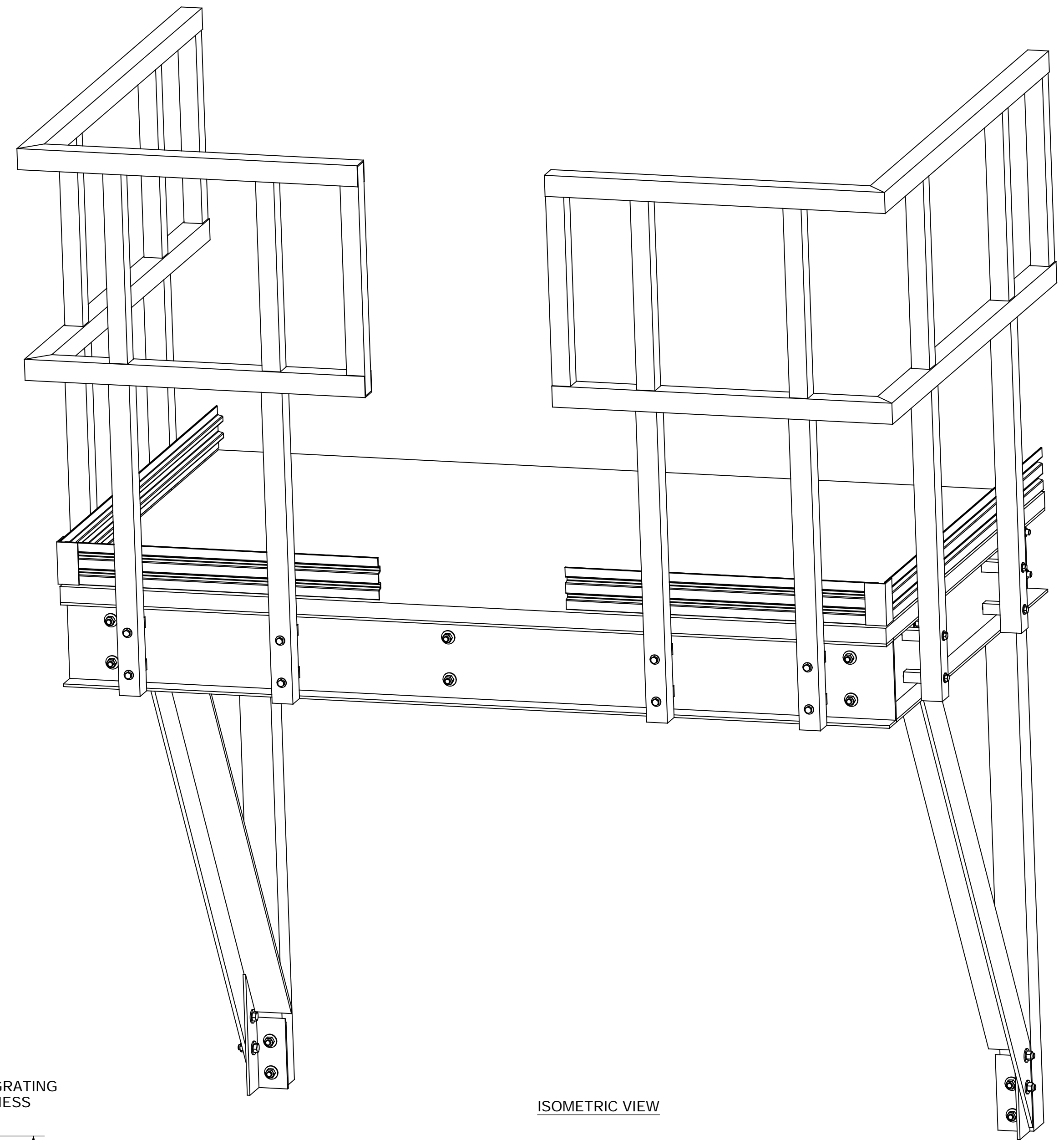
SCALE: N.T.S.

DATE: 5-15-14

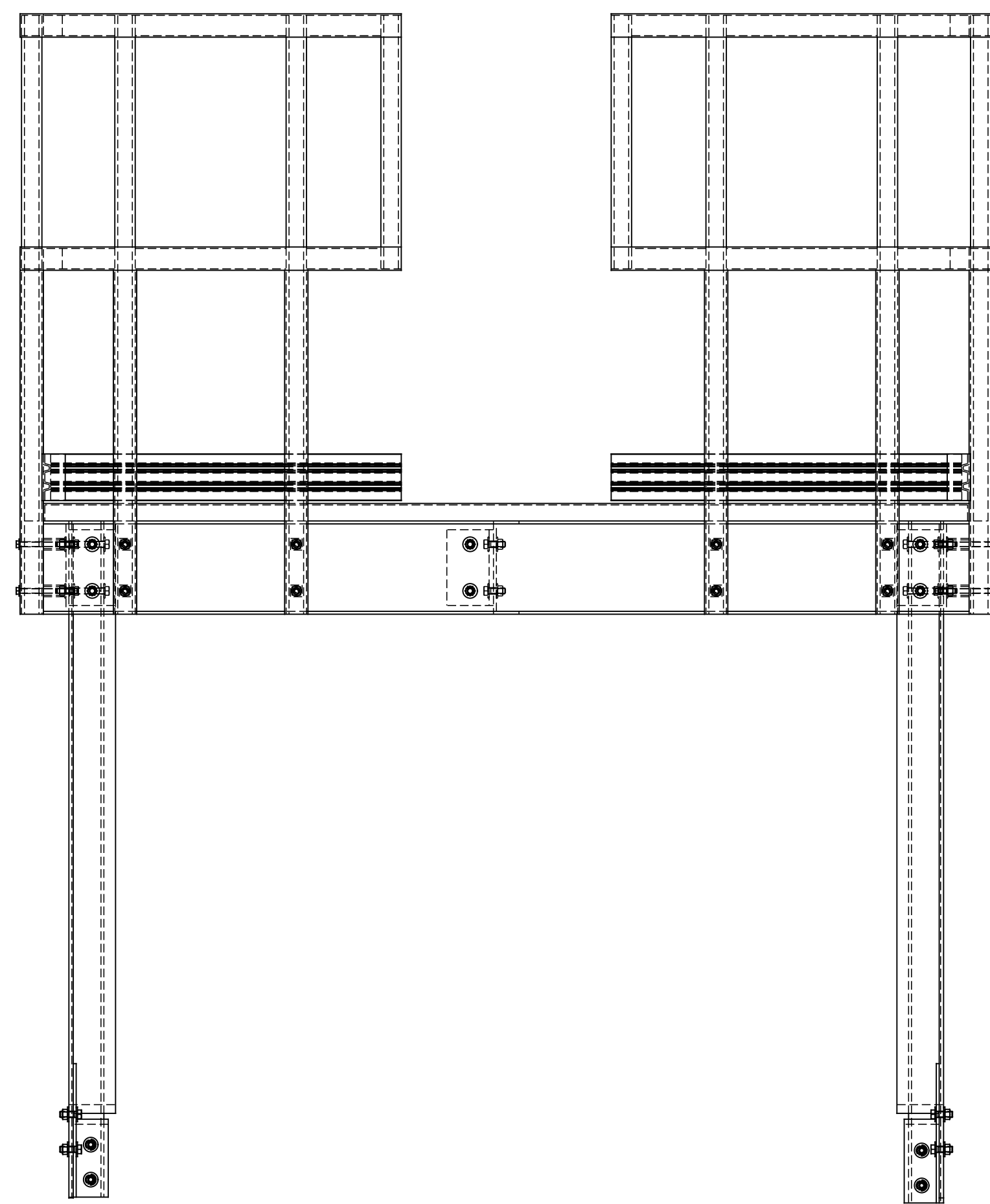
DRAWN BY: BB



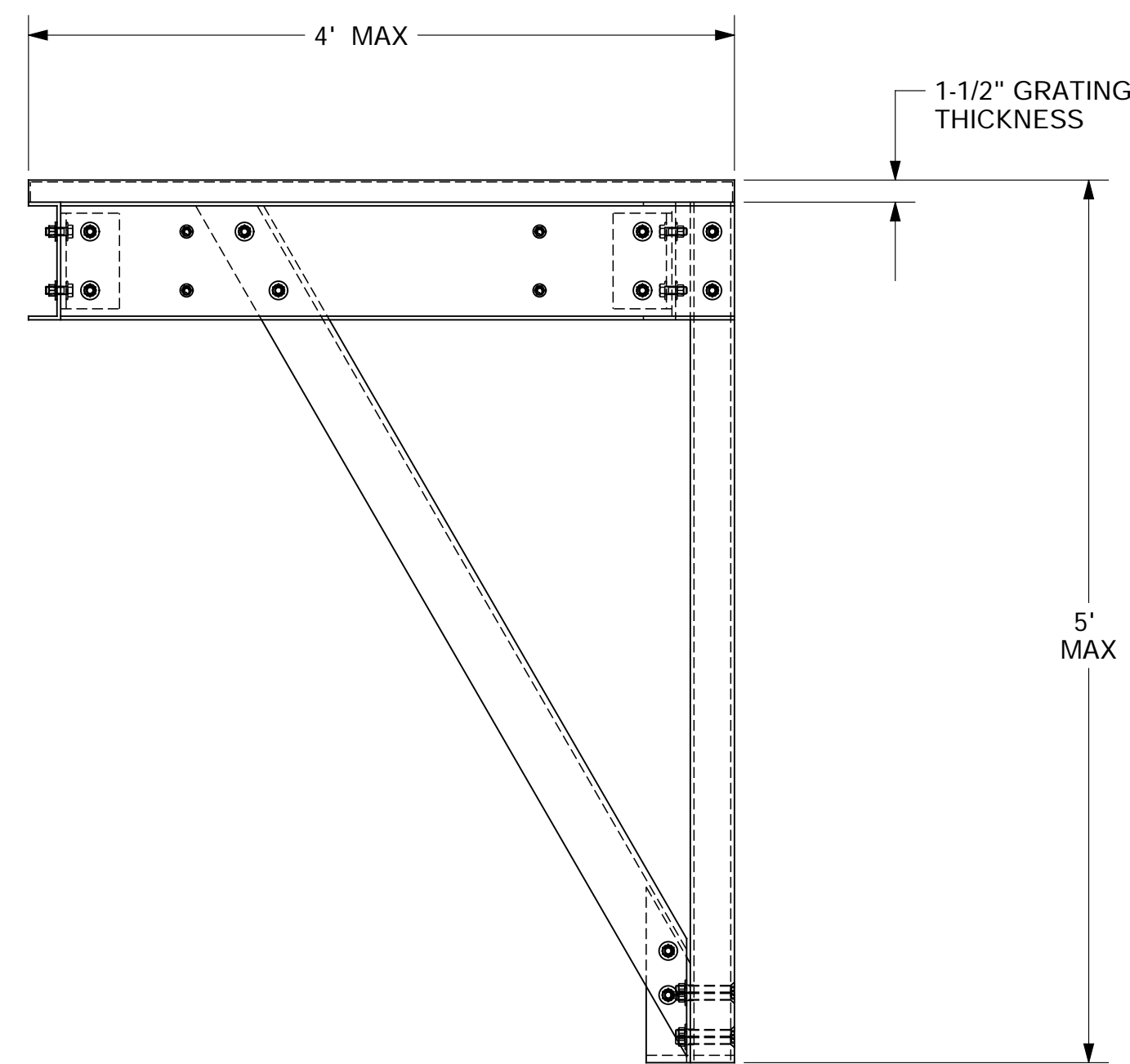
PLAN VIEW
GRATING NOT SHOWN



ISOMETRIC VIEW



FRONT ELEVATION



SIDE ELEVATION

REV.	BY	DATE	DESCRIPTION
00	-	-	-

Since 1974

REINFORCED PLASTICS

THIS DRAWING IS THE CONFIDENTIAL PROPERTY OF BEDFORD REINFORCED PLASTICS, INC. AND MUST NOT BE MADE PUBLIC OR COPIED, AND IS SUBJECT TO RETURN ON DEMAND. ALL RIGHTS OF INVENTION OR DESIGN ARE RESERVED.

TOLERANCES	DRAWN	AEC	TITLE
X/Y: ± 1/16	CHECKED	BB	RESTING PLATFORM FRONT ACCESS
.XX: ± .030	APPROVED		JOB
.XXX: ± .010	DATE	10-27-14	DRAWING NO. PLATFORM-FRONT
ANG: ± 0.5°	REF.		SCALE 3/32" = 1" REV SHEET 1 OF 1