



Owner's Manual

GANGWAY MOUNTING GUIDE

INCLUDES:

STANDARD MOUNTING	(ALL GANGWAYS)
TOP MOUNTING	(OPTIONAL PURCHASE)
UNIVERSAL MOUNTING	(OPTIONAL PURCHASE)
UNDERSLUNG MOUNTING	(OPTIONAL PURCHASE)

SafeRack
Sales and Support
730 Electric Drive
Sumter, S.C. 29153
803-774-7225

THIS PRODUCT AND/OR IT'S COMPONENTS MAY BE COVERED BY ONE OR MORE PATENTS, SEE WWW.SAFERACK.COM/PATENTS

GANGWAY MOUNTING GUIDE

a

ALL HARDWARE NEEDED FOR ASSEMBLY IS LOCATED IN A 5 GALLON BUCKET SHIPPED WITH THE UNIT.

IT IS RECOMMENDED THAT A FORKLIFT, HOIST, CRANE OR OTHER SUITABLE LIFTING DEVICE BE USED FOR PROPER AND SAFE ASSEMBLY.

IT IS THE CUSTOMER'S RESPONSIBILITY TO MAKE SURE THE EXISTING STRUCTURE WILL SUPPORT THE LOADS FROM THE NEW SAFERACK EQUIPMENT.

THIS MOUNTING GUIDE CONTAINS FOUR DIFFERENT MOUNTING STYLES:
STANDARD, TOP, UNIVERSAL, AND UNDERSLUNG

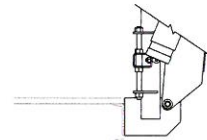
REFER TO APPROPRIATE SHEET FOR MOUNTING INSTRUCTIONS.

BILL OF MATERIALS ARE PER GANGWAY.



STANDARD MOUNTING: – SEE SHEETS 1 & 2.

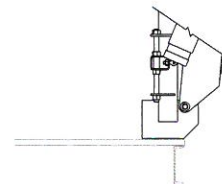
DESCRIPTION	QUANTITY	MATERIAL
MANUAL	1	
GANGWAY	1	
Ø3/4–10x2–1/4" BOLT,NUT,FLAT WASHERS	4	A325



TOP MOUNTING: – SEE SHEET 3.

DESCRIPTION	QUANTITY	MATERIAL
MANUAL	1	
GANGWAY	1	
TOP MOUNT CLIPS	1 PAIR	GALV. STEEL
Ø3/4–10x2–1/4" BOLT,NUT,FLAT WASHERS	8	A325

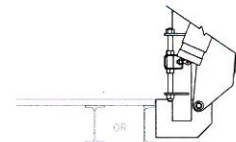
NOTE: MODIFICATION TO EXISTING PLATFORM OR BOLTING THROUGH GRATING MAY REQUIRE BOLTS LONGER THAN SUPPLIED.



UNIVERSAL MOUNTING: – SEE SHEET 4.

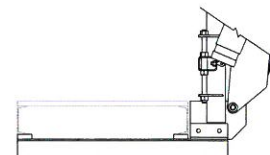
DESCRIPTION	QUANTITY	MATERIAL
MANUAL	1	
GANGWAY	1	
TOP MOUNT CLIPS	1 PAIR	GALV. STEEL
UNIVERSAL MOUNT CLIPS	1 PAIR	GALV. STEEL
SPACER PLATES	6	GALV. STEEL
Ø3/4–10x2–1/4" BOLT,NUT,FLAT WASHERS	4	A325
Ø3/4–10x2–3/4" BOLT,NUT,FLAT WASHERS	4	A325
Ø3/4–10x3–1/2" BOLT,NUT,FLAT WASHERS	4	A325

NOTE: 1 PAIR OF CLIPS INCLUDE A LEFT AND RIGHT CLIP ANGLE.



UNDERSLUNG MOUNTING: – SEE SHEET 5.

DESCRIPTION	QUANTITY	MATERIAL
MANUAL	1	
GANGWAY	1	
UNDERSLUNG MOUNT	1	GALV. STEEL
TOP MOUNT CLIPS	1 PAIR	GALV. STEEL
Ø3/4–10x2–1/4" BOLT,NUT,FLAT WASHERS	8	A325
Ø5/8–11x2" BOLT,NUT,FLAT & BEVEL WASHERS	4	A325



ASSEMBLY INSTRUCTIONS

STANDARD MOUNTING

1

STANDARD MOUNT

- USE MOUNTING PATTERN IN BACK OF GANGWAY BASETREAD
 - USE ONLY FOR MOUNTING TO SMOOTH FACE OF CHANNEL WEB
- NOTE: ALL BOLT HOLES MUST BE USED WHEN MOUNTING GANGWAY.**

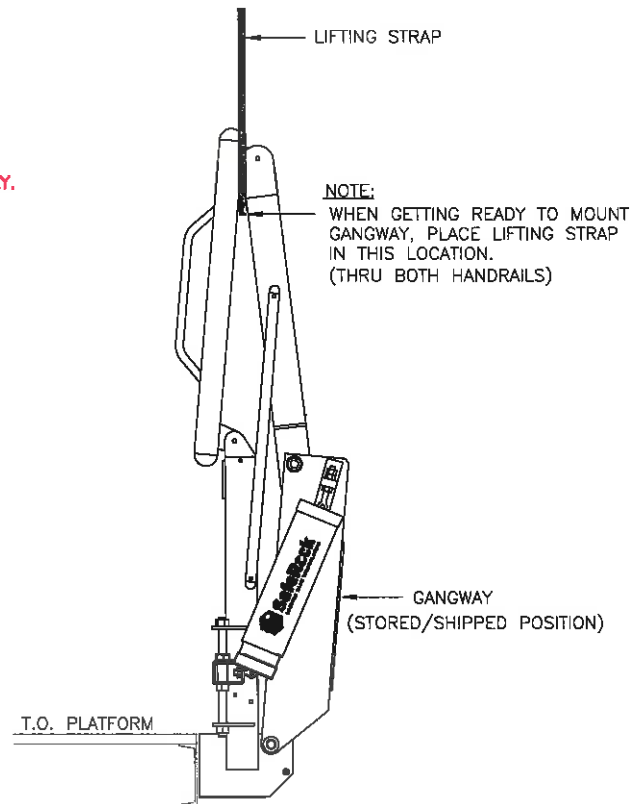
APPLIES TO:

- 8" CHANNEL WITH RECESSED GRATING
- 8" CHANNEL WITH 1 $\frac{1}{4}$ " GRATING
- 8" CHANNEL WITH 1 $\frac{1}{2}$ " GRATING
- 10" CHANNEL WITH RECESSED GRATING
- 10" CHANNEL WITH 1 $\frac{1}{4}$ " GRATING
- 12" CHANNEL WITH RECESSED GRATING
- 12" CHANNEL WITH 1 $\frac{1}{4}$ " GRATING
- 12" CHANNEL WITH 1 $\frac{1}{2}$ " GRATING
- 15" CHANNEL WITH RECESSED GRATING

WARNING:

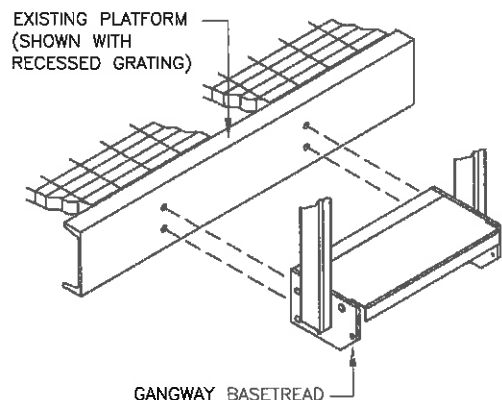
TOP OF GANGWAY BASETREAD
SHOULD MATCH TOP OF
PLATFORM WALK SURFACE.

IF THIS NOT DONE, THIS COULD
CREATE A TRIPPING HAZARD.



INSTALLATION:

- 1 - PRE-DRILL $\frac{1}{16}$ " DIAMETER HOLES INTO EXISTING PLATFORM USING APPROPRIATE TEMPLATE FROM SHEET 2.
- 2 - LIFT GANGWAY IN PLACE USING CORRECTLY POSITIONED LIFTING STRAPS AND FORKLIFT, HOIST, CRANE, OR OTHER SUITABLE LIFTING DEVICE.
- 3 - LOOSELY BOLT GANGWAY INTO PLACE USING BOLTS, NUTS, AND WASHERS.
- 4 - VERIFY GANGWAY IS PLUMB AND SQUARE. THE GANGWAY WALK SURFACE SHOULD BE LEVEL WITH THE PLATFORM WALK SURFACE.
- 5 - TIGHTEN AND TORQUE ALL BOLTS, USE THE TIGHTENING/TORQUING GUIDE ON SHEET 6 OF THIS MANUAL.



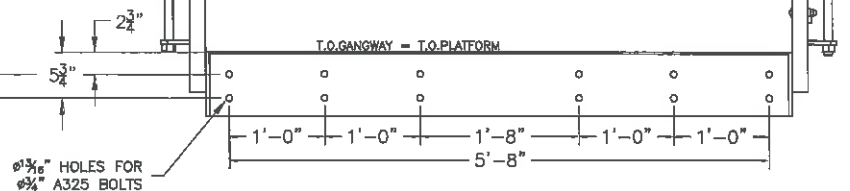
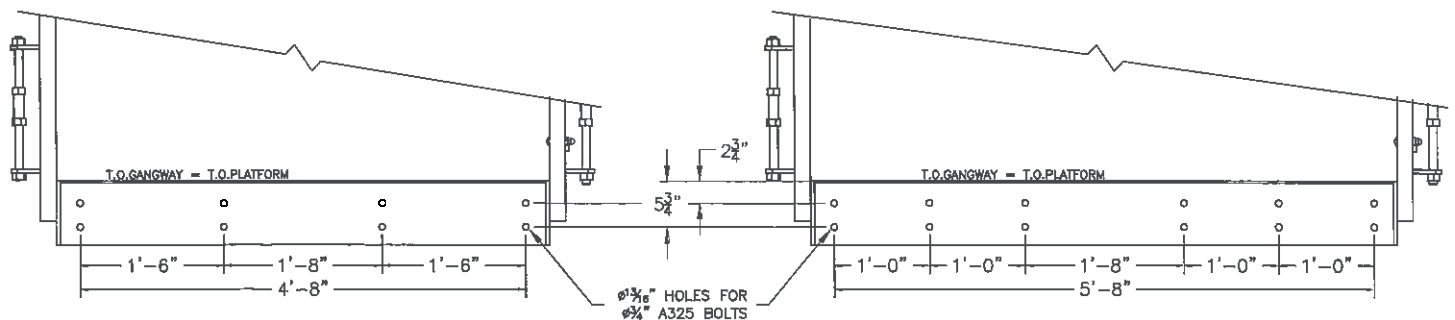
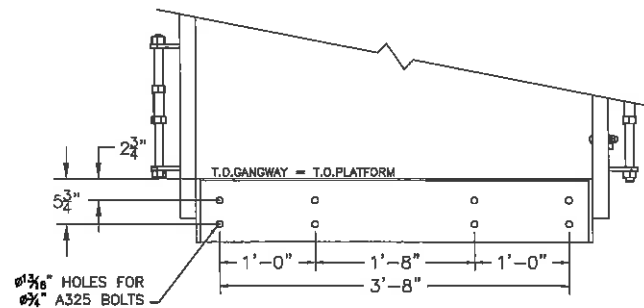
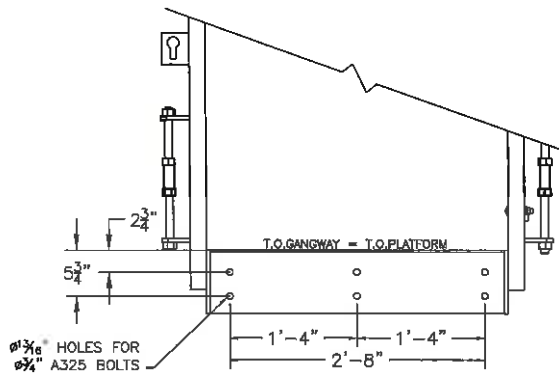
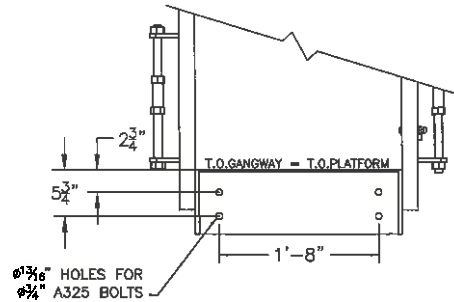
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STANDARD MOUNTING

ASSEMBLY INSTRUCTIONS

STANDARD MOUNTING

STANDARD GANGWAY MOUNTING TEMPLATES:



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STANDARD MOUNTING

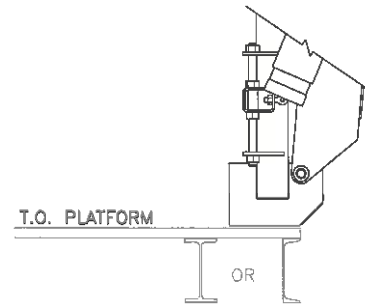
ASSEMBLY INSTRUCTIONS

TOP MOUNTING

TOP MOUNT

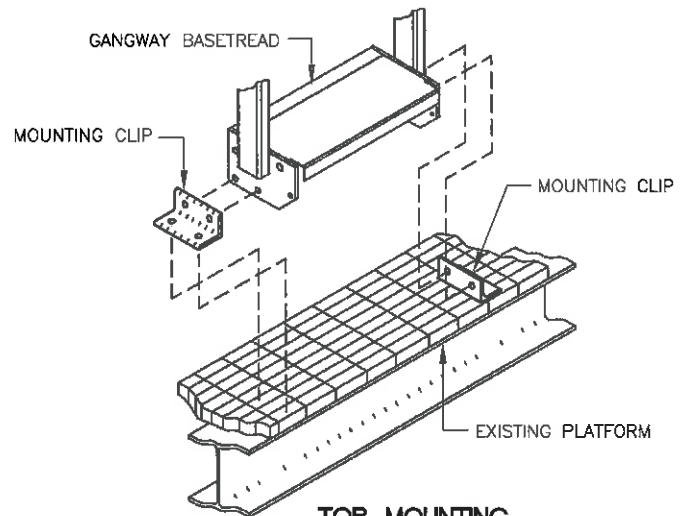
- EXISTING PLATFORMS MAY REQUIRE ADDITIONAL SUPPORT STEEL FOR MOUNTING GANGWAY. DETERMINATION AND SUPPLY OF ADDITIONAL STEEL IS BY OTHERS.
- GANGWAY MUST BOLT TO STRUCTURAL STEEL, NOT JUST GRATING.

APPLIES TO:
VARIOUS PLATFORM STYLES INCLUDING
CHANNEL AND WIDE FLANGE CONSTRUCTION
WITH RECESSED OR TOP MOUNTED GRATING.

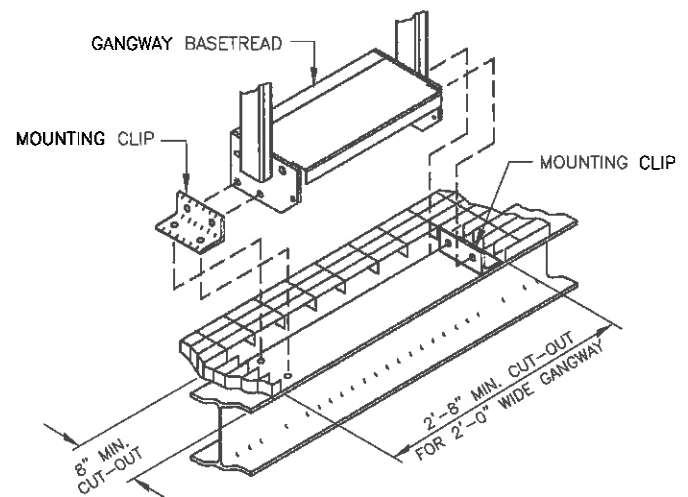


INSTALLATION:

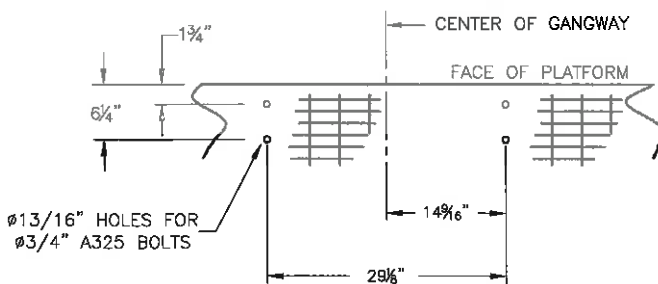
- PRE-DRILL $\frac{13}{16}$ " DIAMETER HOLES INTO EXISTING PLATFORM STRUCTURAL STEEL USING THE PROVIDED TEMPLATE.
- ATTACH MOUNTING CLIPS TO EACH SIDE OF GANGWAY BASETREAD USING (4) SUPPLIED BOLTS, NUTS, AND WASHERS.
- LIFT GANGWAY IN PLACE USING CORRECTLY POSITIONED LIFTING STRAPS (SEE SHEET 1) AND FORKLIFT, HOIST, CRANE, OR OTHER SUITABLE LIFTING DEVICE.
- LOOSELY BOLT GANGWAY INTO PLACE USING REMAINING BOLTS, NUTS AND WASHERS. MODIFICATIONS TO PLATFORM MAY REQUIRE LONGER BOLTS THAN SUPPLIED.
- VERIFY GANGWAY IS PLUMB AND SQUARE.
- TIGHTEN AND TORQUE ALL BOLTS, USE THE TIGHTENING/TORQUING GUIDE ON SHEET 6 OF THIS MANUAL.



TOP MOUNTING
ABOVE GRATING



TOP MOUNTING
GRATING CUT-OUT



MOUNTING HOLE TEMPLATE
FOR 2'-0" WIDE GANGWAY
(PLAN VIEW)



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TOP MOUNTING

ASSEMBLY INSTRUCTIONS

UNIVERSAL MOUNT CLIP

UNIVERSAL MOUNT

— USE ONLY FOR MOUNTING TO FLANGE SIDE OF CHANNEL WEB OR WEB OF W-BEAM

APPLIES TO: 8" CHANNEL WITH 1¼" GRATING
8" CHANNEL WITH 1½" GRATING

10" CHANNEL WITH RECESSED GRATING
10" CHANNEL WITH 1¼" GRATING

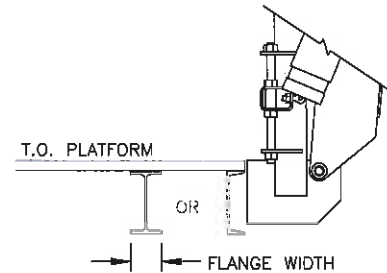
12" CHANNEL WITH RECESSED GRATING
12" CHANNEL WITH 1" GRATING
12" CHANNEL WITH 1¼" GRATING

15" CHANNEL WITH RECESSED GRATING

8" BEAM WITH 1¼" GRATING
8" BEAM WITH 1½" GRATING

10" BEAM WITH RECESSED GRATING
10" BEAM WITH 1¼" GRATING
10" BEAM WITH 1½" GRATING (UP TO AND INCLUDING W10x30)

12" BEAM WITH RECESSED GRATING
12" BEAM WITH 1¼" GRATING
12" BEAM WITH 1½" GRATING (UP TO AND INCLUDING W12x35)



WARNING:

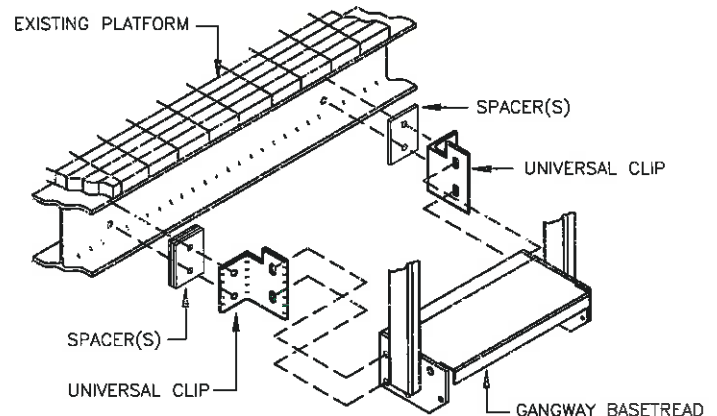
TOP OF GANGWAY BASETREAD SHOULD MATCH TOP OF PLATFORM WALK SURFACE.

IF THIS NOT DONE, THIS COULD CREATE A TRIPPING HAZARD.

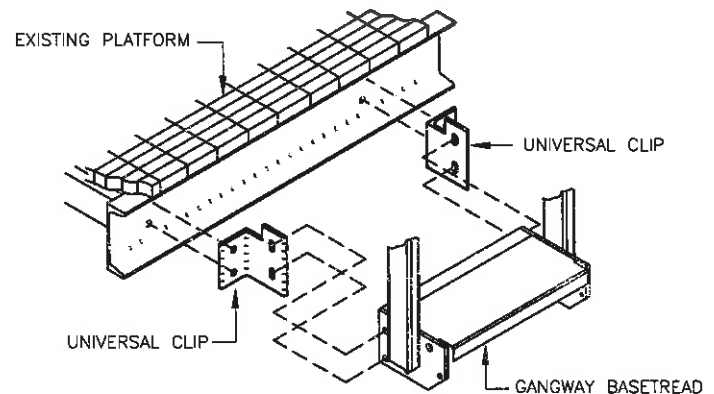
INSTALLATION:

- 1 — PRE-DRILL 13/16" DIAMETER HOLES INTO EXISTING PLATFORM STRUCTURAL STEEL USING THE PROVIDED TEMPLATE.
- 2 — MEASURE FLANGE WIDTH AND DETERMINE THE REQUIRED BOLT LENGTH AND NUMBER OF SPACERS FROM THE BELOW LIST:
 - 4½" FLANGE OR SMALLER
— USE MOUNTING CLIP (¾"x2" BOLT)
 - 4½" TO 5½" FLANGE
— USE MOUNTING CLIP, ONE SPACER (¾"x2¼"/2¾" BOLT)
 - 5½" TO 6½" FLANGE
— USE MOUNTING CLIP, TWO SPACERS (¾"x2¾" BOLT)
 - 6½" TO 8" FLANGE
— USE MOUNTING CLIP, THREE SPACERS (¾"x3¼" BOLT)
- 3 — ATTACH UNIVERSAL CLIPS TO EACH SIDE OF GANGWAY BASETREAD USING (4) SUPPLIED 2" LONG BOLTS, NUTS, AND WASHERS.
- 4 — LIFT GANGWAY IN PLACE USING CORRECTLY POSITIONED LIFTING STRAPS (SEE SHEET 1) AND FORKLIFT, HOIST, CRANE, OR OTHER SUITABLE LIFTING DEVICE.
- 5 — LOOSELY BOLT GANGWAY INTO PLACE USING (4) OF THE SUPPLIED APPROPRIATE LENGTH BOLTS, NUTS, AND WASHERS.
- 6 — VERIFY GANGWAY IS PLUMB AND SQUARE. THE GANGWAY WALK SURFACE SHOULD BE LEVEL WITH THE PLATFORM WALK SURFACE.
- 7 — TIGHTEN AND TORQUE ALL BOLTS, USE THE TIGHTENING/TORQUING GUIDE ON SHEET 6 OF THIS MANUAL.

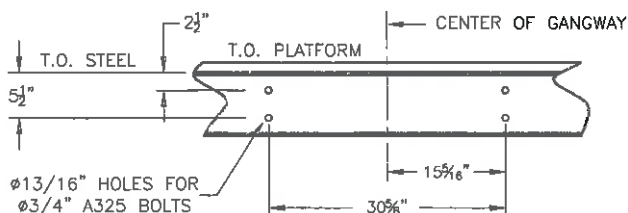
NOTE:
IF MORE THAN ONE SPACER IS REQUIRED, TAC WELD THEM TOGETHER ON TWO SIDES TO HELP PREVENT SLIPPING.



WIDE FLANGE MOUNTING



CHANNEL MOUNTING



MOUNTING HOLE TEMPLATE FOR 2'-0" WIDE GANGWAY

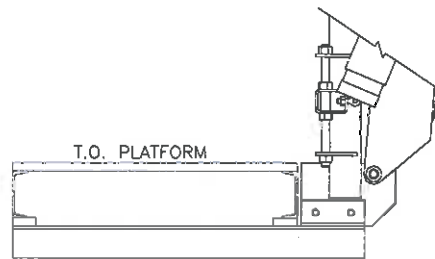
ASSEMBLY INSTRUCTIONS

UNDERSLUNG MOUNT

UNDERSLUNG MOUNT

APPLIES TO:

6" CHANNELS WITH TOES IN OR OUT
AND GRATING ON TOP OF CHANNEL.



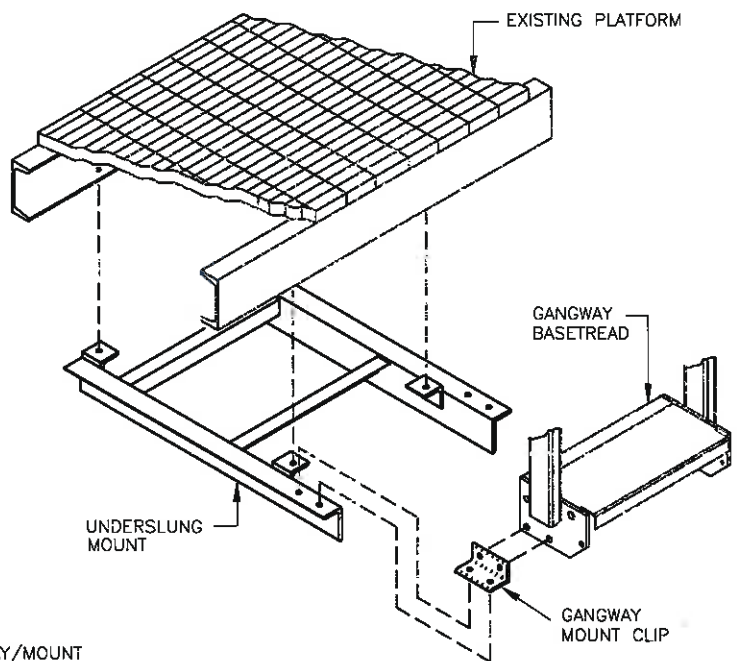
WARNING:

TOP OF GANGWAY BASETREAD
SHOULD MATCH TOP OF
PLATFORM WALK SURFACE.

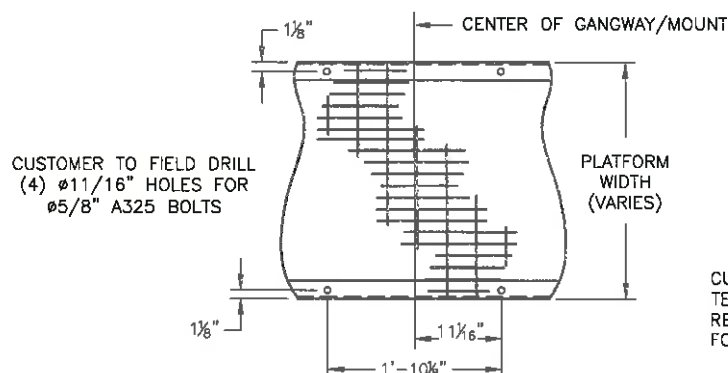
IF THIS NOT DONE, THIS COULD
CREATE A TRIPPING HAZARD.

INSTALLATION:

- 1 - PRE-DRILL $\frac{1}{8}$ " DIAMETER HOLES INTO BOTTOM FLANGES OF EXISTING PLATFORM CHANNEL USING THE PROVIDED TEMPLATE.
- 2 - LIFT MOUNT IN PLACE UNDER THE PLATFORM USING FORKLIFT, HOIST, CRANE, OR OTHER SUITABLE LIFTING DEVICE.
- 3 - LOOSELY BOLT MOUNT INTO PLACE USING (4) $\frac{5}{8}$ "x2" BOLTS NUTS, FLAT AND BEVEL WASHERS.
- 4 - VERIFY MOUNT IS PLUMB AND SQUARE. THE TOP OF THE MOUNT SHOULD BE 8" BELOW THE PLATFORM WALK SURFACE.
- 5 - TIGHTEN AND TORQUE ALL BOLTS, USE THE TIGHTENING/TORQUING GUIDE ON SHEET 6 OF THIS MANUAL.
- 6 - ATTACH MOUNTING CLIPS TO EACH SIDE OF GANGWAY BASETREAD USING (4) $\frac{3}{4}$ "x2 $\frac{1}{4}$ " BOLTS, NUTS, AND WASHERS.
- 7 - LIFT GANGWAY IN PLACE USING CORRECTLY POSITIONED LIFTING STRAPS (SEE SHEET 1) AND FORKLIFT, HOIST, CRANE, OR OTHER SUITABLE LIFTING DEVICE.
- 8 - LOOSELY BOLT GANGWAY INTO PLACE USING REMAINING $\frac{3}{4}$ "x2 $\frac{1}{4}$ " BOLTS, NUTS AND WASHERS.
- 9 - VERIFY GANGWAY IS PLUMB AND SQUARE. THE GANGWAY WALK SURFACE SHOULD BE LEVEL WITH THE PLATFORM WALK SURFACE.
- 10 - TIGHTEN AND TORQUE ALL BOLTS, USE THE TIGHTENING/TORQUING GUIDE ON SHEET 6 OF THIS MANUAL.



NOTE:
MOUNTING IS TYPICAL
EACH SIDE OF GANGWAY



MOUNTING HOLE TEMPLATE (PLAN VIEW)
FOR 2'-0" WIDE GANGWAY

CUSTOMER NOTE:
TEMPLATE SHOWN IS FOR TYPICAL 2'-0" WIDE GANGWAY.
REFER TO FINAL DRAWING FOR MOUNTING HOLE LAYOUT
FOR YOUR UNIT.



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UNDERSLUNG MOUNT

TIGHTENING/TORQUING BOLT GUIDE

TURN-OF-NUT METHOD:

BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG-TIGHT CONDITION. SNUG TIGHT IS DEFINED AS THE TIGHTNESS THAT EXIST WHEN THE PLIES OF THE JOINT ARE IN FIRM CONTACT. THIS MAY BE ATTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF A MAN USING AN ORDINARY SPUD WRENCH. FOLLOWING THIS INITIAL OPERATION, ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED IN THE TABLE BELOW. DURING THE TIGHTENING OPERATION, THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH.

BOLT LENGTH	DISPOSITION OF OUTER FACE OF BOLTED PARTS		
	BOTH FACES NORMAL TO BOLT AXIS	ONE FACE NORMAL TO BOLT AXIS AND OTHER SLOPED NOT MORE THAN 1:20 (BEVELED WASHER NOT USED)	BOTH FACES SLOPED NOT MORE THAN 1:20 FROM NORMAL TO THE BOLT AXIS (BEVELED WASHER NOT USED)
UP TO AND INCLUDING 4 DIAMETERS	1/3 TURN	1/2 TURN	2/3 TURN
UP TO AND INCLUDING 4 DIAMETERS	1/2 TURN	2/3 TURN	5/6 TURN
UP TO AND INCLUDING 4 DIAMETERS	2/3 TURN	5/6 TURN	1 TURN

NUT ROTATION IS RELATIVE TO BOLT REGARDLESS OF THE ELEMENT (NUT OR BOLT) BEING TURNED. FOR BOLTS INSTALLED BY 1/2 TURN OR LESS, THE TOLERANCE SHOULD BE PLUS OR MINUS 30 DEGREES; FOR BOLTS INSTALLED BY 2/3 TURN AND MORE, THE TOLERANCE SHOULD BE PLUS OR MINUS 45 DEGREES.

NOTE:

INFORMATION FROM AISC STEEL MANUAL, SECTION A14 – ASD BOLT SPECIFICATION.

TORQUE METHOD:

INSTALLATION AND INSPECTION TORQUES MUST BE DETERMINED OR SET USING SKIDMORE-WILHELM (OR SIMILAR) DEVICES TO ESTABLISH ACTUAL TENSION, THEN DETERMINE THE TORQUE. A BASIC EQUATION TO ESTABLISH THE TORQUE-TENSION RELATIONSHIP IS:

$$T = 0.0167 \times P \times D$$

WHERE

T = TORQUE (FOOT-POUNDS)
P = BOLT TENSION (POUNDS)
D = BOLT DIAMETER (INCHES)

THE VALUE 0.0167, CALLED THE "NUT FACTOR", IS A TRADITIONAL INDUSTRY AVERAGE. IT CAN RANGE AS LOW AS 0.01 FOR WELL-LUBRICATED ASSEMBLIES AND CAN EXCEED 0.025 FOR DRY OR RUSTY FASTENERS.

THE FOLLOWING TABLE MAY BE USED TO ESTIMATE THE TORQUE RANGES FOR VARIOUS A325 BOLTS WHEN THE MINIMUM REQUIRED PRETENSION IS PRESENT. IT MAY BE USED FOR THE SELECTION OF INSTALLATION AND INSPECTION TOOLS. IF BOLT TENSIONS ARE HIGHER THAN THE REQUIRED MINIMUM, TORQUES CAN BE CORRESPONDINGLY HIGHER. TABLE VALUES HAVE BEEN ROUNDED.

A325 BOLT DIAMETER (INCHES)	REQ'D TENSION (KIPS)	TORQUE		
		LOW (0.01)	AVERAGE (0.0167)	HIGH (0.025)
1/2	12	60	100	150
5/8	19	120	200	300
3/4	28	200	350	500
7/8	39	350	550	850
1	51	500	850	1300
1 1/8	56	650	1050	1600
1 1/4	71	900	1500	2200
1 3/8	85	1150	1950	2900
1 1/2	103	1550	2600	3900

A325 APPROXIMATE TORQUES (FOOT POUNDS)