

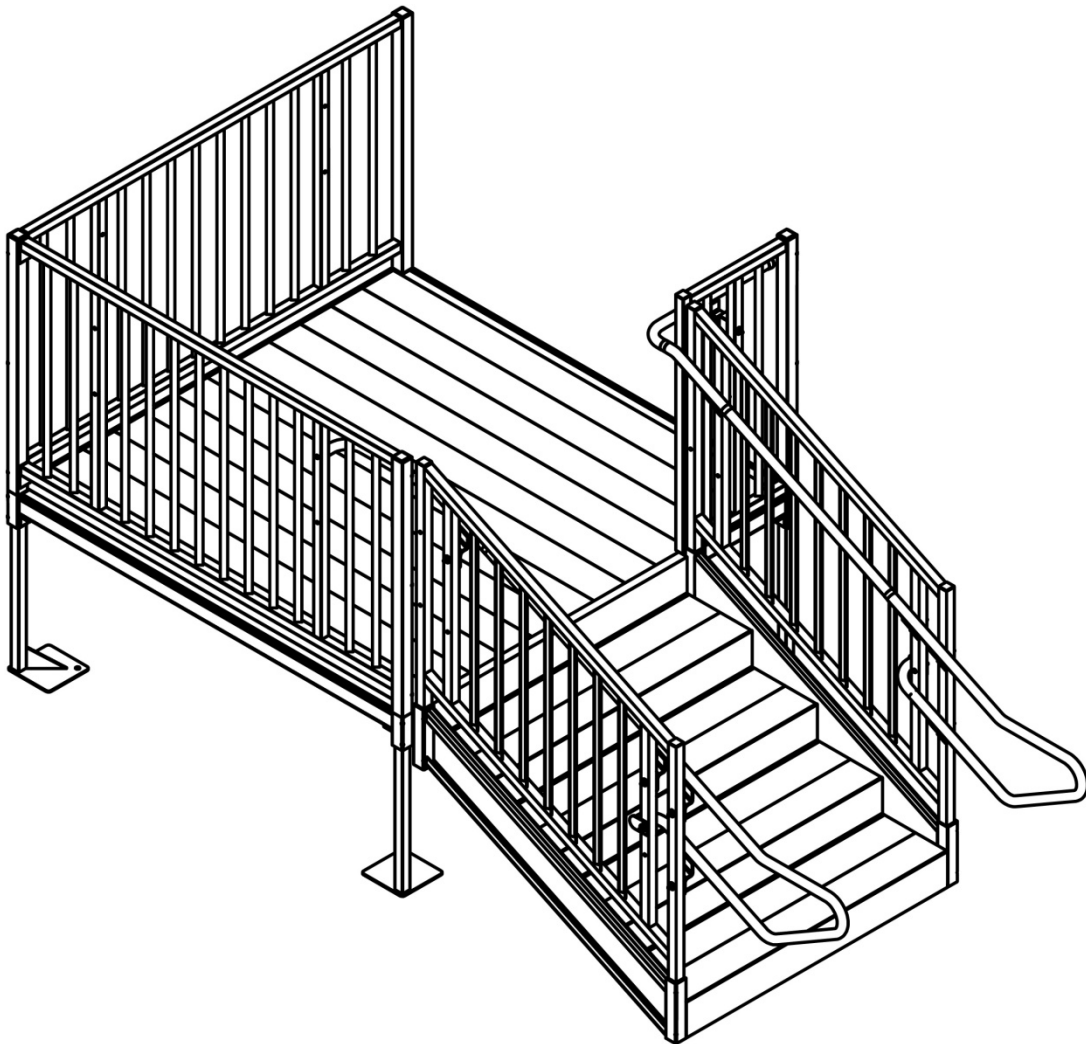
*Supplement*



---

# Assembly and Maintenance Guide

## Titan Series Commercial Step System



Manufactured in the USA

# **IMPORTANT! Read and follow all labels and assembly instructions – including warnings and cautions – prior to use!**

## **⚠ INSPECTION (BEFORE USE):**

1. Read and follow all labels and assembly instructions prior to use. To obtain a copy of complete instructions, warnings and cautions, visit [www.ezaccess.com](http://www.ezaccess.com) or call 1-800-258-8503.
2. Ensure all fasteners and locking mechanisms are in place and tightened. Regularly check and tighten as needed.
3. Inspect for damaged or missing parts before use. If damaged or missing parts are noted, **DO NOT USE!**
4. Check that all parts are in good condition.
5. If any part of the system is damaged or loose, **DO NOT USE** until repairs can be made by a certified installer or other qualified person.

## **⚠ PROPER SET UP AND USE:**

1. Consult local building codes in regard to securing system for wind loads.
2. Use ramp only with a qualified helper.
3. When steps are used with a ramp system, refer to your equipment's Owner Guide for the proper degree of incline/decline and chair direction. Never exceed its recommendations.
4. Do not use if walking surface is unsafe.
5. Steps may be slippery when wet or icy.
6. Proper maintenance and upkeep to the system is vital. **DO NOT USE** if step guards, handrails or supports are damaged or unstable.
7. Confirm that the system is correctly leveled and positioned securely. Periodically check for ground shifts.
8. **DANGER!** Metal conducts electricity. Do not use near exposed wiring or hang lights from system.
9. If any part of the system is damaged or loose, **DO NOT USE** until repairs can be made by a certified installer or other qualified person.
10. Never place anything under or attach anything to system.
11. Only use components supplied or approved by manufacturer with system.
12. Do not sit, stand, or climb on guards or handrails.
13. Do not play on or around system, including, but not limited to, running, jumping, bicycles, scooters, skateboards, etc.
14. Do not use handrails or steps to support planters, decorations, etc.
15. Properly support and restrain system in transit or storage.

## **⚠ MAINTENANCE:**

1. Proper maintenance and upkeep to the system is vital. **DO NOT USE** if step guards, handrails or supports are damaged or unstable.
2. Do not use if surface is covered with ice and/or snow. Accumulation must be shoveled and the tread surface swept clean before use.
3. At all times, keep system clear of dirt, leaves and other debris that may accumulate on the surface.
4. Confirm that the system is correctly leveled and positioned securely. Periodically check for ground shifts.
5. Ensure all fasteners and locking mechanisms are in place and tightened. Regularly check and tighten as needed.
6. Steps may be cleaned with mild detergent and warm water (consult manufacturer before using abrasives or chemical cleaners). Rinse well and use extra caution when step surface is wet.
7. For additional care, use or safety information, please call 1-800-258-8503.

# TABLE OF CONTENTS

BEFORE YOU BEGIN .....	2
TOOLS NEEDED .....	2
INTRODUCTION.....	2
PREPARATION AND INITIAL STEPS.....	3
INSTALLING THE FILLER SECTION .....	3-4
INSTALLING THE RISERS AND GUARDS.....	5-6
INSTALLING THE STEP HANDRAILS AND HANDRAIL ATTACHMENTS .....	7-8
RETURNING THE STEP HANDRAILS TO A PLATFORM GUARD, FILLER SECTION OR WALL .....	9-11
CONNECTING THE STEP HANDRAILS TO A RAMP HANDRAIL.....	12-13
FINAL STEPS .....	13

## Before you begin

1. Read and follow all instructions/warnings prior to assembly and use.
2. Load rating: 100 lbs. psf live load, 300 lbs. concentrated

## Tools needed

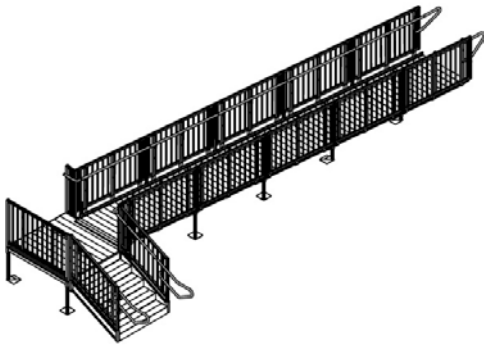
- ✓ Tape measure
- ✓ Level
- ✓ 9/16" socket or wrench
- ✓ 1/2" socket or wrench
- ✓ 3/16" hex key wrench
- ✓ 5/32" hex key wrench
- ✓ Hammer
- ✓ #3 square drive bit
- ✓ File
- ✓ Power drill
- ✓ Metal cutting chop saw or reciprocating saw
- ✓ Digging tools (if an obstacle needs to be removed)
- ✓ Two able-bodied persons needed for installation

## Introduction

The Titan Commercial Step System, manufactured by EZ-ACCESS, is designed to work in conjunction with the Titan Commercial Ramps and Platforms and is not intended to be a standalone product. The steps must be placed on a stable, level surface which is between 18" to 42" (in 6" increments) below the platform to which it is attached.

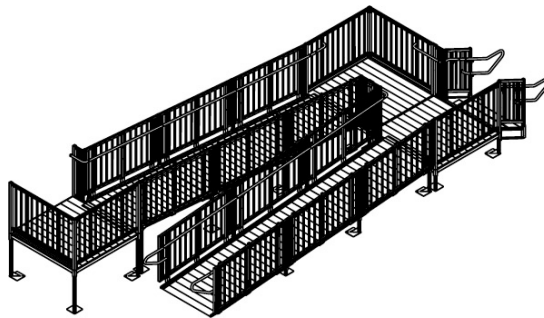
Leveling feet are provided with the system. However, use of leveling feet may cause the step system to no longer be in compliance with building codes and ADA guidelines. EZ-ACCESS will not be responsible for any costs or liabilities that result from use of the leveling feet. It is strongly recommended that the ground be leveled at the proper height with respect to the platform and that the leveling feet only be used where absolutely necessary.

There are three basic configurations in which the Titan Series Commercial Steps can be used (If your situation does not fall into one of the following categories, consult the project drawings for the specific arrangement):



### Configuration No. 1

Adjacent to ramp



### Configuration No. 2

In line with (on the opposite side of) an uphill ramp or at a top or stand alone platform opposite a wall.

**NOTE: Due to safety concerns, never place the steps across from a down-sloping ramp**



### Configuration No. 3

At a top or stand alone platform parallel to a wall



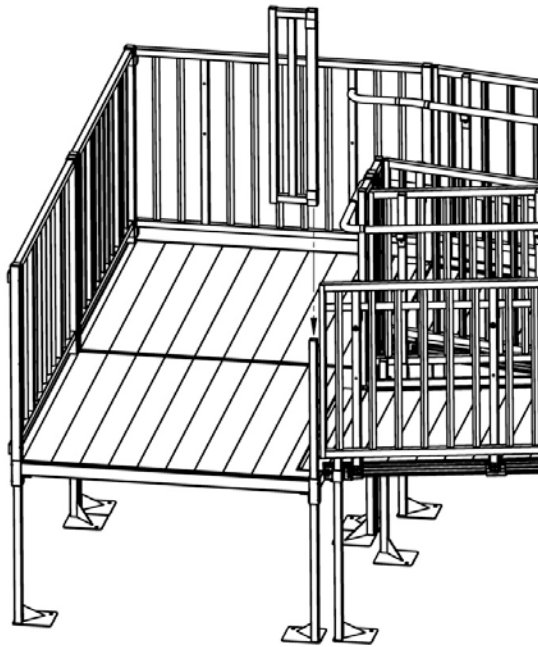
**WARNING:** Do not walk, sit, stand, etc. on steps until the installation is complete.

## 1. Preparation and Initial Steps

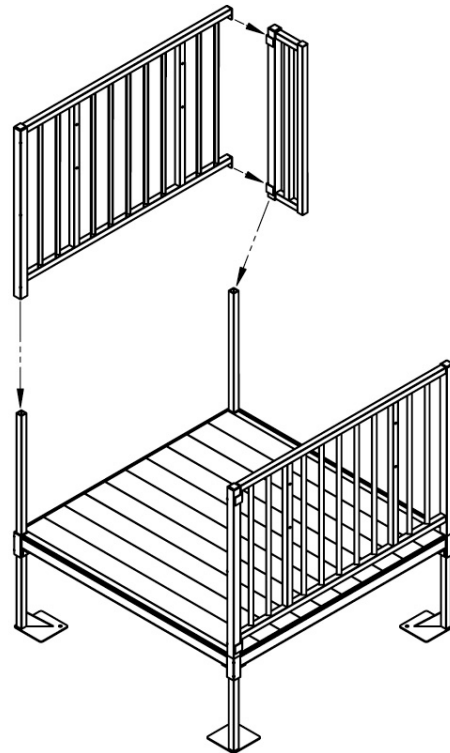
- 1.1 Install the platforms and ramps as described in the Titan Series Commercial Ramp manual, except DO NOT install a platform guard on the side of the platform where the steps will be installed.
- 1.2 The height of the platform to which a step system is attached must be level and 18" to 42" from the ground in six inch increments. If the ground in the area where the steps will be installed does not meet these requirements create a surface that is level and at the appropriate height by digging or filling.

## 2. Installing the Filler Section

- 2.1 Installing a filler section that will be adjacent to a ramp (Configuration 1):
  - 2.1.1 On the side of the platform adjacent to the ramp (where a platform guard would normally go) install a filler section over the platform leg closest to the ramp with the tab brackets facing out and capped (FIG. 1).
  - 2.1.2 Tighten the two lower 3/8"-16 setscrews in the bottom of the filler post with a 3/16" hex key wrench securely.
- 2.2 Installing a filler section that will be on the opposite side of an uphill ramp or at a top or stand alone platform opposite a wall (Configuration 2):
  - 2.2.1 On the side of the platform opposite the ramp or wall install a filler section over the leg where a platform guard or guard post would normally go.
    - 2.2.1.1 If the filler section is at 90° to a platform guard (FIG 2.) the tab brackets should point toward the guard and the tabs on the platform guard installed into the tab brackets as shown in the Titan Series Commercial Ramp manual.
    - 2.2.1.2 If the filler section is not at 90° to a guard install the filler section over the platform leg with the tab brackets facing out and capped (FIG. 3).
  - 2.2.2 Tighten the two lower 3/8"-16 setscrews in the bottom of the filler post with a 3/16" hex key wrench securely.

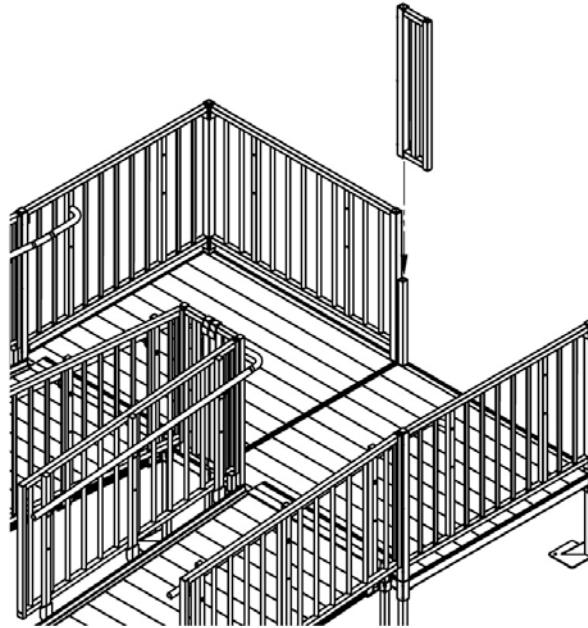


**FIG. 1**



**FIG. 2**

- 2.3 Installing a filler section that will be at a top or stand alone platform where the steps are parallel to the wall (Configuration 3):
- 2.3.1 On the side of the platform adjacent to the wall (where a platform guard would normally go) install a filler section over the platform leg closest to the wall with the tab brackets facing out and capped (FIG. 4).
  - 2.3.2 Tighten the two lower 3/8"-16 setscrews in the bottom of the filler post with a 3/16" hex key wrench securely.



**FIG. 3**

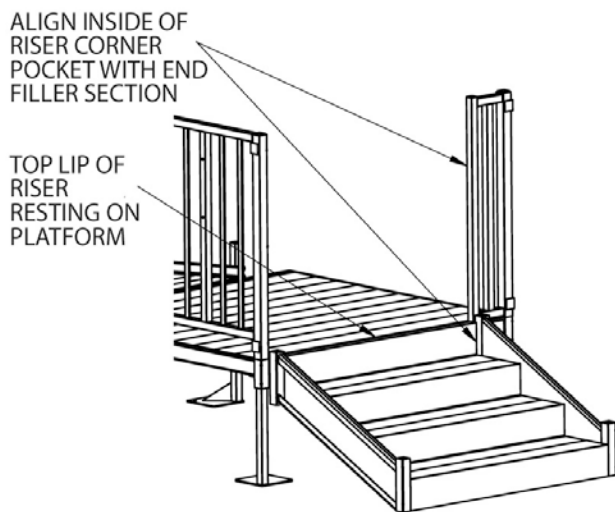


**FIG. 4**

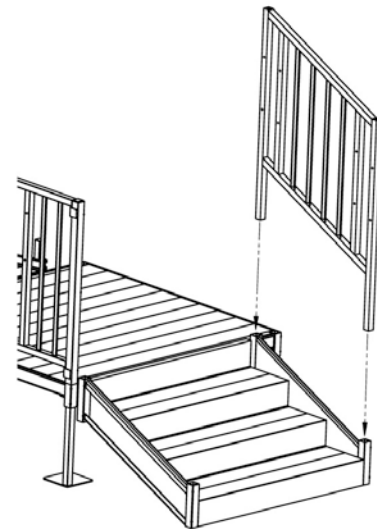
- 2.4 Install two plastic plugs in the open end of the filler section post/picketet.

### 3. Installing the Risers and Guards

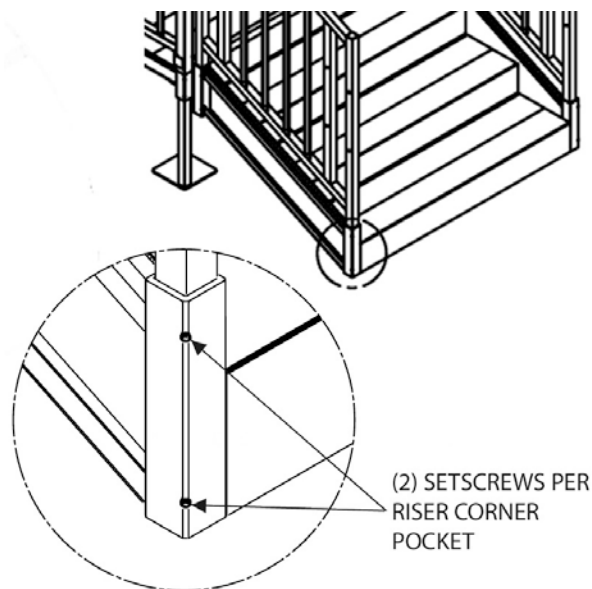
- 3.1 Place the upper lip of the steps riser on the side of the platform with the filler section installed in the previous step so that the inside of the corner pocket aligns with the end of the filler section (FIG. 5).
- 3.2 Install two step guards into the corner pockets of the riser until the lower post rests on the ground (FIG. 6).



**FIG. 5**



**FIG. 6**



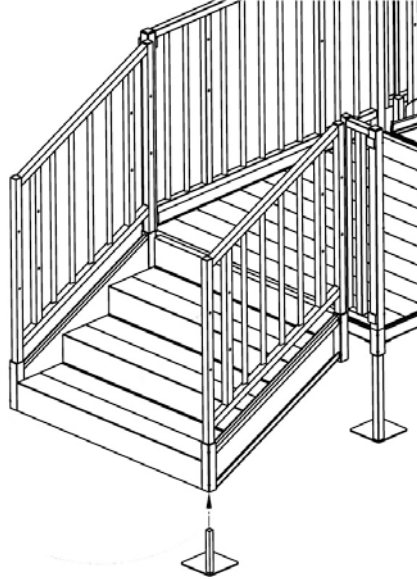
**FIG. 7**

- 3.3 Tighten the two 3/8"-16 setscrews in each corner pocket securely (FIG. 7). **NOTE:** If using the leveling feet align the bottom of the post with the bottom of the corner pocket and tighten the two 3/8"-16 setscrews in the corner pocket securely.

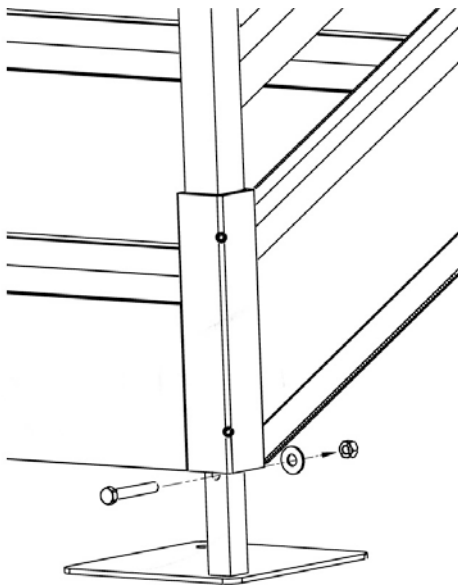


**WARNING:** Do not walk, sit, stand, etc. on steps until the installation is complete.

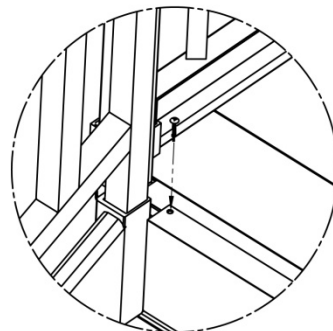
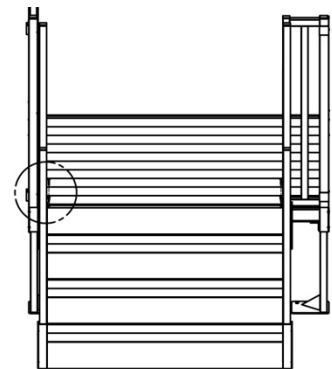
- 3.4 If using the leveling foot see warning at start of instructions.
- 3.4.1 Install the leveling foot into the bottom of the step guard post with the foot positioned so that it extends under the riser and sits on the ground (FIG. 8). This may require lifting the riser and realigning corner pocket as described in step 3.1.
  - 3.4.2 Drill a 13/32" dia. hole through the leg parallel to the riser and directly under the corner pocket, install a 3/8"-16 x 2-1/2" long hex bolt, 3/8"-16 nut and 3/8" flat washer and tighten securely (FIG. 9).
  - 3.4.3 Repeat on the opposite side of steps if needed.



**FIG. 8**



**FIG. 9**



**FIG. 10**

- 3.5 Screw the upper lip of the step riser to the platform using two 1/4" x 1" long self drilling square drive screws (FIG. 10). Make sure that the steps are aligned correctly and pushed as tight as possible against the platform before installing screws.



## 4. Installing the Step Handrails and Handrail Attachments:

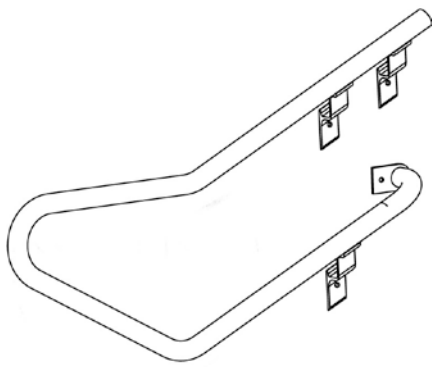
4.1 There are three handrail components that are specific to the steps:

**NOTE:** Regardless of the configuration of the steps with respect to the platform and ramps, these components will be installed in the same manner.

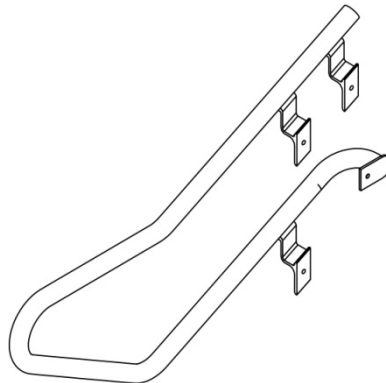
- ① Left (FIG. 11a) and right bottom loops (FIG. 11b)
- ② Handrail sections for the specific step height (FIG. 12)
- ③ Left and right top transition bends (FIG. 13)

There are also three handrail components that are common to both the Titan Ramps and Steps:

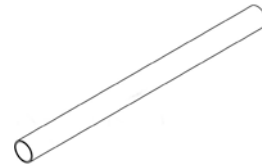
- ④ 90° elbow – 13¼" long (FIG. 14)
- ⑤ 90° elbow – 26½" long (FIG. 14)
- ⑥ Adjustable elbow (FIG. 15)



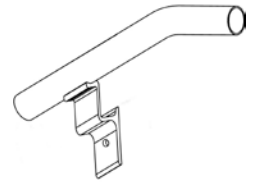
**FIG. 11a**



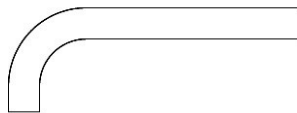
**FIG. 11b**



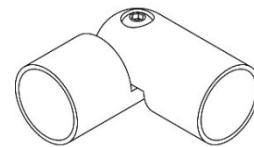
**FIG. 12**



**FIG. 13**



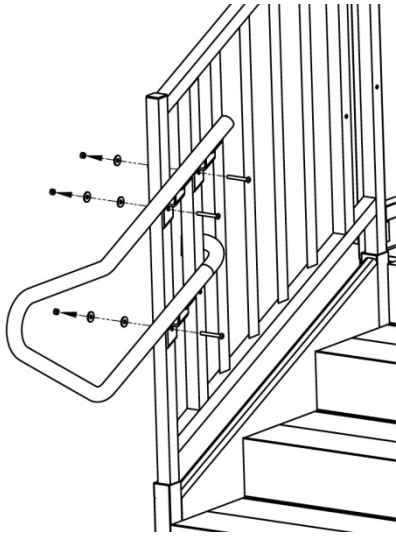
**FIG. 14**



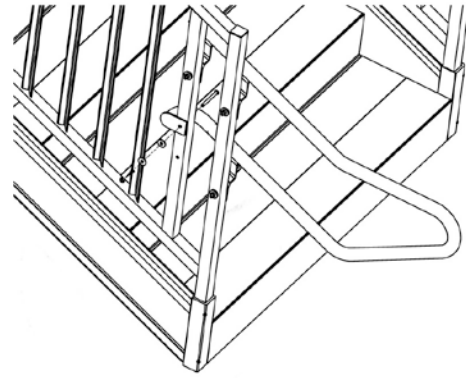
**FIG. 15**

4.2 Start with either the left or right hand bottom loop.

- 4.2.1 Align the holes in the three brackets welded to the bottom loop with the corresponding holes provided in the guard post and picket.
- 4.2.2 Install a 5/16"-18 x 2-1/2" button head bolt, two washers and nylock nut in each bracket (place two washers and nylock nut on the outside of the guard) and tighten all fasteners securely (FIG. 16).
- 4.2.3 Using the hole in the bottom loop return tab as a guide, drill a 5/16"-3/8" hole through the 1-1/2" square picket.
- 4.2.4 Install 5/16"-18 x 2-1/2" button head bolt, two washers and nylock nut through the hole just drilled (place two washers and nylock nut on the outside of the guard) and tighten securely (FIG. 17).

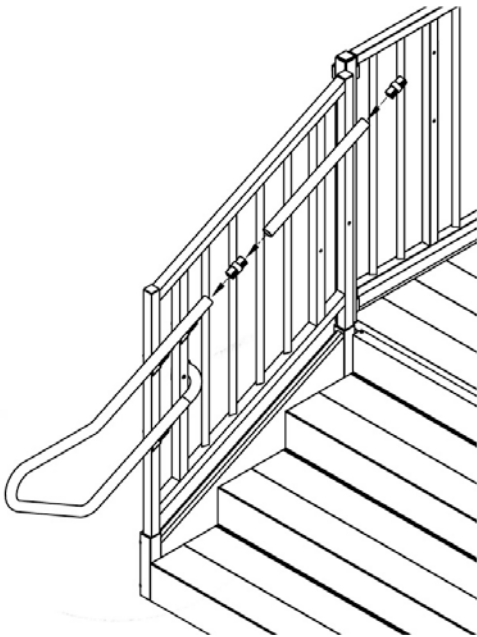


**FIG. 16**

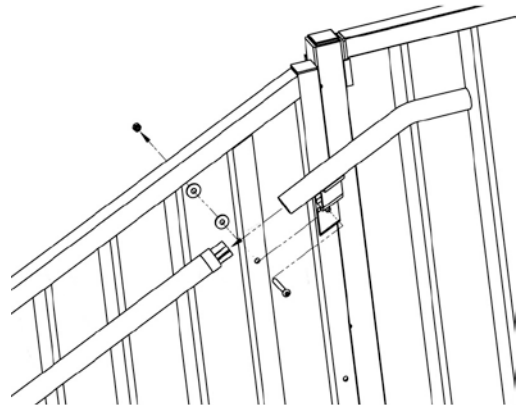


**FIG. 17**

- 4.3 Install a 4" ring joiner into the open end of the bottom loop (with the setscrew on the bottom) and slide the handrail section over the other end of the joiner (FIG. 18).
  - 4.3.1 Tighten the setscrew in the ring joiner enough to hold the handrail section in place, but leave loose enough to allow movement.
- 4.4 Install another 4" ring joiner into the upper end of the handrail section (with the setscrew on the bottom) (FIG. 18).
- 4.5 Slide the "long" end of the top transition bend over the end of the joiner installed in the previous step until the hole in the bracket welded to the top transition bend aligns with the corresponding hole in the guard picket (FIG. 19).
  - 4.5.1 Install 5/16"-18 x 2-1/2" button head bolt, two washers and nylock nut (place two washers and nylock nut on the outside of the guard) and tighten securely (FIG. 19).



**FIG. 18**

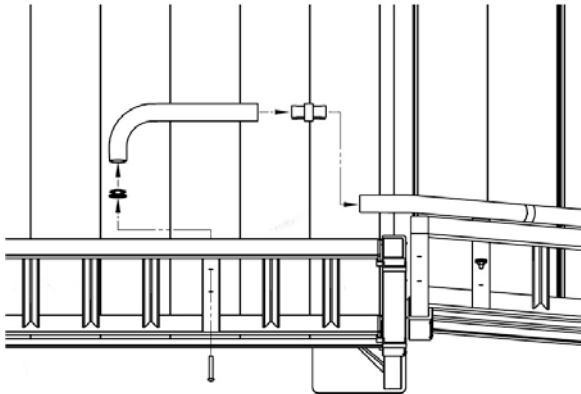


**FIG. 19**

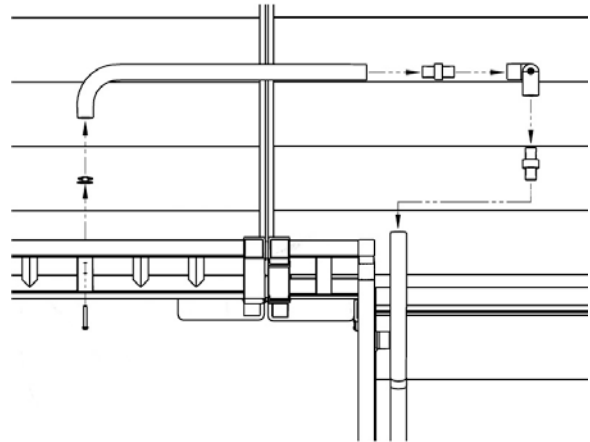
- 4.6 Tighten the setscrews in the two ring joiners securely.
- 4.7 Repeat steps 4.2 through 4.6 for the opposite bottom loop, handrail and top transition bend.

## 5. Returning the Step Handrail to a Platform Guard, Filler Section or Wall:

- 5.1 For situations where the step guard is adjacent and parallel to a platform guard refer to steps 5.1.1 through 5.1.7 for returning the step handrail to the platform guard (FIG. 20).
  - 5.1.1 Install a 2-15/16" ring joiner in the open end of the top transition bend, but don't tighten the setscrew.
  - 5.1.2 Hold a 13-1/4" long, 90° elbow in position and mark for trimming.
  - 5.1.3 Test fit the elbow after trimming.
  - 5.1.4 When fit is confirmed, install threaded insert into short end of elbow with a hammer.
  - 5.1.5 Install the long end of the elbow over the joiner installed in step 5.1.1.
  - 5.1.6 Connect the short end to the square tube picket on the platform guard with 5/16"-18 x 2" button head bolt.
  - 5.1.7 Tighten all fasteners securely.



**FIG. 20**

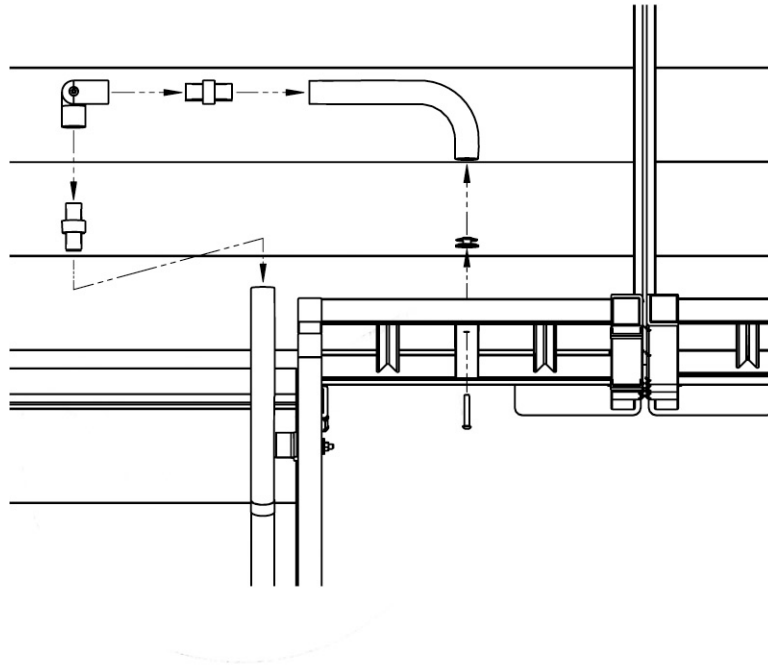


**FIG. 21**

- 5.2 For situations where the step guard is not adjacent to a ramp and is at 90° to a 5' platform, refer to steps 5.2.1 through 5.2.10 for returning the step handrail to the platform guard (FIG. 21).
  - 5.2.1 Install a 2-15/16" ring joiner in the open end of the top transition bend, but don't tighten the setscrew.
  - 5.2.2 Install an adjustable elbow over the other end of the ring joiner installed in the previous step and rotate the elbow until it is level with the platform.
  - 5.2.3 Tighten the joiner setscrew enough to hold elbow in place, but still allow movement.
  - 5.2.4 Install another 2-15/16" ring joiner in the opposite end of the adjustable elbow.
  - 5.2.5 Hold a 26-1/2" long, 90-degree elbow in position and mark for trimming. The short end of the end of the elbow should return to the closest square picket in the platform guard.

**NOTE:** The end of the top transition bend may also have to be trimmed to fit the elbow correctly. However, use caution not to trim so much off that the ring joiner bottoms out in the bend before it is inserted all the way.
  - 5.2.6 Test fit the elbow after trimming.
  - 5.2.7 When fit is confirmed install a threaded insert into the short end of the elbow with a hammer.
  - 5.2.8 Install the long end of the elbow over the joiner installed in step 5.2.4 (above).
  - 5.2.9 Connect short end to the square picket on the platform guard with a 5/16"-18 x 2" button head bolt.
  - 5.2.10 Tighten all fasteners securely.

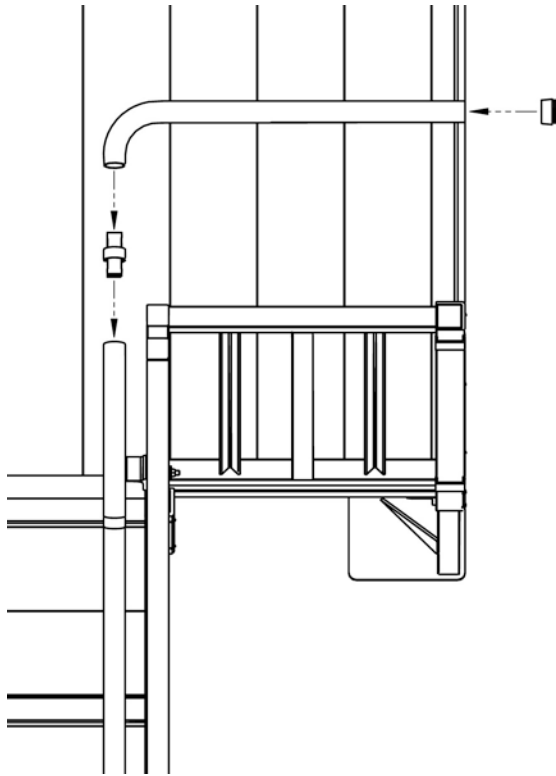
- 5.3 For situations where the step guard is not adjacent to a ramp and is at 90° to a 6' platform refer, to steps 5.3.1 through 5.3.11 for returning the step handrail to the filler section (FIG. 22).



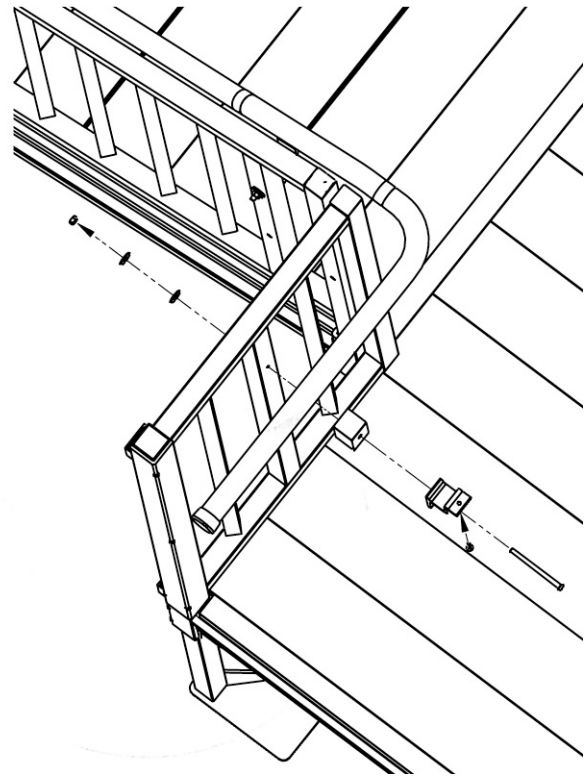
**FIG. 22**

- 5.3.1 Install a 2-15/16" ring joiner in the open end of the top transition bend, but don't tighten the setscrew.
- 5.3.2 Install an adjustable elbow over the other end of the ring joiner installed in the previous step and rotate the elbow until it is level with the platform.
- 5.3.3 Tighten the joiner setscrew enough to hold elbow in place, but still allow movement.
- 5.3.4 Install another 2-15/16" ring joiner in the opposite end of the adjustable elbow.
- 5.3.5 Hold a 13-1/4" long, 90-degree elbow in position and mark for trimming. The short end of the elbow should return to the square picket in the middle of the filler section instead of the platform guard. **NOTE:** The end of the top transition bend may also have to be trimmed to fit the elbow correctly. However, use caution not to trim so much off that the ring joiner bottoms out in the bend before it is inserted all the way.
- 5.3.6 Test fit the elbow after trimming.
- 5.3.7 When fit is confirmed install a threaded insert into the short end of the elbow with a hammer.
- 5.3.8 Mark the position of the short end of the elbow on the square picket in the middle of the filler section and drill a 5/16" dia. hole through the picket centered on the mark.
- 5.3.9 Install the long end of the elbow over the joiner installed in step 5.3.4
- 5.3.10 Connect short end to the square picket in the middle of the filler section with 5/16"-18 x 2" button head bolt.
- 5.3.11 Tighten all fasteners securely.

- 5.4 For situations where the step guard is at 90° to a top platform with the steps parallel to a wall, refer to steps 5.4.1 through 5.4.10 for returning the step handrail to a wall (FIG. 23 and 24).



**FIG. 23**



**FIG. 24**

- 5.4.1 Install a 2-15/16" ring joiner in the open end of the top transition bend, but don't tighten the setscrews.
- 5.4.2 Install a 90-degree elbow on the opposite end of the joiner. Use a 13-1/4" long elbow for a 5' platform or a 26-1/2" long elbow for a 6' platform.
- 5.4.3 Rotate the elbow until it is parallel to the platform with the long end pointed toward the wall and mark for trimming. The centerline of the long leg of the elbow should be approx. 3-3/4" from the filler section and the open end of the elbow should be within 1/4" inch of the wall. **NOTE:** The end of the top transition bend may also have to be trimmed to fit the elbow correctly. However, use caution not to trim so much off that the ring joiner bottoms out in the bend before it is inserted all the way.
- 5.4.4 Test fit the elbow with a handrail bracket and standoff after trimming.
- 5.4.5 When fit is confirmed, install a cap over the open end of the long leg of the elbow and tighten the joiner setscrew to hold the elbow parallel to the platform.
- 5.4.6 Hold a handrail bracket and standoff in place on the middle square picket in the filler section and mark the location of the center of the hole (FIG. 24).
- 5.4.7 Drill a 5/16" dia. hole through the square picket in the location marked in the previous step.
- 5.4.8 Attach the handrail bracket and standoff using a 5/16"-18 x 4" button head bolt, two washers and a nylock nut (place two washers and nylock nut on the outside of the guard).
- 5.4.9 Attach the elbow to the handrail bracket using one 1/4" x 1" long self drilling square drive screw.
- 5.4.10 Tighten all fasteners securely.

## 6. Connecting the Step Handrail to a Ramp Handrail:

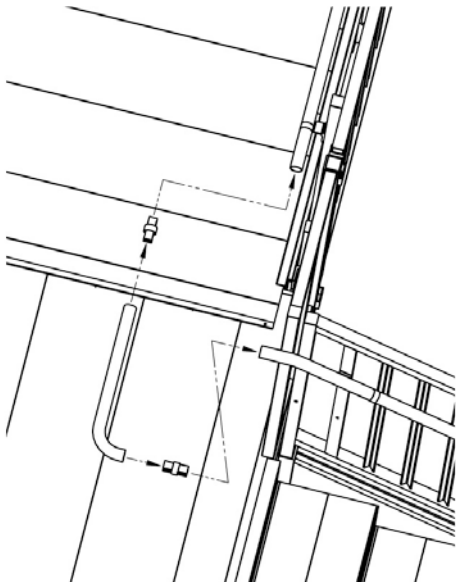
- 6.1 For situations where the step guard is adjacent to a ramp and at 90° to a 5' platform, also referred to as an "inside" corner, refer to steps 6.1.1 through 6.1.5 for connecting the step handrail to the ramp handrail (FIG. 25).



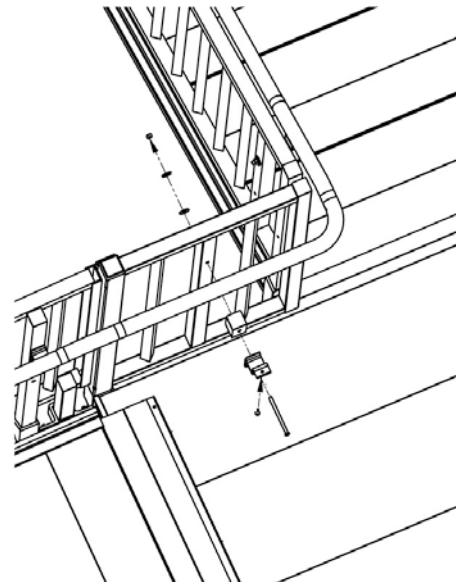
**FIG. 25**

- 6.1.1 Install either a joiner or ring joiner and a 5° bend into the ramp handrail, depending on whether the installation is at the bottom or top of a ramp as described in the Titan Series Commercial Ramp manual.
- 6.1.2 Install a 2-15/16" ring joiner in the open end of both the top transition bend and the 5° bend, but don't tighten the setscrews.
- 6.1.3 Hold a 13-1/4" long 90-degree elbow in position and mark for trimming. The centerline of the long leg of the elbow should be approx. 3-3/4" from the filler section. **NOTE:** The end of the top transition bend, the 5° bend, and the end of the ramp handrail may all have to be trimmed to fit the elbow correctly. However, use caution not to trim so much off of any one component that the joiners bottom out in a bend before they are inserted all the way.
- 6.1.4 Test fit the elbow after trimming. **NOTE:** If a proper fit can not be achieved by trimming the 90° and 5° elbows, ramp handrail and top transition bend, replace the 5° bend with an adjustable elbow. This will overcome any misalignment, but should only be done as a last resort.
- 6.1.5 Tighten all fasteners securely.

- 6.2 For situations where the step guard is adjacent to a ramp and at 90° to a 6' platform, also referred to as an "inside" corner, refer to steps 6.2.1 through 6.2.10 for connecting the step handrail to the ramp handrail (FIG. 26 and FIG. 27).



**FIG. 26**



**FIG. 27**

- 6.2.1 Install either a joiner or ring joiner and a 5° bend into the ramp handrail depending on whether the installation is at the bottom or top of a ramp as described in the Titan Series Commercial Ramp manual.
- 6.2.2 Install a 2-15/16" ring joiner in the open end of both the top transition bend and the 5° bend, but don't tighten the setscrews.
- 6.2.3 Hold a 26-1/2" long 90-degree elbow in position and mark for trimming. The centerline of the long leg of the elbow should be approx. 3-3/4" from the filler section. **NOTE:** The end of the top transition bend, the 5° bend and the end of the ramp handrail may all have to be trimmed to fit the elbow correctly. However, use caution not to trim so much off of any one component that the joiners bottom out in a bend before they are inserted all the way.
- 6.2.4 Test fit the elbow with a handrail bracket and standoff after trimming. **NOTE:** If a proper fit can not be achieved by trimming the 90° and 5° elbows, ramp handrail and top transition bend, replace the 5° bend with an adjustable elbow. This will overcome any misalignment, but should only be done as a last resort.
- 6.2.5 When fit is confirmed, tighten the joiner setscrews securely
- 6.2.6 Hold a handrail bracket and standoff in place on the middle square picket in the filler section and mark the location of the center of the hole.
- 6.2.7 Drill a 5/16" dia. hole through the square picket in the location marked in the previous step.
- 6.2.8 Attach the handrail bracket and standoff using a 5/16"-18 x 4" button head bolt, two washers and a nylock nut (place two washers and nylock nut on the outside of the guard).
- 6.2.9 Attach the elbow to the handrail bracket using one 1/4" x 1" long self drilling square drive screw
- 6.2.10 Tighten all fasteners securely.

## 7. Final Steps:

- 7.1 Ensure all fasteners are in place and secure.
- 7.2 Walk on the assembled system and check for any undue movement.
- 7.3 Remove any debris and metal chips.
- 7.4 Ensure that the level has not shifted or compacted during installation.
- 7.5 Check that all handrail ends are terminated with loops, returns or end caps.

**NOTES:**

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

Thank you for choosing



Please visit  
**www.ezaccess.com or call 1-800-258-8503**  
for all your ramp and step system needs.

